

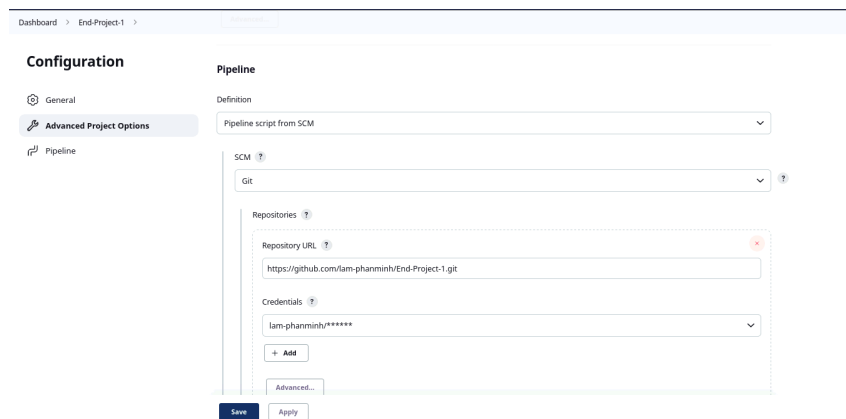
1. Link github repo: <https://github.com/lam-phanminh/End-Project-1>

- In this repo, I add Dockerfile to build source code PHP.
- About Dockerfile:

```
Dockerfile 2 x
Dockerfile > ...
1 FROM devopsedu/webapp
2 WORKDIR /var/www/html
3 RUN rm -rf index.html index.php && \
4     rm -rf /etc/apache2/sites-enabled/000-default.conf
5 COPY 000-default.conf /etc/apache2/sites-enabled/
6 COPY . /var/www/html
7 EXPOSE 80
8 CMD ["apachectl", "-D", "FOREGROUND"]
```

- Base image: devopsedu/webapp
- My workdir is /var/www/html
- I add line DirectoryIndex index.php into 000-default.conf file and copy 000-default.conf from this directory to /etc/apache2/sites-enabled/ of container.
- Copy source code to /var/www/html
- Expose port 80
- Final, start apache.

2. Create Jenkins pipeline job and config:



Dashboard > End-Project-1 >

### Configuration

- General
- Advanced Project Options
- Pipeline**

[Add New Pipeline](#)

Branches to build [?](#)

Branch Specifier (blank for 'any') [?](#)

[Add Branch](#)

Repository browser [?](#)

Additional Behaviours

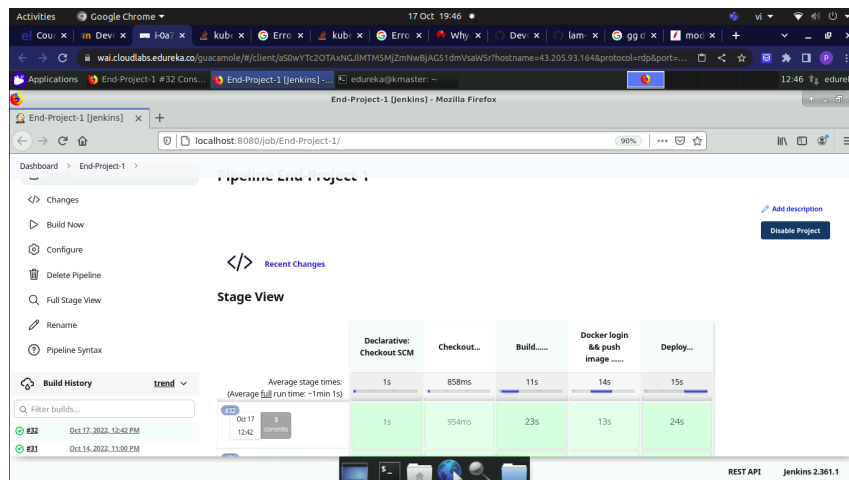
[Add +](#)

Script Path [?](#)

☒ Lightweight checkout [?](#)

[Save](#) [Apply](#)

### • Job:



### 3. Jenkinsfile:

```

1 pipeline{
2
3   // agent (label 'kslave1')
4
5   agent any
6   stages{
7     stage('Checkout...'){
8       steps{
9         echo 'cloning..'
10        git 'https://github.com/lam-phanminh/End-Project-1.git'
11      }
12    }
13    stage('Build.....'){
14      steps{
15        sh 'docker build -t phamminhlan/php-app:$BUILD_NUMBER .'
16      }
17    }
18    stage('Docker login && push image .....'){
19      steps{
20        withCredentials([usernamePassword(credentialsId: 'docker-hub', passwordVariable: 'passwd', usernameVariable: 'user')]) {
21          sh 'echo "${passwd} | docker login -u ${user} --password-stdin && docker push phamminhlan/php-app:$BUILD_NUMBER'
22        }
23      }
24    }
25    stage('Deploy...'){
26      steps{
27        // sh 'cd ansible-deploy && ansible-playbook -i inventory playbook.yml --extra-vars "tag=$BUILD_NUMBER"'
28        ansiblePlaybook installation: 'ansible-kslave1', inventory: './ansible-deploy/inventory', playbook: './ansible-deploy/playbook.yml', extras:
29        "--extra-vars tag=$BUILD_NUMBER"
30      }
31    }
32  }
33 }
34
35
36
37 }

```

#### 4. Ansible:

- Playbook:

```

! playbook.yml 1,4 x
ansible-deploy > ! playbook.yml > {} 0 > {} tasks > {} 0 > {} docker_container > [] ports > [] 0
Ansible Playbook (ansible.json)
1 ---
2 - hosts: kslave1
3   become: yes
4   tasks:
5     - name: deploy PHP app docker container
6       docker_container:
7         image: 'phamminhlan/php-app:{{ tag }}'
8         name: php-app
9         state: started
10        ports:
11        - "8888:80"

```

- Inventory:

```

Inventory x
ansible-deploy > Inventory
1 [kslave1]
2 172.31.31.158 ansible_user=root

```

#### 5. Console output:

- Stage Checkout...:

```

Dashboard > End-Project-1 > #32

> git checkout -f 2faa3431b875efcd4159ee68cb225e06dce190 # timeout=10
-----
> git rev-list --no-walk 54d384338c39c1076f6c38fd971a010e3949b82c # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout...)
[Pipeline] echo
cloning..
[Pipeline] git
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/End-Project-1/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/lan-phaminh/End-Project-1.git # timeout=10
Fetching upstream changes from https://github.com/lan-phaminh/End-Project-1.git
> git --version # timeout=10
> git --version # 'git version 2.17.1'
> git fetch --tags --progress -- https://github.com/lan-phaminh/End-Project-1.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 2faa3431b875efcd4159ee68cb225e06dce190 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 2faa3431b875efcd4159ee68cb225e06dce190 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10
> git checkout -B master 2faa3431b875efcd4159ee68cb225e06dce190 # timeout=10
Commit message: "modify syntax Jenkinsfile"

```

## • Stage Build.....:

```

Dashboard > End-Project-1 > #32

Commit message: "modify syntax Jenkinsfile"
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build.....)
[Pipeline] sh
+ docker build -t phaminhlan/php-app:32 .
Sending build context to Docker daemon 262.1kB

Step 1/7 : FROM devopsedu/webapp
latest: Pulling from devopsedu/webapp
a48c50ed2d4e: Pulling fs layer
1e1de00ff7d1: Pulling fs layer
0338ca45a200: Pulling fs layer
471db38cbcfb: Pulling fs layer
0b4ab487617: Pulling fs layer
c2e32ec79cfd: Pulling fs layer
7a1cc782c1ae: Pulling fs layer
0b4ab487617: Waiting
c2e32ec79cfd: Waiting
7a1cc782c1ae: Waiting
471db38cbcfb: Waiting
0338ca45a200: Verifying Checksum
0338ca45a200: Download complete
a48c50ed2d4e: Download complete
1e1de00ff7d1: Verifying Checksum
1e1de00ff7d1: Download complete
471db38cbcfb: Verifying Checksum
471db38cbcfb: Download complete
0b4ab487617: Verifying Checksum
0b4ab487617: Download complete

0338ca45a200: Pull complete
471db38cbcfb: Pull complete
0b4ab487617: Pull complete
c2e32ec79cfd: Pull complete
7a1cc782c1ae: Pull complete
Digest: sha256:5c95d958c163838b8e79edc7ba8f05d856d1594416c8755639da82703a1b834
Status: Downloaded newer image for devopsedu/webapp:latest
--> 0e191240e173
Step 2/7 : WORKDIR /var/www/html
--> Running in 1f83605126ee
Removing intermediate container 1f83605126ee
--> 200791132ccc
Step 3/7 : RUN rm -rf index.html index.php && rm -rf /etc/apache2/sites-enabled/000-default.conf
--> Running in 0ba32204e5f4
Removing intermediate container 0ba32204e5f4
--> a598cc38a2ab
Step 4/7 : COPY 000-default.conf /etc/apache2/sites-enabled/
--> a54ca0d9e5e3
Step 5/7 : COPY . /var/www/html
--> a60b0d5d8bc7
Step 6/7 : EXPOSE 80
--> Running in ba0debe5df58
Removing intermediate container ba0debe5df58
--> 0bc6e41a5633
Step 7/7 : CMD ["apachectl", "-D", "FOREGROUND"]
--> Running in 37926c3dff18
Removing intermediate container 37926c3dff18
--> aff702bf78c4
Successfully tagged phaminhlan/php-app:32

```

## • Stage Docker login && push image .....

```
Dashboard > End-Project-1 > #32

successfully tagged phamminhlan/php-app:32
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Docker login && push image .....)
[Pipeline] withCredentials
Masking supported pattern matches of $password
[Pipeline] {
[Pipeline] sh
+ echo **** | docker login -u --password-stdin
**** | docker login -u --password-stdin
+ docker push phamminhlan/php-app:32
The push refers to repository [docker.io/phamminhlan/php-app]
9f0b3504cd7: Preparing
725e72899fe: Preparing
4560901f8bab: Preparing
7a2921c5effc: Preparing
75408c63561b: Preparing
059a0d0bcacf: Preparing
8bd5f072feec: Preparing
67885e448177: Preparing
ec75999a0cb1: Preparing
050a050ae76a: Preparing
059a0d0bcacf: Waiting
8bd5f072feec: Waiting
67885e448177: Waiting
ec75999a0cb1: Waiting
050a050ae76a: Waiting
75408c63561b: Layer already exists
7a2921c5effc: Layer already exists
059a0d0bcacf: Layer already exists
8bd5f072feec: Layer already exists

Dashboard > End-Project-1 > #32

8bd5f072feec: Layer already exists
67885e448177: Layer already exists
ec75999a0cb1: Layer already exists
050a050ae76a: Layer already exists
725e72899fe: Pushed
4560901f8bab: Pushed
9f0b3504cd7: Pushed
32: digest: sha256:4c4efb16a2a8ba98cb70a231d54f8f480944a5962f9a2720518e05d9952f5 size: 2399
```

• Stage Deploy...

```
Dashboard > End-Project-1 > #32

32: digest: sha256:4c4efb16a2a8ba98cb70a231d54f8f480944a5962f9a2720518e05d9952f5 size: 2399
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy...)
[Pipeline] ansiblePlaybook
[End-Project-1] $ /usr/bin/ansible-playbook ./ansible-deploy/playbook.yml -i ./ansible-deploy/inventory --extra-vars tag=32

PLAY [kslavel] *****

TASK [Gathering Facts] *****
[DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ok: [172.31.31.158]

TASK [deploy PHP app docker container] *****
changed: [172.31.31.158]

PLAY RECAP *****
172.31.31.158 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] End of Pipeline
Finished: SUCCESS

Dashboard > End-Project-1 > #32

PLAY [kslavel] *****

TASK [Gathering Facts] *****
[DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ok: [172.31.31.158]

TASK [deploy PHP app docker container] *****
changed: [172.31.31.158]

PLAY RECAP *****
172.31.31.158 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

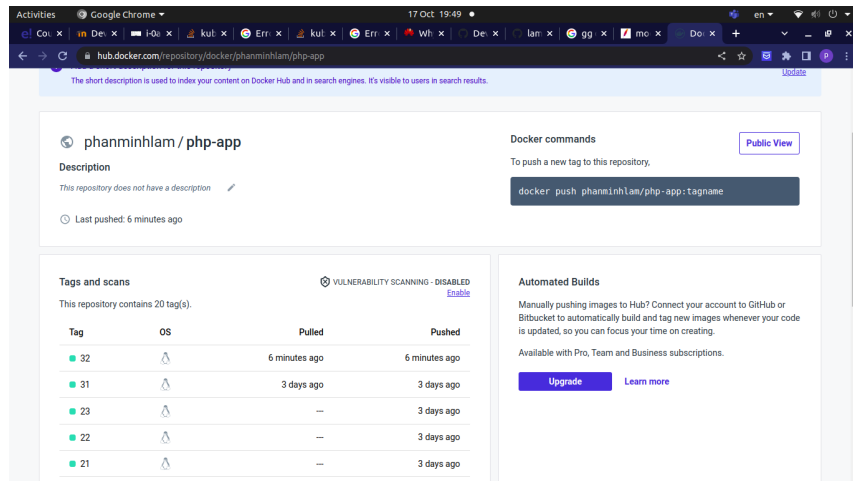
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

REST API Jenkins 2.361.1
```

- Log ansible:

```
2022-10-14 16:01:07.612 p=19057 u=jenkins n=ansible | PLAY [kslave1] *****
2022-10-14 16:01:07.626 p=19057 u=jenkins n=ansible | TASK [Gathering Facts] *****
2022-10-14 16:01:11.352 p=19057 u=jenkins n=ansible | [DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should
use /usr/bin/python3, but is using /usr/bin/python for backward compatibility
with prior Ansible releases. A future Ansible release will default to using the
discovered platform python for this host. See https://docs.ansible.com/ansible
/2.9/reference_appendices/interpreter_discovery.html for more information. This
feature will be removed in version 2.12. Deprecation warnings can be disabled
by setting deprecation warnings=False in ansible.cfg.
2022-10-14 16:01:11.353 p=19057 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:01:11.380 p=19057 u=jenkins n=ansible | TASK [Log into DockerHub] *****
2022-10-14 16:01:12.127 p=19057 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:01:12.155 p=19057 u=jenkins n=ansible | TASK [deploy PHP app docker container] *****
2022-10-14 16:01:29.092 p=19057 u=jenkins n=ansible | changed: [172.31.31.158]
2022-10-14 16:01:29.094 p=19057 u=jenkins n=ansible | PLAY RECAP *****
2022-10-14 16:01:29.094 p=19057 u=jenkins n=ansible | 172.31.31.158 : ok=3 changed=1 unreachable=0 failed=0 skipped=0 res
cued=0 ignored=0
2022-10-14 16:02:48.768 p=28092 u=jenkins n=ansible | PLAY [kslave1] *****
2022-10-14 16:02:48.780 p=28092 u=jenkins n=ansible | TASK [Gathering Facts] *****
2022-10-14 16:02:52.212 p=28092 u=jenkins n=ansible | [DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should
use /usr/bin/python3, but is using /usr/bin/python for backward compatibility
with prior Ansible releases. A future Ansible release will default to using the
discovered platform python for this host. See https://docs.ansible.com/ansible
/2.9/reference_appendices/interpreter_discovery.html for more information. This
feature will be removed in version 2.12. Deprecation warnings can be disabled
by setting deprecation warnings=False in ansible.cfg.
2022-10-14 16:02:52.237 p=28092 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:03:08.095 p=28092 u=jenkins n=ansible | TASK [deploy PHP app docker container] *****
2022-10-14 16:03:08.099 p=28092 u=jenkins n=ansible | changed: [172.31.31.158]
2022-10-14 16:03:08.099 p=28092 u=jenkins n=ansible | PLAY RECAP *****
2022-10-14 16:03:08.099 p=28092 u=jenkins n=ansible | 172.31.31.158 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 res
cued=0 ignored=0
root@kmaster:/var/lib/jenkins/workspace/End-Project-1# █
```

## 6. Image pushed to dockerhub:



## 7. Container run:

```
root@kslave1:/home/edureka# docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                    NAMES
3f17b51b6e8a   phanminhlan/php-app:32              "apachectl -D FOREGR..." 7 minutes ago  Up 7 minutes  0.0.0.0:8888->80/tcp      php-app
```

## 8. Web built:

