

Step 1 Docker installation

1 apt update

to get the update of all existing packages

2 apt install apt-transport-https ca-certificates curl
software-properties-common

install a few prerequisite packages which let apt use
packages over HTTPS

3 curl -fsSL

<https://download.docker.com/linux/ubuntu/gpg> | sudo
apt-key add -

to add the GPG key

4. add-apt-repository "deb [arch=amd64]

<https://download.docker.com/linux/ubuntu> focal stable"

Add the Docker repository to APT

5. apt update

update the package database with the Docker packages
from the newly added repo

6. apt-cache policy docker-ce

Making sure you are about to install from the Docker
repo instead of the default Ubuntu repo

7. apt install docker-ce

Install the Docker

Step 2 Install Docker Compose

1. curl -L "<https://github.com/docker/compose/releases/d>

```
curl -o /usr/local/bin/docker-compose-$(uname -s)-$(uname -m) "https://github.com/docker/compose/releases/download/1.26.0/docker-compose-$(uname -s)-$(uname -m)"
```

to download Docker Compose and make this software globally accessible on your system as docker-compose

2. docker-compose --version

To check the docker-compose version

Step 3 To Install WordPress With Docker Compose

1. Defining the Web Server Configuration

a. mkdir wordpress

create the directory here will be all the docker executables located

b. mkdir -p /media/etc/nginx-conf

creating the directory for storing the configuration files

c. vim /media/etc/nginx-conf/nginx.conf

To edit the nginx.conf and give the server name, root directory

```
server {
```

```
    listen 80;
```

```
    listen [::]:80;
```

```
    server_name abhinandtest.com.com
```

```
    www.abhinandtest.com;
```

```
index index.php index.html index.htm;
```

```
root /var/www/html;
```

```
location ~ /.well-known/acme-challenge {  
    allow all;  
    root /var/www/html;  
}
```

```
location / {  
    try_files $uri $uri/  
/index.php$is_args$args;  
}
```

```
location ~ \.php$ {  
    try_files $uri =404;  
    fastcgi_split_path_info  
^(.+\.php)(/.+)$;  
    fastcgi_pass wordpress:9000;  
    fastcgi_index index.php;  
    include fastcgi_params;  
    fastcgi_param SCRIPT_FILENAME  
$document_root$fastcgi_script_name;  
    fastcgi_param PATH_INFO  
$fastcgi_path_info;  
}
```

```

location ~ /\.ht {
    deny all;
}

location = /favicon.ico {
    log_not_found off; access_log off;
}

location = /robots.txt {
    log_not_found off; access_log off; allow
all;
}

location ~* \.(css|gif|ico|jpeg|jpg|js|png)$ {
    expires max;
    log_not_found off;
}
}"

```

2. Create the enviornment variables

a. cd wordpress

change the directory to wordpress

b. vim .env

this is to store the MYSQL enviornment variables

```
" MYSQL_ROOT_PASSWORD=your_root_password
```

```
MYSQL_USER=your_wordpress_database_user
```

```
MYSQL_PASSWORD=your_wordpress_database_password"
```

c. git init

this will initialise the wordpress directory to git

d. vim .gitignore

.env added to the gitignore file because the .env file will contain all the secret details

f. vim .dockerignore

to minimise the secrets in handling the Docker issues

Step 4 Defining the docker-compose.yml

1. vim docker-compose.yml

this is to edit the docker-compose.yml file

a. now we have to add the configurations for the Database

```
"services:
```

```
db:
```

```
  image: mysql:8.0
```

```
  container_name: db
```

```
  restart: unless-stopped
```

```
  env_file: .env
```

```
  environment:
```

```
    - MYSQL_DATABASE=wordpress
```

```
  volumes:
```

```
    - /media/database:/var/lib/mysql
```

```
  command:
```

```
'--default-authentication-plugin=mysql_native_password'
```

```
  networks:
```

```
    - app-network"
```

b. now add the configurations for the wordpress

```

"    wordpress:
      depends_on:
        - db
      build: ../wordpress/wordpress1/
      image: php:7.4-fpm-alpine
      container_name: wordpress
      restart: unless-stopped
      env_file: .env
      environment:
        - WORDPRESS_DB_HOST=db:3306
        - WORDPRESS_DB_USER=$MYSQL_USER
        - WORDPRESS_DB_PASSWORD=$MYSQL_PASSWORD
        - WORDPRESS_DB_NAME=wordpress
      ports:
        - "9000:9000"
      volumes:
        - wordpress:/var/www/html
        - /media/database:/var/lib/mysql
        - /media/wp:/var/www/html/wp-content
      networks:
        - app-network
"

```

c now add the configurations for the nginx server

```

"    webserver:
      depends_on:
        - wordpress
      image: nginx:1.15.12-alpine

```

```

    container_name: webserver
    restart: unless-stopped
    ports:
      - "80:80"
    volumes:
      - wordpress:/var/www/html
      - /media/etc/nginx-conf:/etc/nginx/conf.d
    networks:
      - app-network"

```

d. add network and volume definition

```

"volumes:
  wordpress:
  dbdata:

```

```

networks:
  app-network:
    driver: bridge "

```

Step 5 Defining the Dockerfile

1. cd wordpress1

2.vim Dockerfile

edit the dockerfile

a. Install Git and do the Git clone step

```
"RUN apk --update add git
```

```

RUN mkdir -p /home/sampleTest \
    cd /home/sampleTest \

```

```
git clone
```

```
https://github.com/WordPress/WordPress.git"
```

Step 8 edit the /etc/hosts file

```
1. vim /etc/hosts
```

this is to give the domain name

```
127.0.0.1 abhinandtest.com
```

Step 7 Run The docker Compose file

```
1. docker-compose up -d
```

Refference :

Digital ocean

HowtoForge

Medium

Docker hub

Git-hub