

JENKINS LAB2

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Track: System Administration

Branch: Aswan

GITHUB Repo:

https://github.com/mohamedesmael10/Jenkins_lab2/tree/terraform_ansible

01) What is Jenkins pipeline?

A **Jenkins Pipeline** is a suite of plugins that supports implementing and integrating continuous delivery pipelines into Jenkins. It allows you to define the entire build, test, and deployment process as code (**Jenkinsfile**) so that your CI/CD process becomes versioned and reproducible.

02) What scripting language is Jenkins pipeline syntax based on?

The Jenkins Pipeline syntax is based on **Groovy**.

- **Declarative Pipeline** provides a simplified, opinionated syntax for creating pipelines.
- **Scripted Pipeline** uses standard Groovy syntax to define more complex pipelines with full programmatic control.

03) What are the ways you can write pipeline in Jenkins?

There are primarily **two ways** to write a pipeline in Jenkins:

- **Declarative Pipeline:**
A more structured and opinionated approach that uses a predefined block syntax.
- **Scripted Pipeline:**
Provides more flexibility with standard Groovy code, giving you complete programmatic control.

04) Create jenkins pipeline for your repo and use script file (jenkinsfile) to write pipeline syntax ?

Global credentials (unrestricted)

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
mohamedesmael10	mohamedesmael10/*****	Username with password	
mohamedesmael_dockerhub	mohamedesmael/*****	Username with password	

Icons: S M L

Code Blame 37 lines (35 loc) · 924 Bytes Code 55% faster with GitHub Copilot Raw Copy Download Edit

```
1 pipeline {
2   agent any
3   environment {
4     DOCKER_CREDS = credentials('mohamedesmael_dockerhub')
5   }
6
7   stages {
8     stage('Checkout') {
9       steps {
10        git url: 'https://github.com/mohamedesmael10/Jenkins_lab2.git', branch: 'main'
11      }
12    }
13    stage('Docker Login') {
14      steps {
15
16        sh '''
17          echo "\${DOCKER_CREDS_PSW}" | docker login -u "\${DOCKER_CREDS_USR}" --password-stdin
18        '''
19      }
20    }
21    stage('Build Image') {
22      steps {
23        sh 'docker build -t ubuntu .'
24      }
25    }
26    stage('Tag Image') {
27      steps {
28        sh 'docker tag ubuntu mohamedesmael/jenkins_lab1:v2'
29      }
30    }
31    stage('Push Image') {
```

TAG

y2

Last pushed 23 minutes by mohamedesmael

docker pull mohamedesmael/jenkins_lab1:v2

Digest	OS/ARCH	Last pull	Compressed size
16977c2462a3	linux/amd64	less than 1 day	49.84 MB

Activities Firefox Apr 5 13:14

lab1 Config [Jenkins] x lab2_q4 #2 Console [Jenkins] x lab1 Config [Jenkins] x mohamedesmael10/Jenkins x +

192.168.159.133:8080/job/lab2_q4/2/console

Customer Portal Red Hat Red Hat Products Doc... Red Hat Enterprise Lin... Red Hat Developer Por... Red Hat Container Cat... Red Hat Hybrid Cloud ...

Dashboard > lab2_q4 > #2

Changes

Console Output

Edit Build Information

Delete build '162'

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

```
Started by user Mohamed Mostafa Esmael
Replayed #1
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/lab2_q4
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential mohamedesmael10
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/lab2_q4/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/mohamedesmael10/Jenkins_lab2 # timeout=10
Fetching upstream changes from https://github.com/mohamedesmael10/Jenkins_lab2
> git --version # timeout=10
> git --version # 'git version 2.43.5'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/mohamedesmael10/Jenkins_lab2 +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 42572be7f391674397836f00f3c21e9b277ed3d5 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 42572be7f391674397836f00f3c21e9b277ed3d5 # timeout=10
Commit message: "Update Jenkinsfile"
> git rev-list --no-walk 42572be7f391674397836f00f3c21e9b277ed3d5 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
```

Dashboard > lab2_q4 > #2

```
[Pipeline] }
[Pipeline] sh
+ docker tag ubuntu:mohamedesmael/jenkins_lab1:v2
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Push Image)
[Pipeline] sh
+ docker push mohamedesmael/jenkins_lab1:v2
The push refers to repository [docker.io/mohamedesmael/jenkins_lab1]
2ddaf470900a: Preparing
b2d6174abbc: Preparing
270a1170e7e3: Preparing
270a1170e7e3: Layer already exists
2ddaf470900a: Layer already exists
b2d6174abbc: Layer already exists
v2: digest: sha256:16977c2462a3a4c0e23126070614ffed2f2763e78e575b2355b551039bca0bfb size: 947
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

lab1 Config [Jenkins] x lab2_q4 Config [Jenkins] x lab1 Config [Jenkins] x mohamedesmael10/Jenkins x +

192.168.159.133:8080/job/lab2_q4/configure

Customer Portal Red Hat Red Hat Products Doc... Red Hat Enterprise Lin... Red Hat Developer Por... Red Hat Container Cat... Red Hat Hybrid Cloud ...

Dashboard > lab2_q4 > Configuration

Configure

Pipeline script from SCM

General

Triggers

Pipeline

Advanced

SCM

Git

Repositories

Repository URL

https://github.com/mohamedesmael10/Jenkins_lab2

Credentials

mohamedesmael10/*****

+ Add

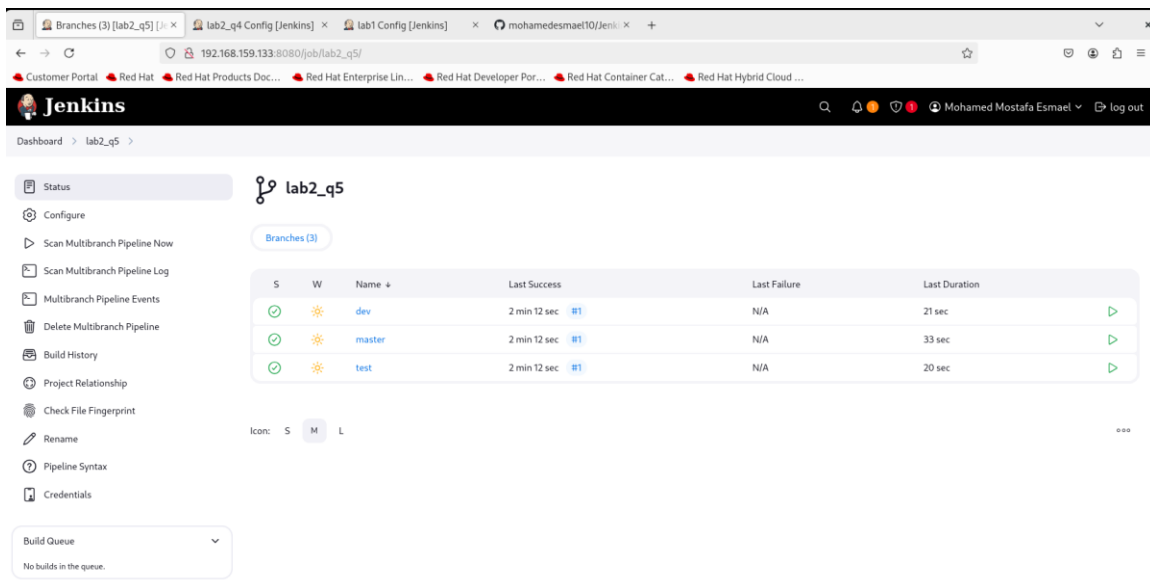
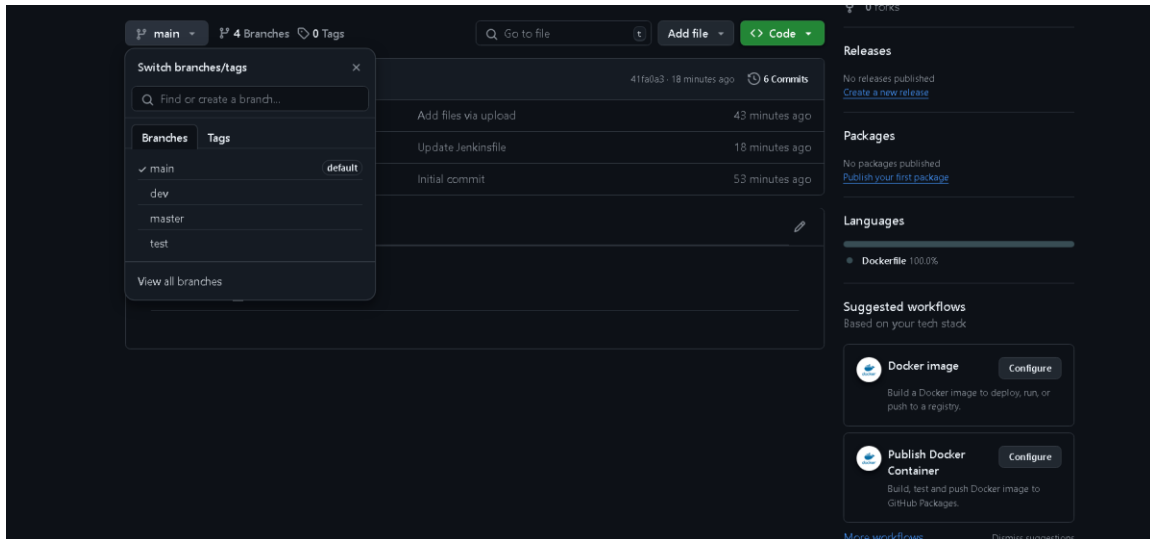
Advanced

Add Repository

Branches to build

Branch Specifier (blank for 'any')

05) Create another multibranch pipeline and filter branches to contain only (master , dev , test)?



Configuration

- General
- Branch Sources
- Build Configuration
- Scan Multibranch Pipeline Triggers
- Orphaned Item Strategy
- Appearance
- Health metrics
- Properties

Branch Sources

Git ? ✕

Project Repository ?

Credentials ?
 ▼
[+ Add](#)

Behaviors

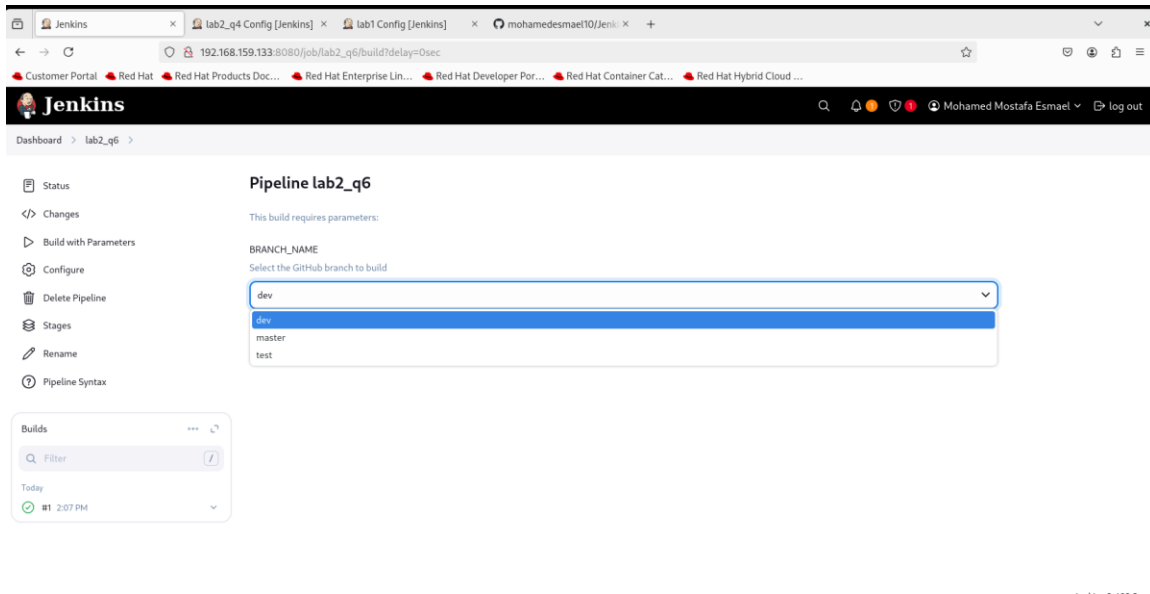
Discover branches ? ✕

Filter by name (with wildcards) ✕

Include ?

Exclude ?

06) Create another multibranch pipeline and filter branches to contain only (master , dev , test) ?



Y4

Last pushed less than a minute by mohamedesmael

Digest

16977c2462a3

OS/ARCH

linux/amd64

Last pull

less than 1 day

docker pull mohamedesmael/jenkins_lab1:v4

Copy

Compressed size

48.84 MB

dev

Y5

Last pushed 2 minutes by mohamedesmael

Digest

16977c2462a3

OS/ARCH

linux/amd64

Last pull

less than 1 day

docker pull mohamedesmael/jenkins_lab1:v5

Copy

Compressed size

48.84 MB

master

Y3

Last pushed 3 minutes by mohamedesmael

Digest

16977c2462a3

OS/ARCH

linux/amd64

Last pull

less than 1 day

docker pull mohamedesmael/jenkins_lab1:v3

Copy

Compressed size

48.84 MB

test

The image is tagged differently depending on the branch:

- **dev** → tag v4
- **master** → tag v5
- **test** → tag v3

Status

Changes

Build with Parameters

Configure

Delete Pipeline

Stages

Rename

Pipeline Syntax

Pipeline lab2_q6

This build requires parameters:

BRANCH_NAME

Select the GitHub branch to build

test

Build Cancel

Builds

Filter

Today

#2 2:09 PM

#1 2:07 PM

Activities Firefox

Apr 5 14:09

lab2_q6 #2 Console [Jen] x lab2_q4 Config [Jenkins] x lab1 Config [Jenkins] x mohamedesmael10/Jen: x

192.168.159.133:8080/job/lab2_q6/2/console

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Dashboard > lab2_q6 > #2

```

[Pipeline] script
[Pipeline] {
[Pipeline] echo
Tagging image as mohamedesmael/jenkins_lab1:v3
[Pipeline] sh
+ docker tag ubuntu mohamedesmael/jenkins_lab1:v3
[Pipeline] echo
Pushing image mohamedesmael/jenkins_lab1:v3
[Pipeline] sh
+ docker push mohamedesmael/jenkins_lab1:v3
The push refers to repository [docker.io/mohamedesmael/jenkins_lab1]
2ddaf470900a: Preparing
b2d6174abbec: Preparing
270e1170e7e3: Preparing
b2d6174abbec: Layer already exists
2ddaf470900a: Layer already exists
270e1170e7e3: Layer already exists
v3, digest: sha256:16977c2462a3a4c0e23126070614ffed2f2763e78e575b2355b551839bca0bfb size: 947
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

Overview Tags

Sort by Newest Filter tags

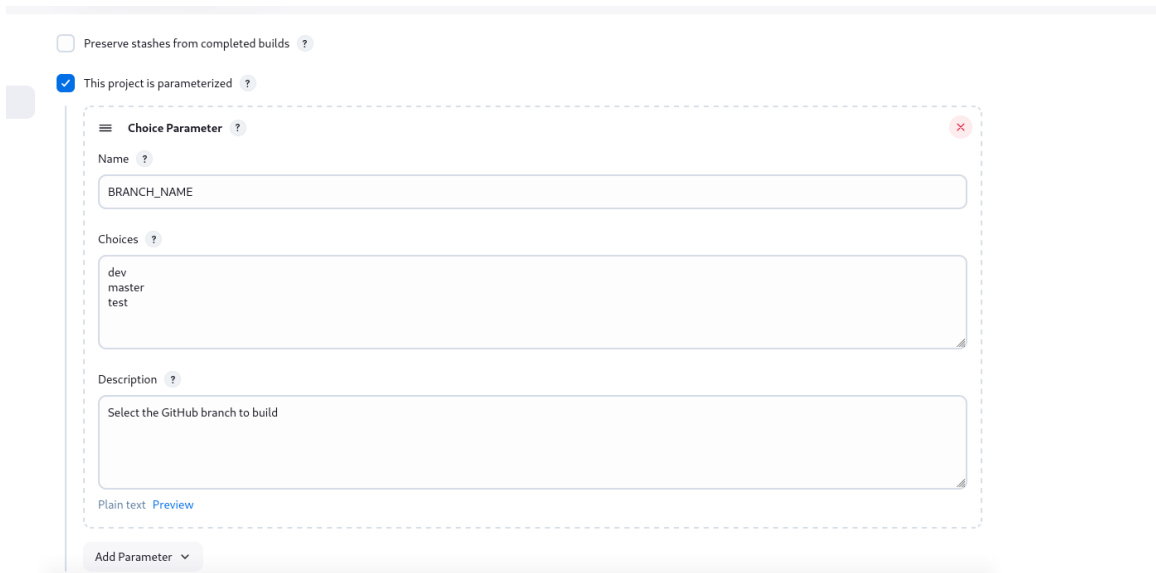
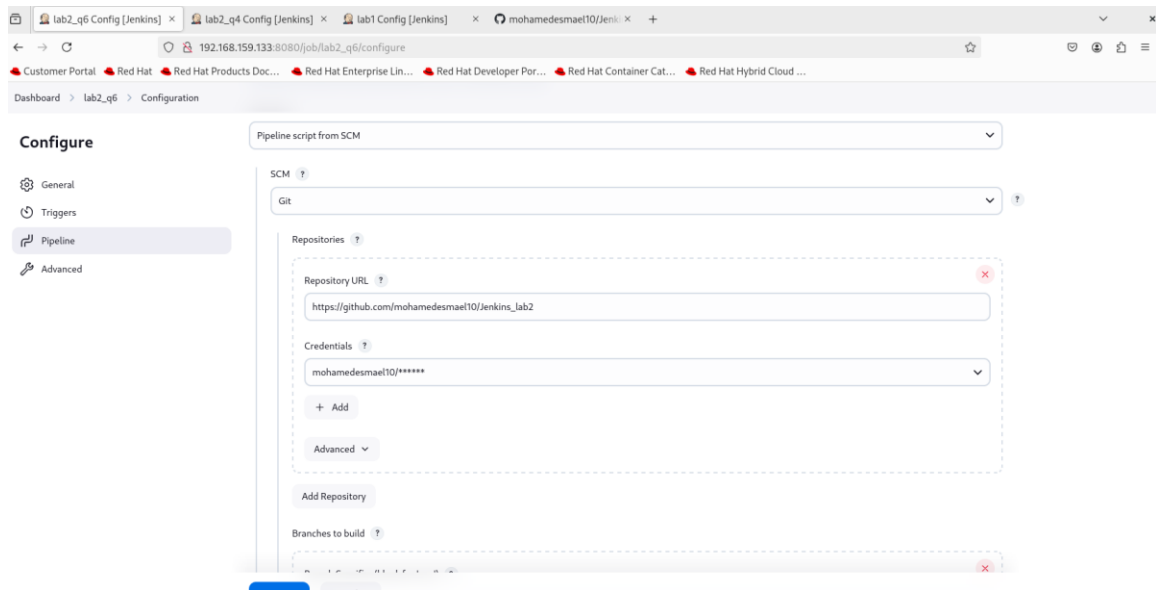
TAG

v3

Last pushed 1 minute by mohamedesmael

docker pull mohamedesmael/jenkins_lab1:v3 Copy

Digest	OS/ARCH	Last pull	Compressed size
16977c2462a3	linux/amd64	less than 1 day	48.84 MB

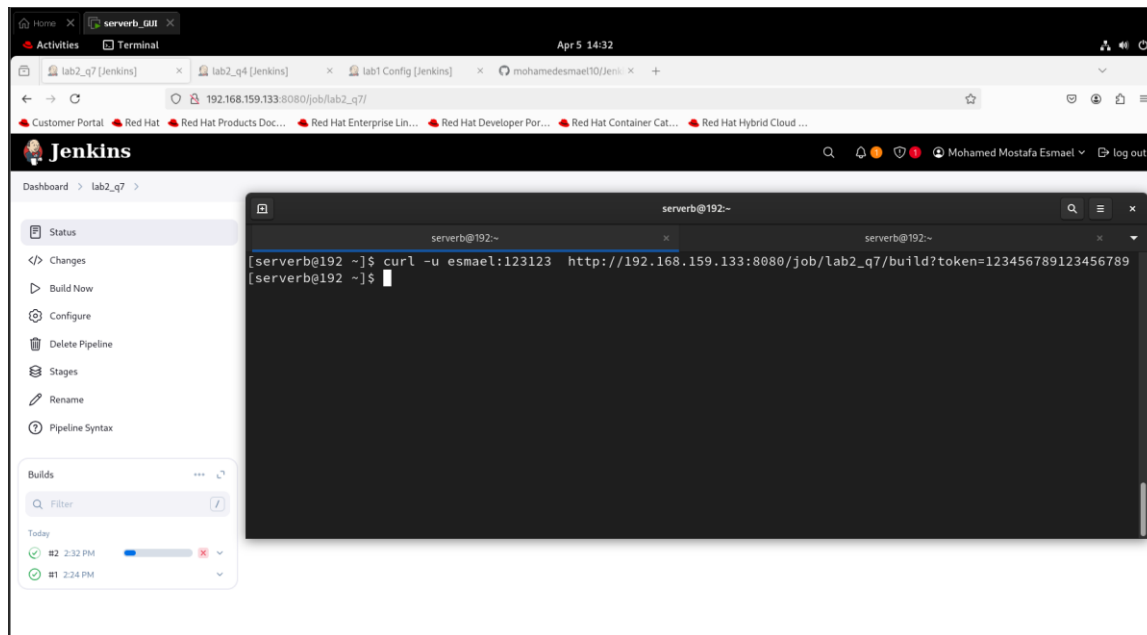


07) trigger jenkins pipeline from terminal

```
serverb@192:~$ curl http://192.168.159.133:8080/job/lab2_q7/build?token=123456789123456789
<html><head><meta http-equiv='refresh' content='1;url=/login?from=%2Fjob%2Flab2_q7%2Fbuild%3Ftoken%3D123456789123456789' /><script id='redirect' data-redirect-url='/login?from=%2Fjob%2Flab2_q7%2Fbuild%3Ftoken%3D123456789123456789' src='/static/cbf2db9/scripts/redirect.js'></script></head><body style='background-color:white; color:white;'>
Authentication required
<!--
-->

</body></html>

[serverb@192 ~]$
```



Activities Firefox Apr 5 14:33

lab2_q7 #2 Console [Jen] x lab2_q4 [Jenkins] x lab1 Config [Jenkins] x mohamedesmael10/Jenki x +

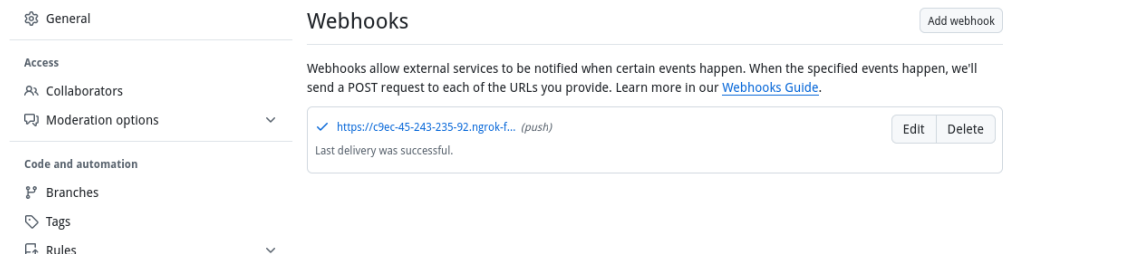
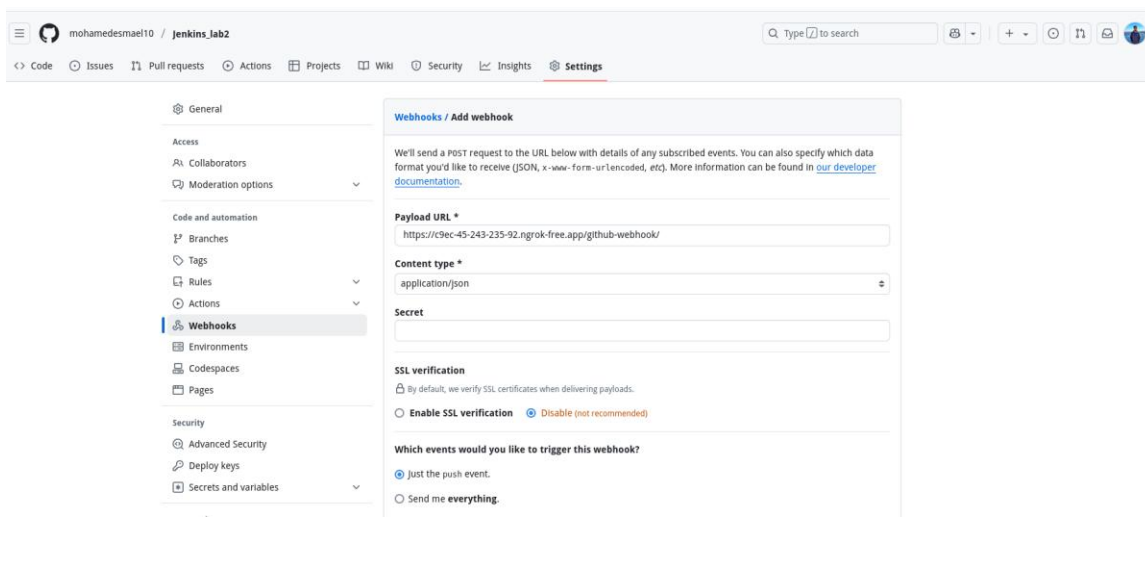
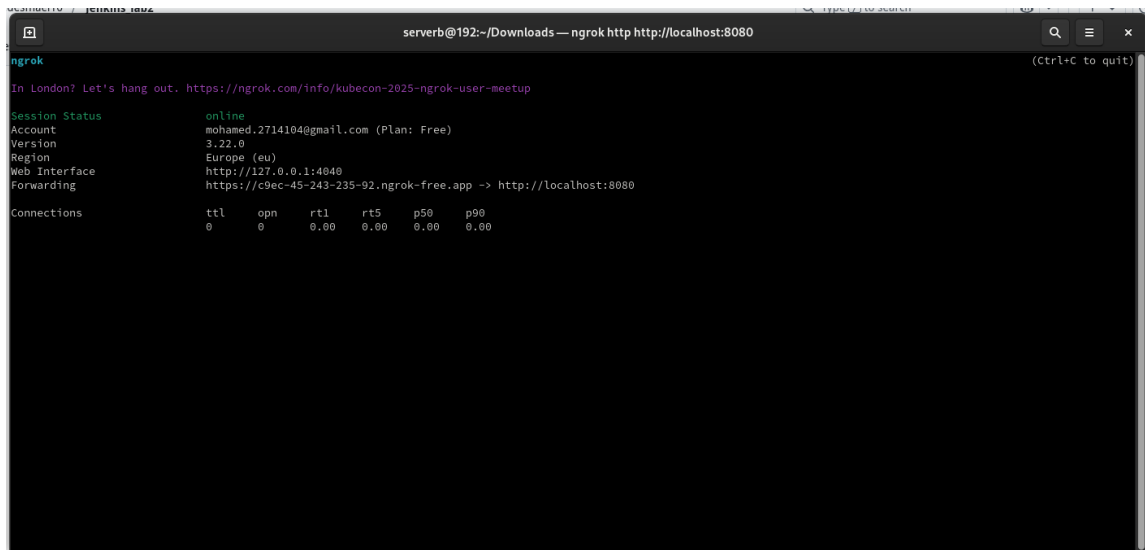
192.168.159.133:8080/job/lab2_q7/2/console

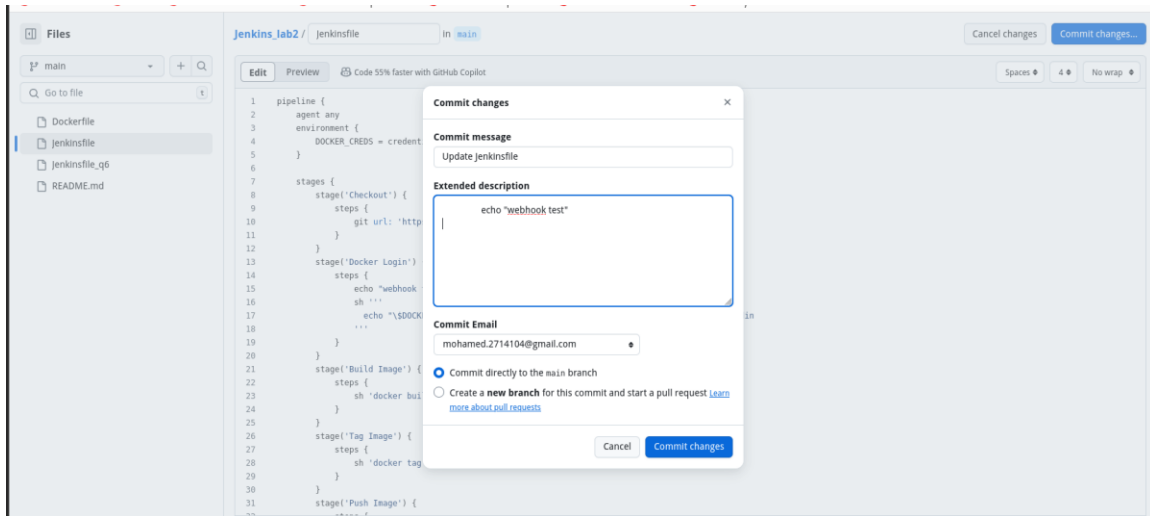
Customer Portal Red Hat Red Hat Products Doc... Red Hat Enterprise Lin... Red Hat Developer Por... Red Hat Container Cat... Red Hat Hybrid Cloud ...

Dashboard > lab2_q7 > #2

```
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Tag Image)
[Pipeline] sh
+ docker tag ubuntu mohamedesmael/jenkins_lab1:v7
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Push Image)
[Pipeline] sh
+ docker push mohamedesmael/jenkins_lab1:v7
The push refers to repository [docker.io/mohamedesmael/jenkins_lab1]
2ddaf470990a: Preparing
b2d6174abbec: Preparing
27b01170e7e3: Preparing
b2d6174abbec: Layer already exists
27b01170e7e3: Layer already exists
2ddaf470990a: Layer already exists
v7: digest: sha256:16977c2462a3a4c0e23126070614ffed2f2763e78e575b2355b551039bca0bfb size: 947
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

08) activate webhook in github to send commits to jenkins





```
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Docker Login)
[Pipeline] echo
webhook test
[Pipeline] sh
+ docker login -u mohamedmael --password-stdin
+ echo ***
Login Succeeded
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Image)
[Pipeline] sh
+ docker build -t ubuntu .
#0 building with "default" instance using docker driver
#1 [internal] load build definition from Dockerfile
```

09) run pipeline to make ec2 using terraform and by ansible run any script on it all steps done through pipeline

The screenshot shows the Jenkins 'Plugins' page. The left sidebar contains links for Updates, Available plugins, Installed plugins, and Advanced settings. The main area displays a search for 'AWS Credentials' with an 'Install' button. Below the search bar is a table with columns 'Install', 'Name', and 'Released'. The table lists the 'AWS Credentials' plugin (version 245.v8a_1b_7c11a_94d) as 'Released' 25 days ago. The description states: 'Allows storing Amazon IAM credentials within the Jenkins Credentials API. Store Amazon IAM access keys (AWSAccessKeyId and AWSSecretKey) within the Jenkins Credentials API. Also support IAM Roles and IAM MFA Token.'

The screenshot shows the 'Download progress' page in Jenkins. The left sidebar includes links for Updates, Available plugins, Installed plugins, Advanced settings, and Download progress. The main area shows the progress of various components:

- Preparation
 - Checking internet connectivity
 - Checking update center connectivity
 - Success
- Amazon Web Services SDK 2 :: Core: Success
- Amazon Web Services SDK 2 :: EC2: Installing
- Amazon Web Services SDK :: Minimal: Pending
- Amazon Web Services SDK :: EC2: Pending
- AWS Credentials: Pending
- Loading plugin extensions: Pending

At the bottom, there are two links:

- [Go back to the top page](#) (you can start using the installed plugins right away)
- ☐ Restart Jenkins when installation is complete and no jobs are running

EC2 > Instances

Instances (4) Info

Find instance by attribute or tag (case-sensitive)

All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
public-1	i-079d7abf679ade4c7	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a
public-0	i-0431796a372911984	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a
public-1	i-031fb7ea83d864a10	Terminated	t2.micro	-	View alarms +	us-east-1a
public-0	i-00a30925d29bd0948	Terminated	t2.micro	-	View alarms +	us-east-1a

Select an instance

VPC dashboard

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Route servers

Security

Network ACLs

Security groups

Your VPCs (3) Info

Search

Actions

Create VPC

Name	VPC ID	State	Block Public IP	IPv4 CIDR	IPv6 CIDR
-	vpc-010a1bb0e81ab03be	Available	Off	172.31.0.0/16	-
my-vpc	vpc-095bd4fe70782dc80	Available	Off	10.0.0.0/16	-
my-vpc-Terraform	vpc-0b90b8b7f3f9ebbe8	Available	Off	10.0.0.0/16	-

Select a VPC above

VPC dashboard

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Route servers

Security

Network ACLs

Security groups

Subnets (2) Info

Find resources by attribute or tag

Actions

Create subnet

Name	Subnet ID	State	VPC
public-subnet-1	subnet-062a2c180fe872918	Available	vpc-0b90b8b7f3f9ebbe8 my-vpc-Terraform
public-subnet-2	subnet-0cfd20dd3dfe93d17	Available	vpc-0b90b8b7f3f9ebbe8 my-vpc-Terraform

Select a subnet

aws-us-east-1.console.aws.amazon.com/vpcconsole/home

Search [Alt+S]

United States (N. Virginia) Mohamed_Esmail

S3 IAM VPC EC2

VPC dashboard

EC2 Global View

Filter by VPC

- Virtual private cloud
 - Your VPCs
 - Subnets
 - Route tables
 - Internet gateways
 - Egress-only internet gateways
 - Carrier gateways
 - DHCP option sets
 - Elastic IPs
 - Managed prefix lists
 - NAT gateways
 - Peering connections
 - Route servers
- Security
 - Network ACLs
 - Security groups

Route tables (5)

Last updated less than a minute ago

Find resources by attribute or tag

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associati...	Main	VPC
<input type="checkbox"/>	-	rtb-09a92fd0fbc351fc2	-	-	Yes	vpc-010a1bb0e81ab03ba
<input type="checkbox"/>	-	rtb-0c4066c7b91698d1e	-	-	Yes	vpc-095bd4fe70782d80
<input type="checkbox"/>	-	rtb-03f23b018e47d791e	-	-	Yes	vpc-0b90b8b7f3f9ebbe8
<input type="checkbox"/>	private	rtb-0e0db0463a62ab6b4	-	-	No	vpc-095bd4fe70782d80
<input type="checkbox"/>	esmael-public-rt	rtb-035425a7e75cd5588	2 subnets	-	No	vpc-0b90b8b7f3f9ebbe8

Select a route table

aws-us-east-1.console.aws.amazon.com/vpcconsole/home

Search [Alt+S]

United States (N. Virginia) Mohamed_Esmail

S3 IAM VPC EC2

VPC dashboard

EC2 Global View

Filter by VPC

- Virtual private cloud
 - Your VPCs
 - Subnets
 - Route tables
 - Internet gateways
 - Egress-only internet gateways
 - Carrier gateways
 - DHCP option sets
 - Elastic IPs
 - Managed prefix lists
 - NAT gateways
 - Peering connections
 - Route servers
- Security
 - Network ACLs
 - Security groups

Security Groups (6)

Export security groups to CSV

Find resources by attribute or tag

<input type="checkbox"/>	Name	Security group ID	Security group name	VPC ID
<input type="checkbox"/>	esmael-bastion-sg	sg-0ba39f735b1cf3a7e	esmael-bastion-sg	vpc-0b90b8b7f3f9ebbe8
<input type="checkbox"/>	esmael-jenkins-portainer-sg	sg-0b92ec5927e318c60	esmael-jenkins-portainer-sg	vpc-0b90b8b7f3f9ebbe8
<input type="checkbox"/>	-	sg-0e0c9f68e4b315e5b	default	vpc-010a1bb0e81ab03ba
<input type="checkbox"/>	esmael-nginx-sg	sg-000c9e016054181fb	esmael-nginx-sg	vpc-0b90b8b7f3f9ebbe8
<input type="checkbox"/>	-	sg-0a88450993f22368a	default	vpc-0b90b8b7f3f9ebbe8
<input type="checkbox"/>	-	sg-0a281b0646d7bc4f6	default	vpc-095bd4fe70782d80

Select a security group

us-east-1 console.aws.amazon.com/ec2-instance-connect/sth/home

aws Search [Alt+S]

S3 IAM VPC EC2

```
ubuntu@ip-10-0-3-21:~$ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS   NAMES
9218968db079   mohamedesmael/jenkins_lab1:latest  "bash"                  6 minutes ago Exited (0)    6 minutes ago      jenkins_lab1
ubuntu@ip-10-0-3-21:~$
```

i-079d7abf679ade4c7 (public-1)
PublicIPs: 3.82.154.227 PrivateIPs: 10.0.3.21

192.168.159.133:8080/job/lab2_q9/8/console

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Dashboard > lab2_q9 > #8

Changes

- Console Output
- Edit Build Information
- Delete build '#8'
- Timings
- Git Build Data
- Pipeline Overview
- Pipeline Console
- Restart from Stage
- Replay
- Pipeline Steps
- Workspaces
- Previous Build

```
Started by user Mohamed Mostafa Esmael
Obtained Jenkinsfile from git https://github.com/mohamedesmael10/Jenkins_lab2
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/lab2_q9
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential mohamedesmael_dockerhub
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/lab2_q9/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/mohamedesmael10/Jenkins_lab2 # timeout=10
Fetching upstream changes from https://github.com/mohamedesmael10/Jenkins_lab2
> git --version # timeout=10
> git --version # 'git version 2.43.5'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/mohamedesmael10/Jenkins_lab2 +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/terraform_ansible^{commit} # timeout=10
Checking out Revision f434d4fbed83e7274913fb9ec6520a4f5031e100 (refs/remotes/origin/terraform_ansible)
> git config core.sparsecheckout # timeout=10
> git checkout -f f434d4fbed83e7274913fb9ec6520a4f5031e100 # timeout=10
Commit message: "Update Jenkinsfile"
> git rev-list --no-walk 568db1d32f6510d3c238926f94b21a44aba88d4e # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
```

serverb GUI

Activities

Firefox

Apr 5 18:21

lab2_q8lab1 Jenkinslab2_q8lab2_q9lab2_q9

192.168.159.133:8080/job/lab2_q9/8/console

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Dashboardlab2_q9#8

changed: [3.236.154.56]

PLAY RECAP *****

3.236.154.56: ok=12 changed=8 unreachable=0 failed=0 skipped=2 rescued=0 ignored=0

3.82.154.227: ok=12 changed=8 unreachable=0 failed=0 skipped=2 rescued=0 ignored=0

[Pipeline] }

[Pipeline] // dir

[Pipeline] }

[Pipeline] // withCredentials

[Pipeline] }

[Pipeline] // stage

[Pipeline] stage

[Pipeline] { (Declarative: Post Actions)

[Pipeline] sh

+ rm -f ansible/inventory

[Pipeline] }

[Pipeline] // stage

[Pipeline] }

[Pipeline] // withEnv

[Pipeline] }

[Pipeline] // withEnv

[Pipeline] }

[Pipeline] // node

[Pipeline] End of Pipeline

Finished: SUCCESS

REST APIJenkins 2.492.3

🔍🔔🛡️👤 Mohamed Mostafa Esmael🔒 log out

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All+

S	W	Name ↕	Last Success	Last Failure	Last Duration
✔️	☁️	lab1	1 day 2 hr #4	1 day 2 hr #3	5 min 8 sec▶️
✔️	☁️	lab2_q4	5 hr 8 min #2	5 hr 10 min #1	14 sec▶️
🔧	☀️	lab2_q5	4 hr 47 min log	N/A	3 sec▶️
✔️	☀️	lab2_q6	4 hr 11 min #2	N/A	12 sec▶️
✔️	☀️	lab2_q7	3 hr 47 min #2	N/A	12 sec▶️
✔️	☀️	lab2_q8	55 min #12	N/A	17 sec▶️
✔️	☁️	lab2_q9	16 min #8	34 min #6	8 min 54 sec▶️

Icon: S M L

...

Console Output:

```
Started by user Mohamed Mostafa Esmael
Obtained Jenkinsfile from git https://github.com/mohamedesmael10/Jenkins_lab2
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/lab2_q9
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential mohamedesmael_dockerhub
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/lab2_q9/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/mohamedesmael10/Jenkins_lab2 #
timeout=10
Fetching upstream changes from https://github.com/mohamedesmael10/Jenkins_lab2
> git --version # timeout=10
> git --version # 'git version 2.43.5'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/mohamedesmael10/Jenkins_lab2
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/terraform_ansible^{commit} # timeout=10
Checking out Revision 568db1d32f6510d3c238926f94b21a44aba88d4e
(refs/remotes/origin/terraform_ansible)
> git config core.sparsecheckout # timeout=10
> git checkout -f 568db1d32f6510d3c238926f94b21a44aba88d4e # timeout=10
Commit message: "Update react.yaml"
> git rev-list --no-walk 8170cf580d17c2689be3a74c93c3788dfe6d0cff # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Docker Build)
[Pipeline] sh
+ docker build Docker/. -t mohamedesmael/jenkins_lab1:7
#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile
#1 transferring dockerfile: 300B 0.0s done
#1 DONE 0.1s
```

#2 [internal] load metadata for docker.io/library/ubuntu:22.04

#2 ...

#3 [auth] library/ubuntu:pull token for registry-1.docker.io

#3 DONE 0.0s

#2 [internal] load metadata for docker.io/library/ubuntu:22.04

#2 DONE 1.8s

#4 [internal] load .dockerignore

#4 transferring context: 2B done

#4 DONE 0.0s

#5 [1/3] FROM

docker.io/library/ubuntu:22.04@sha256:ed1544e454989078f5dec1bfdabd8c5cc9c48e0705d0
7b678ab6ae3fb61952d2

#5 DONE 0.0s

#6 [2/3] RUN apt-get update && apt-get install -y --no-install-recommends curl vim
&& apt-get clean && rm -rf /var/lib/apt/lists/*

#6 CACHED

#7 [3/3] WORKDIR /app

#7 CACHED

#8 exporting to image

#8 exporting layers done

#8 writing image

sha256:e53e4c1d788b14080bac22aa68d53f8109c52f4e56515097f117a8e2a7fd7b81 done

#8 naming to docker.io/mohamedesmael/jenkins_lab1:7 done

#8 DONE 0.0s

[Pipeline] }

[Pipeline] // stage

[Pipeline] stage

[Pipeline] { (Docker Tag as Latest)

[Pipeline] sh

+ docker tag mohamedesmael/jenkins_lab1:7 mohamedesmael/jenkins_lab1:latest

[Pipeline] }

[Pipeline] // stage

[Pipeline] stage

[Pipeline] { (Docker Push)

[Pipeline] withCredentials

Masking supported pattern matches of \$DOCKER_PASSWORD

[Pipeline] {

[Pipeline] sh

+ echo ****

+ docker login -u mohamedesmael --password-stdin

```
Login Succeeded
+ docker push mohamedesmael/jenkins_lab1:7
The push refers to repository [docker.io/mohamedesmael/jenkins_lab1]
2ddaf470900a: Preparing
b2d6174abbec: Preparing
270a1170e7e3: Preparing
270a1170e7e3: Layer already exists
2ddaf470900a: Layer already exists
b2d6174abbec: Layer already exists
7: digest: sha256:16977c2462a3a4c0e23126070614ffed2f2763e78e575b2355b551039bca0bfb
size: 947
+ docker push mohamedesmael/jenkins_lab1:latest
The push refers to repository [docker.io/mohamedesmael/jenkins_lab1]
2ddaf470900a: Preparing
b2d6174abbec: Preparing
270a1170e7e3: Preparing
2ddaf470900a: Layer already exists
270a1170e7e3: Layer already exists
b2d6174abbec: Layer already exists
latest: digest:
sha256:16977c2462a3a4c0e23126070614ffed2f2763e78e575b2355b551039bca0bfb size: 947
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Run Terraform)
[Pipeline] withCredentials
Masking supported pattern matches of $AWS_ACCESS_KEY_ID or
$AWS_SECRET_ACCESS_KEY
[Pipeline] {
[Pipeline] dir
Running in /var/lib/jenkins/workspace/lab2_q9/terraform
[Pipeline] {
[Pipeline] sh
+ export AWS_ACCESS_KEY_ID=****
+ AWS_ACCESS_KEY_ID=****
+ export AWS_SECRET_ACCESS_KEY=****
+ AWS_SECRET_ACCESS_KEY=****
+ terraform init
  [0m  [1mInitializing the backend... [0m
  [0m  [1mInitializing modules... [0m
  [0m  [1mInitializing provider plugins... [0m
- Reusing previous version of hashicorp/aws from the dependency lock file
- Reusing previous version of hashicorp/tls from the dependency lock file
- Reusing previous version of hashicorp/local from the dependency lock file
- Using previously-installed hashicorp/aws v5.94.1
- Using previously-installed hashicorp/tls v4.0.6
```

- Using previously-installed hashicorp/local v2.5.2

```
[0m [1m [32mTerraform has been successfully initialized! [0m [32m [0m  
[0m [32m
```

You may now begin working with Terraform. Try running "terraform plan" to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary. [0m

+ terraform apply -auto-approve

```
[0m [1mmodule.vpc.aws_vpc.main: Refreshing state... [id=vpc-02397187b2e5abc0a] [0m  
[0m [1mmodule.internet_gateway.aws_internet_gateway.gw: Refreshing state... [id=igw-  
05d355c59eb19dbf6] [0m  
[0m [1mmodule.bastion_security_group.aws_security_group.sg: Refreshing state... [id=sg-  
0d25d2e89240a81dd] [0m  
[0m [1mmodule.public_subnet_1.aws_subnet.subnets: Refreshing state... [id=subnet-  
0a8d4f80929cb96f8] [0m  
[0m [1mmodule.jenkins_portainer_sg.aws_security_group.sg: Refreshing state... [id=sg-  
03709420fdeaa5f82] [0m  
[0m [1mmodule.public_subnet_2.aws_subnet.subnets: Refreshing state... [id=subnet-  
01d07981ce20a6381] [0m  
[0m [1mmodule.key.tls_private_key.rsa: Refreshing state...  
[id=5981330f47e7f2d4119081807692ab306c171911] [0m  
[0m [1mmodule.nginx_security_group.aws_security_group.sg: Refreshing state... [id=sg-  
0edb945belff5a935] [0m  
[0m [1mmodule.key.aws_key_pair.TF_key: Refreshing state... [id=key-pair] [0m  
[0m [1mmodule.key.local_file.TF-key: Refreshing state...  
[id=0ea4cea05ad57a9a0a2373ffff89dale927c316b] [0m  
[0m [1mmodule.load_balancer.aws_lb_target_group.lb: Refreshing state...  
[id=arn:aws:elasticloadbalancing:us-east-1:025066251600:targetgroup/my-target-  
group/10c2f50cf97d4cb6] [0m  
[0m [1mmodule.public_route_table.aws_route_table.public: Refreshing state... [id=rtb-  
0d03d9932f76f14e8] [0m  
[0m [1mmodule.public_instances.aws_instance.instance[0]: Refreshing state... [id=i-  
00a30923d29bd0948] [0m  
[0m [1mmodule.public_instances.aws_instance.instance[1]: Refreshing state... [id=i-  
031fb7ea83d864a10] [0m  
[0m [1mmodule.load_balancer.aws_lb.lb: Refreshing state...  
[id=arn:aws:elasticloadbalancing:us-east-1:025066251600:loadbalancer/app/my-load-  
balancer/d490abb3b715419a] [0m  
[0m [1mmodule.public_route_table.aws_route_table_association.public_association[1]:  
Refreshing state... [id=rtbassoc-06d27a5e3cadf1122] [0m  
[0m [1mmodule.public_route_table.aws_route_table_association.public_association[0]:  
Refreshing state... [id=rtbassoc-0183daf0fe520e38f] [0m
```

```
[0m [1mmodule.load_balancer.aws_lb_listener.lb: Refreshing state...
[id=arn:aws:elasticloadbalancing:us-east-1:025066251600:listener/app/my-load-
balancer/d490abb3b715419a/1ecf9e75211640cf] [0m
[0m [1mmodule.load_balancer.aws_lb_target_group_attachment.lb[1]: Refreshing state...
[id=arn:aws:elasticloadbalancing:us-east-1:025066251600:targetgroup/my-target-
group/10c2f50cf97d4cb6-202504051418242839000000004] [0m
[0m [1mmodule.load_balancer.aws_lb_target_group_attachment.lb[0]: Refreshing state...
[id=arn:aws:elasticloadbalancing:us-east-1:025066251600:targetgroup/my-target-
group/10c2f50cf97d4cb6-202504051418243193000000005] [0m
```

```
[0m [1m [32mNo changes. [0m [1m Your infrastructure matches the configuration. [0m
```

[0mTerraform has compared your real infrastructure against your configuration
and found no differences, so no changes are needed.

```
[0m [1m [32m
Apply complete! Resources: 0 added, 0 changed, 0 destroyed.
```

```
[0m [0m [1m [32m
Outputs:
```

```
[0mbastion_public_ip_1 = "3.239.222.193"
bastion_public_ip_2 = "3.84.120.51"
public_lb_dns = "my-load-balancer-1067543872.us-east-1.elb.amazonaws.com"
+ chmod +x inventory.sh
+ ./inventory.sh
[Pipeline] }
[Pipeline] // dir
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Run Ansible)
[Pipeline] withCredentials
Masking supported pattern matches of $AWS_ACCESS_KEY_ID or
$AWS_SECRET_ACCESS_KEY
[Pipeline] {
[Pipeline] dir
Running in /var/lib/jenkins/workspace/lab2_q9/ansible
[Pipeline] {
[Pipeline] sh
+ cat inventory
[web]
3.239.222.193
3.84.120.51
+ ansible-playbook -i inventory react.yaml
```

```
PLAY [Setup Docker and run container] *****
```


TASK [Gathering Facts] *****
ok: [3.239.222.193]
ok: [3.84.120.51]

TASK [Update apt cache] *****
changed: [3.239.222.193]
changed: [3.84.120.51]

TASK [Install prerequisites] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Add Docker GPG key] *****
changed: [3.84.120.51]
changed: [3.239.222.193]

TASK [Add Docker repository] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Install Docker] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Ensure Docker service is running] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Add user to Docker group] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Restart Docker service] *****
changed: [3.84.120.51]
changed: [3.239.222.193]

TASK [Pull the latest version of the Docker image] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Check if the container is already running] *****
ok: [3.84.120.51]
ok: [3.239.222.193]

TASK [Stop the existing Docker container if it is running] *****
skipping: [3.239.222.193]
skipping: [3.84.120.51]

TASK [Remove the existing Docker container if it exists] *****
skipping: [3.239.222.193]
skipping: [3.84.120.51]

TASK [Run the latest version of the Docker image] *****
changed: [3.84.120.51]
changed: [3.239.222.193]

PLAY RECAP *****
3.239.222.193 : ok=12 changed=4 unreachable=0 failed=0 skipped=2
rescued=0 ignored=0
3.84.120.51 : ok=12 changed=4 unreachable=0 failed=0 skipped=2
rescued=0 ignored=0

[Pipeline] }
[Pipeline] // dir
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] sh
+ rm -f ansible/inventory
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS