

DEVSECOPS Project-1 : Complete CI-CD (3 tier app)-Pet shop

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COURSE : AWS AND DEVOPS
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PIPELINE:

```
pipeline { agent any tools{ jdk
'jdk17' maven 'maven3'
} environment
{
SCANNER_HOME=tool 'sonar-scanner'

} stages{
stage('clean workspace'){ steps{ cleanWs()

}

}

stage('clone'){ steps{ checkout scmGit(branches: [[name: '*/master']], extensions: [],
userRemoteConfigs: [[url: 'https://github.com/Bhargavi413/jpetstore-6.git']])
}

}

stage('maven compile'){ steps{ sh
'mvn compile'

}

}
```

```
stage('maven test'){ steps{ sh  
'mvn clean test'
```

```
}  
}
```

```
stage("Sonarqube Analysis "){ steps{ script{  
withSonarQubeEnv('sonar-server') {  
sh "' $SCANNER_HOME/bin/sonar-scanner - Dsonar.projectName=Petshop \ -  
Dsonar.java.binaries=. \
```

```
-Dsonar.projectKey=Petshop "'  
}  
}  
}  
}
```

```
stage('build'){ steps{ sh  
'mvn package'
```

```
}  
}
```

```
stage('OWASP Dependency Check'){ steps{  
dependencyCheck additionalArguments: '--scan ./ -- format XML ', odcInstallation: 'dpcheck'  
dependencyCheckPublisher pattern: '**/dependency-check-report.xml' }  
  
}
```

```

stage(' Nexus Artifact'){ steps{ nexusArtifactUploader
artifacts: [[artifactId:
'mybatis-parent', classifier: '', file: '/var/lib/jenkins/workspace/project2/target/jpetstore.war',
type: 'war']], credentialsId: 'nexUs', groupId: 'org.mybatis',

nexusUrl: '34.205.155.31:8081', nexusVersion: 'nexus3', protocol: 'http', repository:
'mavensnapshots', version: '6.1.1- SNAPSHOT'
}

}

stage ('Build and push to docker hub'){ steps{ script{
withDockerRegistry(credentialsId: 'docker-cred', toolName: 'docker') {
sh 'docker build -t bhargavi999/petshop:latest1 .' sh 'docker push
bhargavi999/petshop:latest1'

}

}

}

}

stage("TRIVY"){ steps{
sh 'trivy image bhargavi999/petshop:latest1 > trivy.txt'
}

}

}

}

```

OUTPUT :



```

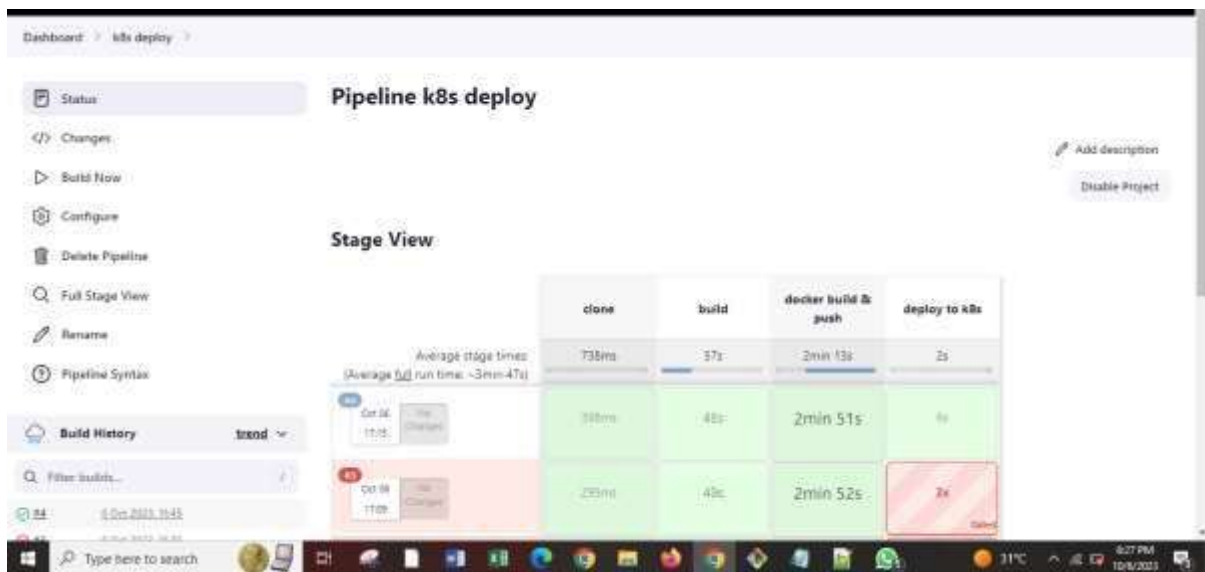
pipeline { agent any stages{ stage('clone'){ steps{ checkout scmGit(branches:
[[name: '*/master']], extensions: [], userRemoteConfigs: [[url:
'https://github.com/Bhargavi413/jpetstore-6.git']])
}
}
stage('build'){
steps{ sh 'mvn
package'
}
}
stage('docker build & push'){
steps{ script{
withDockerRegistry(credentialsId: 'docker-cred', toolName: 'docker') {
sh 'docker build -t bhargavi999/petshop:latest1 .' sh 'docker push
bhargavi999/petshop:latest1'
}
}
}
}
}

```

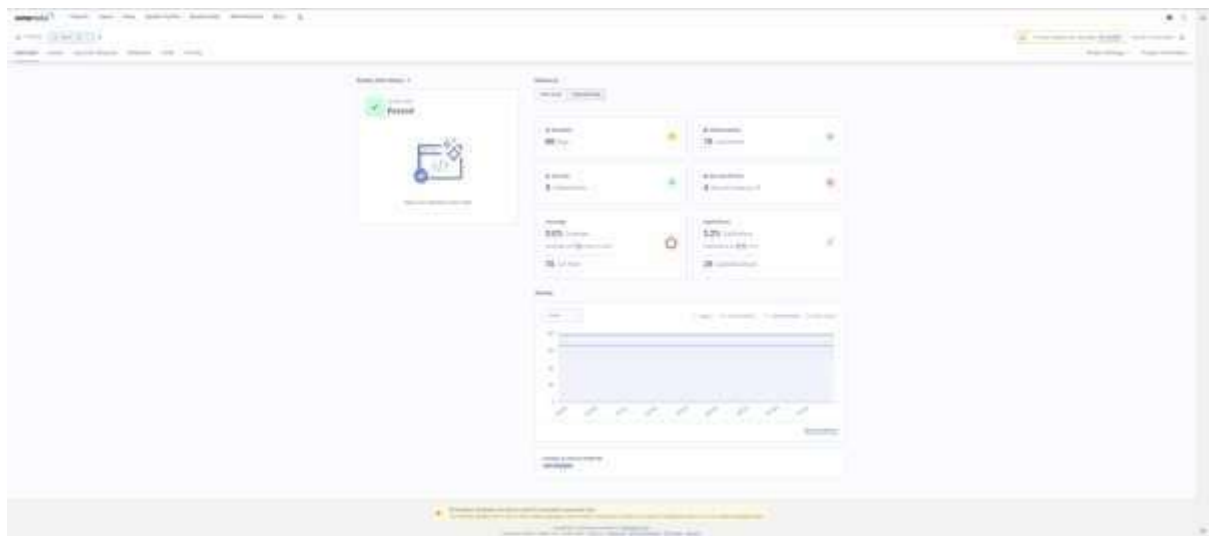
```

stage('deploy to k8s'){
steps{ script{
withKubeConfig(caCertificate: "", clusterName: "", contextName: "", credentialsId: 'k8s',
namespace: "", restrictKubeConfigAccess: false, serverUrl: "") {\ sh 'aws eks update-
kubeconfig --region us-east-1 --name bhagi' sh 'kubectl create -f deployment.yaml'
sh 'kubectl get nodes' sh 'kubectl get po' sh 'kubectl get rs' sh 'kubectl get svc'
}
}
}
}
}
}
}
}
}
}

```



SONARCODE-ANALYSIS



SonarQube Quality Gate

Threshold: **Passed**

0/0 issues, 0/0 hotspots, 0/0 alerts

0/0 technical debt, 0/0 code smells, 0/0 security issues

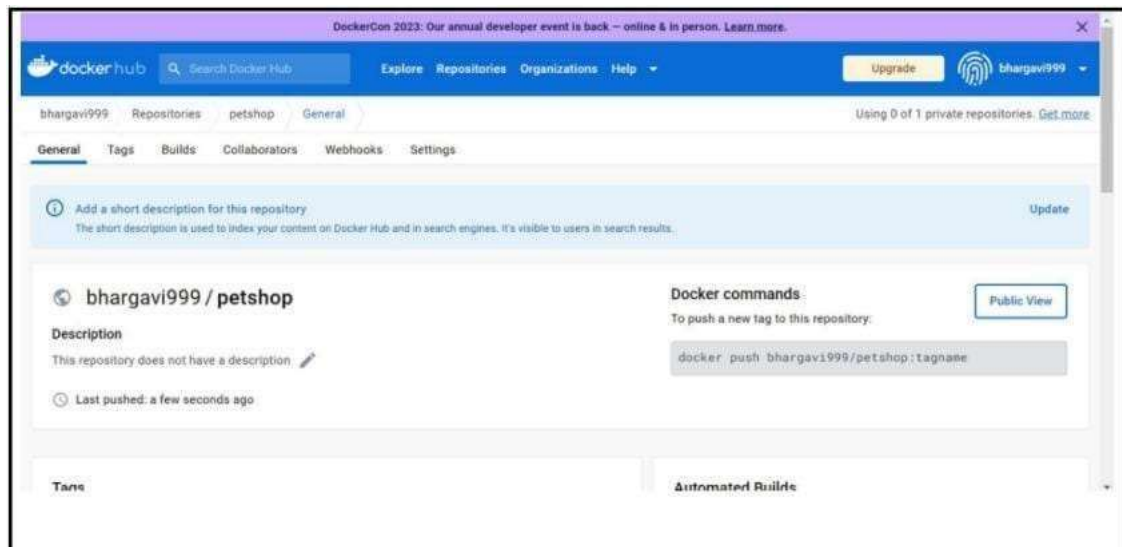
0/0 test coverage, 100% code coverage

0/0 issues, 0/0 hotspots, 0/0 alerts

0/0 technical debt, 0/0 code smells, 0/0 security issues

0/0 test coverage, 100% code coverage

PUSHED DOCKER IMAGE TO DOCKER HUB



SCANNING TRIVY



FINAL DEPLOYED OUTPUT



An autoscaler with a minimum of one pod and a maximum of ten pods is created using this command. Autoscalers try to reduce the number of pods in a deployment to a minimum of one when the average CPU load is below 50 percent. When the load exceeds 50 percent, the autoscaler increases the number of pods in the deployment, up to a maximum of ten.

```
aws | Services | Search [Alt+S]
Elastic Kubernetes Service | EC2 | CloudFormation | IAM | S3 | CloudWatch | VPC | Simple Notification Service | Route

NAME                                DESIRED    CURRENT    READY    AGE
replicaset.apps/coredns-79989457d9    2          2          0       4h9m
replicaset.apps/metrics-server-548448fbf7 1          1          0       167m
replicaset.apps/metrics-server-644748577 1          1          0       132m
root@ip-172-31-25-58:~# kubectl get po
NAME                                READY    STATUS    RESTARTS    AGE
hpa-demo-deployment-66d89bd69d-thcj9 0/1      Pending   0           22m
root@ip-172-31-25-58:~# kubectl get rs
NAME                                DESIRED    CURRENT    READY    AGE
hpa-demo-deployment-66d89bd69d    1          1          0       23m
root@ip-172-31-25-58:~# kubectl get svc
NAME                                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
hpa-demo-deployment    ClusterIP   10.100.252.78  <none>         80/TCP     21m
kubernetes              ClusterIP   10.100.0.1    <none>         443/TCP    113m
root@ip-172-31-25-58:~# kubectl get hpa
NAME                                REFERENCE    TARGETS    MINPODS    MAXPODS    REPLICAS    AGE
hpa-demo-deployment    Deployment/hpa-demo-deployment  0%/50%     1          10         1           174m
root@ip-172-31-25-58:~# kubectl get deploy
NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
hpa-demo-deployment    0/1      1             0           23m
root@ip-172-31-25-58:~#
```