

=====“Version 1 “=====

After adding files to github :

Here are the steps to include in your README file for setting up and running the Jenkins pipeline:

1. Open your browser and go to <http://localhost:8080> to access the Jenkins dashboard.
2. In the Jenkins dashboard, click on **New Item**.
3. Enter a name for your project, select **Pipeline**, and click **OK**.
4. In the project configuration, under the **Pipeline** section:
 - Select **Pipeline script from SCM**.
 - Choose **Git** as the SCM



Pipeline

Definition

Pipeline script from SCM

SCM ?

Git

Repositories ?

Repository URL ?

<https://github.com/aliaminsalah/project.git>

Credentials ?

aliaminsalah/**

+ Add

Advanced

- Provide the repository URL.
 - **Note:** Ensure the correct **Credentials** are selected, especially if the Git repository is private.
5. Set the **Script Path** to Jenkinsfile (this is the file containing the pipeline script in your repository).

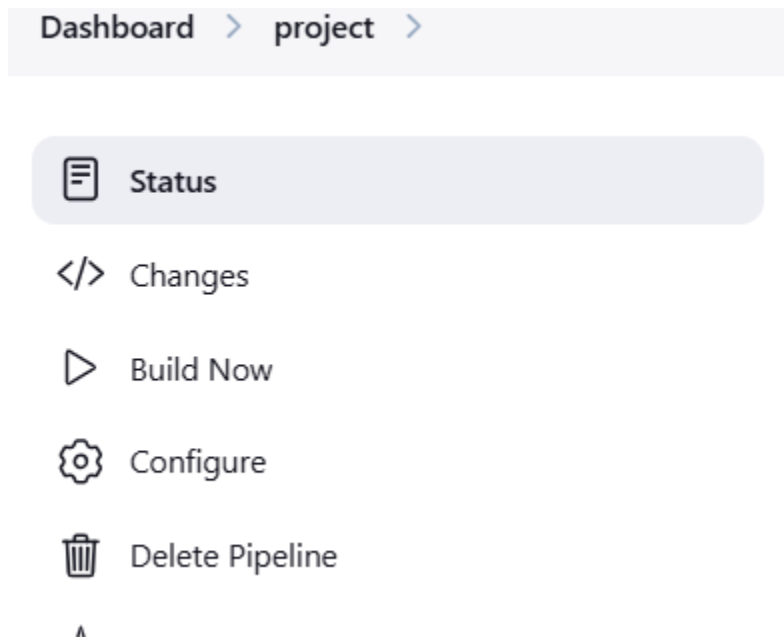


Script Path ?

Jenkinsfile

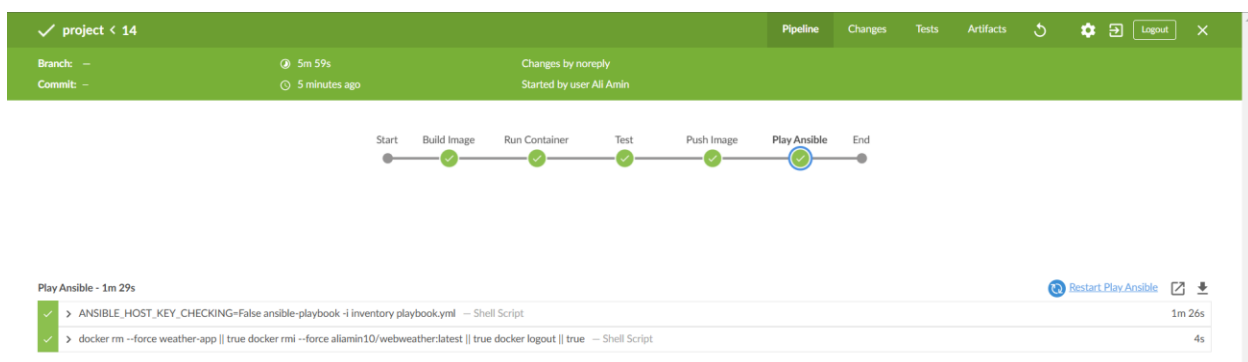
6. Click **Apply** and then **Save**.

7. To trigger the pipeline, click **Build Now**.



This process will clone the repository, read the Jenkinsfile, and execute the pipeline as defined.

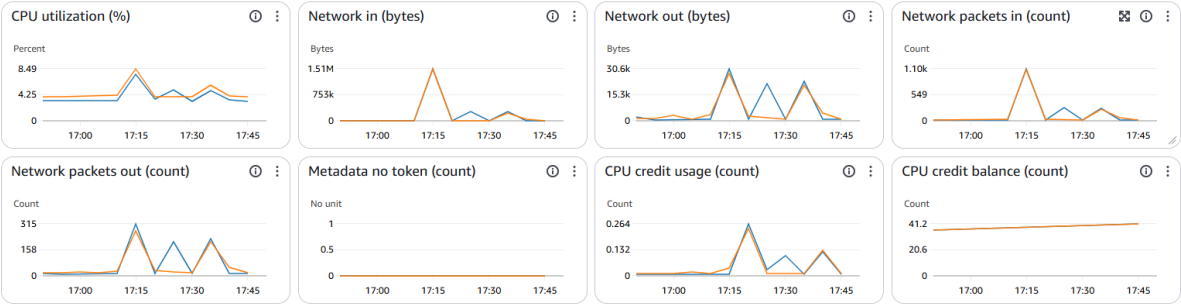
The out pipeline:





Build Image - 3m 6s	Restart Build Image 📄 📄
✓ > Check out from version control	3s
✓ > docker build --no-cache -t aliamin10/webweather.latest . -- Shell Script	3m 3s
Run Container - 27s	Restart Run Container 📄 📄
✓ > docker rm -f weather-app true docker run -d --name weather-app -p 5000:5000 aliamin10/webweather.latest -- Shell Script	18s
Test - 4s	Restart Test 📄 📄
✓ > docker ps grep weather-app -- Shell Script	<1s

2 instances selected



=====“Version 2 ”=====

```
ali@ALI:~/project$ bash script.sh
Hello, This is my final project for Dhub!
===== First Stage: Build Image =====
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.

        Install the buildx component to build images with BuildKit:
        https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 792.5MB
Step 1/7 : FROM python:3.9-slim
--> b9b3c02da6c3
Step 2/7 : WORKDIR /app
--> Using cache
--> 4f1688e54ae4
Step 3/7 : COPY requirements.txt .
--> 3c9fdb027f32
Step 4/7 : RUN pip install --no-cache-dir -r requirements.txt
--> Running in f9ed1e5edbd7
Collecting Flask
  Downloading flask-3.1.0-py3-none-any.whl (102 kB)
  ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 103.0/103.0 kB 1.1 MB/s eta 0:00:00
Collecting requests
  Downloading requests-2.32.3-py3-none-any.whl (64 kB)
  ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 64.9/64.9 kB 1.9 MB/s eta 0:00:00
Collecting matplotlib
  Downloading matplotlib-3.9.4-cp39-cp39-manylinux_2_17_x86_64.manylinux2014_x86_64
.whl (8.3 MB)
```

```
Successfully built 90ca6e5b016d
Successfully tagged webweather:latest
Image built successfully.
===== Second Stage: Run Container =====
weather-app
1200800bc3ec745eb88ca7a58673dfd3043750f2d51044f61ad25b8af2279183
Container is running.
===== Third Stage: Test Container =====
Container is running correctly.
===== Cleaning Up Local Image =====
Untagged: webweather:latest
Deleted: sha256:90ca6e5b016d4636399b2166ae0d642fa4b1cbcb4e368a2a7eb60ae1d5f4b3f1
Deleted: sha256:90f7643deb88ffd0c4a50f8d820450015d69539ae87e1bb52efad80ef706560d
Deleted: sha256:b56c068ddafb689afd1983ab9de1a111caed35e701e34f6adfc77e805d3425eb
Deleted: sha256:a09f1694bc12caf65fec994ec103822e57a300bbc134c569d8e9f36af8c6612b
Deleted: sha256:9a5f4b0b325438400ee7a7e4cc6277d2d88ab83fcf7f3afff70719af3d49b693
Deleted: sha256:26322e254eab6b5d88268518d65ef653a8f5ac7cb0f1a4bd34d968390c16b1c3
Deleted: sha256:3c9fdb027f32e903c53ff1f23fe5323776a31f7d5cab433a3b3c7b5e6caf8e30
Deleted: sha256:db29b3fcd2768491c6de185c3a9423e62c39ffe3b4a70c83dde0585612b2f103
Local image removed successfully.
```

```
===== Fourth Stage: Push Image =====
Image pushed successfully.
```

aliamin10/webweather



Last pushed about 24 hours ago







Add a description   INCOMPLETE

Add a category   INCOMPLETE

Tags

This repository contains 2 tag(s).

Tag	OS	Type	Pulled
 latest		Image	an hour ago

<input type="checkbox"/>	ubuntu-serv...	i-00d5b45eb8fc2372	 	t2.micro	 2/2 checks pass View alarms +	us-east-1b	ec2-54-224-240-61.co...	54.224.240.61	-
<input type="checkbox"/>	ubuntu-serv...	i-01d170184e15ed8b3	 	t2.micro	 2/2 checks pass View alarms +	us-east-1b	ec2-54-89-17-91.comp...	54.89.17.91	-

===== Fifth Stage: Play Ansible =====

PLAY [Update system and setup environment on remote server] *****

TASK [Gathering Facts] *****

[WARNING]: Platform linux on host 54.224.240.61 is using the discovered Python interpreter at /usr/bin/python3.8, but future installation of another Python interpreter could

change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.

ok: [54.224.240.61]

[WARNING]: Platform linux on host 54.89.17.91 is using the discovered Python interpreter at /usr/bin/python3.8, but future installation of another Python interpreter could

change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.

ok: [54.89.17.91]

TASK [Ensure ubuntu is in sudo group (Debian/Ubuntu)] *****

ok: [54.89.17.91]

ok: [54.224.240.61]

TASK [Update apt package list] *****

changed: [54.89.17.91]

```
TASK [Start Docker service] *****
*****

ok: [54.89.17.91]
ok: [54.224.240.61]

TASK [Add ubuntu to docker group] *****
*****

ok: [54.224.240.61]
ok: [54.89.17.91]

TASK [Pull small Docker image] *****
*****

ok: [54.224.240.61]
ok: [54.89.17.91]

PLAY RECAP *****
*****

54.224.240.61      : ok=9    changed=1    unreachable=0    failed=0    skip
ped=0    rescued=0    ignored=0
54.89.17.91       : ok=9    changed=1    unreachable=0    failed=0    skip
ped=0    rescued=0    ignored=0

Ansible executed successfully.
Pipeline completed successfully!
```

```
ali@ALI:~$ ssh -i ~/.ssh/ansible1.pem ubuntu@54.89.17.91
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.11.0-1022-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Tue Dec 17 02:49:53 UTC 2024

System load:  0.0                       Processes:            109
Usage of /:   40.4% of 7.69GB           Users logged in:     0
Memory usage: 27%                       IPv4 address for eth0: 172.31.39.243
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '22.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

*** System restart required ***
Last login: Tue Dec 17 02:32:36 2024 from 156.210.56.181
ubuntu@ip-172-31-39-243:~$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
aliamin10/webweather latest          c7b4f257e3c8   4 days ago    289MB
ubuntu@ip-172-31-39-243:~$
```


=====“Version 3 “=====

bash script-terraform.sh

```
● ali@ALI:~/project$ bash script-terraform.sh
Hello, This is my final project for Dhub!
===== First Stage: Build Image =====
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
             Install the buildx component to build images with BuildKit:
             https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  792.5MB
Step 1/6 : FROM python:3.9-slim
--> b9b3c02da6c3
Step 2/6 : WORKDIR /app
--> Using cache
--> 4f1688e54ae4
Step 3/6 : COPY . .
--> 42b2f1dc6fab
Step 4/6 : RUN pip install --no-cache-dir -r requirements.txt
--> Running in 420bd9a39747
Collecting Flask
  Downloading flask-3.1.0-py3-none-any.whl (102 kB)
    _____ 103.0/103.0 kB 1.1 MB/s eta 0:00:00
Collecting requests
  Downloading requests-2.32.3-py3-none-any.whl (64 kB)
    _____ 64.9/64.9 kB 1.8 MB/s eta 0:00:00
Collecting matplotlib
  Downloading matplotlib-3.9.4-cp39-cp39-manylinux_2_17_x86_64_manylinux2014_x86_64.whl (8.3 MB)
    _____ 8.3/8.3 MB 1.5 MB/s eta 0:00:00
Collecting Jinja2>=3.1.2
  Downloading jinja2-3.1.4-py3-none-any.whl (133 kB)
    _____ 133.3/133.3 kB 1.8 MB/s eta 0:00:00
Collecting Werkzeug>=3.1
  Downloading werkzeug-3.1.3-py3-none-any.whl (224 kB)
    _____ 224.5/224.5 kB 1.8 MB/s eta 0:00:00
Collecting click>=8.1.3
  Downloading click-8.1.7-py3-none-any.whl (97 kB)
    _____ 97.9/97.9 kB 1.8 MB/s eta 0:00:00
```

```
7 4572f111da00
Step 6/6 : CMD ["python3", "app.py"]
--> Running in b080ba9311ae
--> Removed intermediate container b080ba9311ae
--> 5d1ccdea3363
Successfully built 5d1ccdea3363
Successfully tagged webweather:latest
Image built successfully.
```

```

===== Second Stage: Run Container =====
weather-app
e3a6e0c9bb44e2ddca592508635a2db9bfa26b04b92a93b8bbaba7bceb005111
Container is running.
===== Third Stage: Test Container =====
Container is running correctly.
===== Fourth Stage: Push Image =====
The push refers to repository [docker.io/aliamin10/webweather]
78433081ccb3: Layer already exists
e32215819748: Layer already exists
826d46a5815e: Layer already exists
d86feaf80e98: Layer already exists
19f5accf4683: Layer already exists
0300a07ea341: Layer already exists
98b5f35ea9d3: Layer already exists
latest: digest: sha256:df9692b38c6fe64ba87e825a267192c34ee2b9d6c3decebc341c011cd4828dbb size: 1786
Image pushed successfully.
===== Cleaning Up Local Image =====
Untagged: webweather:latest
Deleted: sha256:5d1ccdea3363619a89352365df5a5164c9b091d1b0849fee2490dd54f5f791d1
Deleted: sha256:d972f111a0a894ebafbdfe270f7e6377eb21d505b8a0cb35e24b09963f9d6816
Deleted: sha256:227296597c302eb9b6d9d38b9ab007480959aa2798127d4429d1c4e530a4eeef9
Deleted: sha256:2a4ea3b09056fdad178eee1ff6f8868dedbcb00da316dda8246f5e7d76cd314b
Deleted: sha256:42b2f1dc6fabb694bee3107897f868091e111023fedbfccf0309232f9f8c9f14
Deleted: sha256:0de828a497f1156b8acc8fcf4d4f104b4defe1a0d26a122d9114885a14334df6
Local image removed successfully.

```

aliamin10

▼



🔍

Search by repository name

All content

▼

Create a repository

Name	Last Pushed 	Contains	Visibility	Scout
aliamin10/webweather	11 minutes ago	 IMAGE	Public	Inactive

```

===== Fifth Stage: Play Terraform =====
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.81.0

Terraform has been successfully initialized!

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.
aws_instance.ansible_server[1]: Refreshing state... [id=i-00d5bf45eb8fc2372]
aws_instance.ansible_server[0]: Refreshing state... [id=i-01d170184e15ed8b3]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
~ update in-place

Terraform will perform the following actions:

# aws_instance.ansible_server[0] will be updated in-place
~ resource "aws_instance" "ansible_server" {
    id          = "i-01d170184e15ed8b3"
    tags        = {
        "Name" = "ubuntu-server-1"
    }
    ~ user_data = "52ca6e89e114acfbad2528f5be5d68f26adebcec" -> "baf548ed6d6740cd1560a71af0807b5f17a9b86a"
    # (39 unchanged attributes hidden)

```

```
# aws_instance.ansible_server[1] will be updated in-place
~ resource "aws_instance" "ansible_server" {
  id
  tags
    "Name" = "ubuntu-server-2"
  }
~ user_data                                = "52ca6e89e114acfbad2528f5be5d68f26adebcec" -> "baf548ed6d6740cd1560a71af0807b5f17a9b86a"
# (39 unchanged attributes hidden)

# (8 unchanged blocks hidden)
}
```

Plan: 0 to add, 2 to change, 0 to destroy.

aws_instance.ansible_server[1]: Modifying... [id=i-00d5bf45eb8fc2372]
aws_instance.ansible_server[0]: Modifying... [id=i-01d170184e15ed8b3]
aws_instance.ansible_server[1]: Still modifying... [id=i-00d5bf45eb8fc2372, 10s elapsed]
aws_instance.ansible_server[0]: Still modifying... [id=i-01d170184e15ed8b3, 10s elapsed]
aws_instance.ansible_server[1]: Still modifying... [id=i-00d5bf45eb8fc2372, 20s elapsed]
aws_instance.ansible_server[0]: Still modifying... [id=i-01d170184e15ed8b3, 20s elapsed]
aws_instance.ansible_server[1]: Modifications complete after 28s [id=i-00d5bf45eb8fc2372]
aws_instance.ansible_server[0]: Modifications complete after 28s [id=i-01d170184e15ed8b3]

Apply complete! Resources: 0 added, 2 changed, 0 destroyed.
Terraform executed successfully.
Pipeline completed successfully!

ali@ALT:~/projects\$

Instances (2) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

All states

Instance state = running

Clear filters

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	ubuntu-serv...	i-00d5bf45eb8fc2372	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-3-94-108-25.comp...	3.94.108.25	-
<input type="checkbox"/>	ubuntu-serv...	i-01d170184e15ed8b3	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-50-19-172-68.com...	50.19.172.68	-

```
ali@ALI:~/project$ ssh -i ~/.ssh/ansible1.pem ubuntu@3.94.108.25
The authenticity of host '3.94.108.25 (3.94.108.25)' can't be established.
ED25519 key fingerprint is SHA256:OFQcQNHdIyoQVZIsoKmd1zAfWKMx1y4pWR7UD/835I.
This host key is known by the following other names/addresses:
  ~/.ssh/known_hosts:24: 54.237.235.118
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.94.108.25' (ED25519) to the list of known hosts.
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.11.0-1022-aws x86_64)
```

```
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/pro
```

System information as of Mon Dec 16 03:06:15 UTC 2024

```
System load:  0.0          Processes:            106
Usage of /:   31.0% of 7.69GB Users logged in:      0
Memory usage: 25%         IPv4 address for eth0: 172.31.45.153
Swap usage:   0%
```

Expanded Security Maintenance for Applications is not enabled.

26 updates can be applied immediately.
8 of these updates are standard security updates.
To see these additional updates run: `apt list --upgradable`

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: `sudo pro status`

New release '22.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sun Dec 15 14:00:06 2024 from 156.210.56.181

```
ubuntu@ip-172-31-45-153:~$
```

```
ubuntu@ip-172-31-45-153:~$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
aliamin10/webweather	latest	c7b4f257e3c8	3 days ago	289MB

```
ubuntu@ip-172-31-45-153:~$
```

2 instances selected

