

## DAY-6

Final project

Java application mini kube deployment

```
pipeline {
  agent any

  stages {
    stage('SCM') {
      steps {
        git branch: 'main', url: 'https://github.com/Rithik2005/devOps2/tree/main'
      }
    }
    stage('Build-clean') {
      steps{
        sh 'mvn clean'
      }
    }
    stage('Build-validate') {
      steps{
        sh 'mvn validate'
      }
    }
    stage('Build-compile') {
      steps{
        sh 'mvn compile'
```

```
    }  
  }  
  
  stage('Build-test') {  
    steps{  
      sh 'mvn test'  
    }  
  }  
  
  stage('Build-package') {  
    steps{  
      sh 'mvn package'  
    }  
  }  
  
  stage('build to images') {  
    steps {  
      script{  
        sh "docker build -t rithik/simplewebapp2 ."  
      }  
    }  
  }  
  
  stage('docker push hub') {  
    steps {  
      script{  
        withDockerRegistry(credentialsId: 'docker_cred', url: 'https://index.docker.io/v1/') {  
          sh 'docker push rithik2005/simplewebapp2'  
        }  
      }  
    }  
  }
```

```

    }

    stage('deploy') {
        steps {
            script{
                withKubeCredentials(kubectlCredentials: [[caCertificate: "", clusterName: 'minikube',
contextName: 'minikube', credentialsId: 'cred_1', namespace: "", serverUrl:
'https://192.168.39.226:8443']] ) {
                    sh 'kubectl apply -f deploy.yml --validate=false'
                }
            }
        }
    }

}

apiVersion: apps/v1
kind: Deployment
metadata:
  name: webnginx2
  labels:
    name: webnginx2
spec:
  replicas: 1
  selector:
    matchLabels:
      apptype: web-backend
  strategy:
    type: RollingUpdate

```

```
template:
  metadata:
    labels:
      apptype: web-backend
  spec:
    containers:
      - name: webnginx2
        image: rithik2005/simplewebapp:latest
        ports:
          - containerPort: 7070
```

---

```
apiVersion: v1
kind: Service
metadata:
  name: my-service
  labels:
    app: my-service
    type: backend-app
spec:
  type: NodePort
  ports:
    - targetPort: 8080
      port: 7070
      nodePort: 30002
  selector:
    apptype: web-backend
```

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localhost:8080/job/java-application/

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Rithik S

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log out

Jenkins

Dashboard > java-application >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Stages

Rename

Pipeline Syntax

BUILDS

Filter

Today

#6 9:47 AM

#5 9:13 AM

#4 9:10 AM

#3 9:06 AM

#2 8:07 AM

#1 8:03 AM

🟢 java-application

Add description

Stage View

Average stage times:  
(full run time: ~53s)

	SCM	Build-clean	Build-validate	Build-compile	Build-test	Build-package	build to images	docker push hub	Deploy App
#6 15:17 No Changes	6s	3s	2s	3s	3s	3s	741ms	50s	979ms
#5 14:43 No Changes	1s	2s	1s	2s	2s	3s	508ms	29s	337ms
#4 14:40 1 Change	1s	2s	1s	2s	3s	4s	484ms	37s	533ms failed
#3 14:36 No Changes	1s	3s	2s	3s	3s	3s	508ms	30s	1s failed
#2 13:37 No Changes	1s	1s	848ms	1s	1s	3s	336ms	28s	
#1 13:33 No Changes	1s	1s	848ms	1s	1s	1s	422ms	75ms	

```
Starting tunnel for service my-service.


| NAMESPACE | NAME       | TARGET PORT | URL                    |
|-----------|------------|-------------|------------------------|
| default   | my-service |             | http://127.0.0.1:43755 |


Opening service default/my-service in default browser...
http://127.0.0.1:43755
Because you are using a Docker driver on linux, the terminal needs to be open to run it.
Stopping tunnel for service my-service.
tthik@RITHIK: 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://127.0.0.1:36329 |


Opening service default/my-service in default browser...
http://127.0.0.1:36329
Because you are using a Docker driver on linux, the terminal needs to be open to run it.
Stopping tunnel for service my-service.
tthik@RITHIK: kubectl delete all --all
pod "my-app" deleted
pod "my-deploy-795d5b5d8c-tpm7h" deleted
pod "my-pod" deleted
service "kubernetes" deleted
service "my-service" deleted
deployment.apps "my-deploy" deleted
tthik@RITHIK: sudo apt update
[sudo] password for pcubuntu:
sorry, try again.
[sudo] password for pcubuntu:
sudo: 1 incorrect password attempt
tthik@RITHIK: sudo useradd \
--system \
```

127.0.0.141529/my-app/

127.0.0.141529/my-app/

Hello World!



```

rithik@RITHIK:~$ sudo apt-get install -y apt-transport-https software-properties-common
wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list
sudo apt-get update
sudo apt-get -y install grafana
sudo systemctl enable grafana-server
sudo systemctl start grafana-server
sudo systemctl status grafana-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  python3-software-properties
The following NEW packages will be installed:
  apt-transport-https
The following packages will be upgraded:
  python3-software-properties software-properties-common
2 upgraded, 1 newly installed, 0 to remove and 104 not upgraded.
Need to get 33.7 kB/48.1 kB of archives.
After this operation, 35.8 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble/universe amd64 apt-transport-https all 2.7.14build2 [3974 B]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 python3-software-properties all 0.99.49.1 [29.7 kB]
Fetched 33.7 kB in 1s (22.6 kB/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 46970 files and directories currently installed.)
Preparing to unpack .../apt-transport-https_2.7.14build2_all.deb ...
Unpacking apt-transport-https (2.7.14build2) ...
Preparing to unpack .../software-properties-common_0.99.49.1_all.deb ...
Unpacking software-properties-common (0.99.49.1) over (0.99.48) ...
Preparing to unpack .../python3-software-properties_0.99.49.1_all.deb ...
Unpacking python3-software-properties (0.99.49.1) over (0.99.48) ...
Setting up apt-transport-https (2.7.14build2) ...
Setting up python3-software-properties (0.99.49.1) ...
Setting up software-properties-common (0.99.49.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for dbus (1.14.10-4ubuntu4.1) ...
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
deb https://packages.grafana.com/oss/deb stable main
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease

```

```

prometheus-2.47.1.linux-amd64/NOTICE
prometheus-2.47.1.linux-amd64/prometheus.yml
prometheus-2.47.1.linux-amd64/consoles/
prometheus-2.47.1.linux-amd64/consoles/prometheus.html
prometheus-2.47.1.linux-amd64/consoles/prometheus-overview.html
prometheus-2.47.1.linux-amd64/consoles/node-cpu.html
prometheus-2.47.1.linux-amd64/consoles/index.html.example
prometheus-2.47.1.linux-amd64/consoles/node.html
prometheus-2.47.1.linux-amd64/consoles/node-disk.html
prometheus-2.47.1.linux-amd64/consoles/node-overview.html
prometheus-2.47.1.linux-amd64/promtool
prometheus-2.47.1.linux-amd64/console_libraries/
prometheus-2.47.1.linux-amd64/console_libraries/prom.lib
prometheus-2.47.1.linux-amd64/console_libraries/menu.lib
prometheus-2.47.1.linux-amd64/prometheus
chown: invalid user: 'prometheus:prometheus'
rithik@RITHIK:~/prometheus-2.47.1.linux-amd64$ cd
rm -rf prometheus-2.47.1.linux-amd64.tar.gz
prometheus --version
prometheus, version 2.47.1 (branch: HEAD, revision: c4d1a8beff37cc004f1dc4ab9d2e73193f51aaeb)
  build user:   root@4829330363be
  build date:   20231004-10:31:16
  go version:   go1.21.1
  platform:    linux/amd64
  tags:        netgo,builtinassets,stringlabels
rithik@RITHIK:~$ sudo vim /etc/systemd/system/prometheus.service
rithik@RITHIK:~$ sudo systemctl enable prometheus
sudo systemctl start prometheus
sudo systemctl status prometheus
journalctl -u prometheus -f --no-pager
Created symlink /etc/systemd/system/multi-user.target.wants/prometheus.service → /etc/systemd/system/prometheus.service.
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
   Active: activating (auto-restart) (Result: exit-code) since Sat 2025-03-22 06:40:08 UTC; 60ms ago
   Process: 43366 ExecStart=/usr/local/bin/prometheus --config.file=/etc/prometheus/prometheus.yml --storage.tsdb.path=/data --web.console.tem
   Main PID: 43366 (code=exited, status=217/USER)

Mar 22 06:40:08 PraneshPC systemd[1]: prometheus.service: Failed with result 'exit-code'.
...skipping...
● prometheus.service - Prometheus

```

```
pcubuntu@PraneshPC: ~/kut
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: default-storageclass, storage-provisioner
Done! kubect is now configured to use "minikube" cluster and "default" namespace by default
rithik@RITHIK: ~/kut$ kubectl get pod
NAME          READY   STATUS    RESTARTS   AGE
my-app        1/1     Running   1 (127m ago)  5h8m
my-deploy-795d5b5d8c-tpm7h  1/1     Running   0           58m
my-pod        1/1     Running   1 (127m ago)  5h19m
rithik@RITHIK: ~/kut$ minikube service my-service
NAME      TARGET PORT  URL
default  my-service   9000      http://192.168.49.2:30002
Starting tunnel for service my-service.
NAME      TARGET PORT  URL
default  my-service   9000      http://127.0.0.1:34781
Opening service default/my-service in default browser...
http://127.0.0.1:34781
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.
rithik@RITHIK: ~/kut$ 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;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {co
lor: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>pcubuntu@PraneshPC: ~/kut$ ^C
rithik@RITHIK: ~/kut$ curl http://192.168.49.2:30002/my-app/
<html>
<body>
<h2>Hello World!</h2>
</body>
</html>
```

Skip to content

ms

Search

Notifications

Help

Rithik

log out

Dashboard

New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

0/2

Add description

All

S	W	Name	Last Success	Last Failure	Last Duration	Coverage	
		java-application	6 min 17 sec #7	20 min #5	27 sec		n/a
		maven	1 day 23 hr #1	N/A	1 min 34 sec		n/a
		samplewsl	22 hr #15	1 day 20 hr #10	43 sec		n/a

Icons: S M L

...

localhost:8080/#skip2content

REST API Jenkins 2.492.2