

Dockers 101 – Series 3 of N – Using docker-compose.yml and docker-compose to setup a WordPress site

PUBLISHED ON *April 1, 2018* by *Mohd Naeem*

- **Requirement:**
 - To setup a WordPress website using **docker-compose.yml** and **docker-compose**
- **Strategy:**
 - Docker uses a **docker-compose.yml** to define the orchestration.
 - **docker-compose** is an orchestration tool which uses the docker-compose.yml to setup multiple containers.
 - For above requirement we need the following:
 - WordPress is a multi tier application with a front-end, business layer and a database back-end.
 - One of the features of docker is single responsibility principle. So these multiple layers will be represented by multiple images and containers
 - Install docker-compose and setup the file docker-compose.yml
- **Solution:**
 - Login to your Host machine(in my case a CentOS 7 machine)
 - Make a directory “TicTackToe” and go to the directory – **mkdir mywordpress && cd mywordpress**
 - Now setup and define images and configuration in the docker-compose.yml- **nano docker-compose.yml**
 - **Copy following content** into the **file** and **save:**
 - Explanation of the code:
 - Download the **docker-compose.yml** from here –
<https://testbucket786786.s3.amazonaws.com/docker/docker-compose.yml>
(<https://testbucket786786.s3.amazonaws.com/docker/docker-compose.yml>).

```

version: '3.3'

services:
  db:
    image: mysql:5.7
    volumes:
      - dbdata:/var/lib/mysql
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: somewordpress
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress

  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_USER: wordpress
      WORDPRESS_DB_PASSWORD: wordpress
volumes:
  dbdata:
networks:
  overlay:

```

Read 29 lines

- docker-compose use some terms to define the configuration
- **services:** it use **service** keyword to define services
 - the file defines two services
 - **db** for database image settings
 - **image: mysql:5.7**
 - volume for database **volumes : /var/lib/mysql**
 - **restart: always**
 - and then environment settings like database, username, password and root password.
 - **wordpress** for wordpress settings
 - depends on db means that wordpress service is dependent db service to be ready first
 - **image: wordpress:latest**
 - **ports: "8000:80"** means 8000 is host port "port forwarding" to port 80 of container
 - and then environment settings like host, user, password
- **volumes:** it use **columes** keyword to define volumes to be used and attached in the configuration
- **networks:** it use **networks** keyword to define network settings
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- **Install docker-compose tool**
 - execute these commands:
 - **sudo curl -L [https://github.com/docker/compose/releases/download/1.20.1/docker-compose-\\$\(uname -s\)\\$\(uname -m\) -o /usr/local/bin/docker-compos](https://github.com/docker/compose/releases/download/1.20.1/docker-compose-$(uname -s)$(uname -m) -o /usr/local/bin/docker-compos)****sudo chmod +x /usr/local/bin/docker-compose****export PATH=\${PATH}:/usr/local/bin**

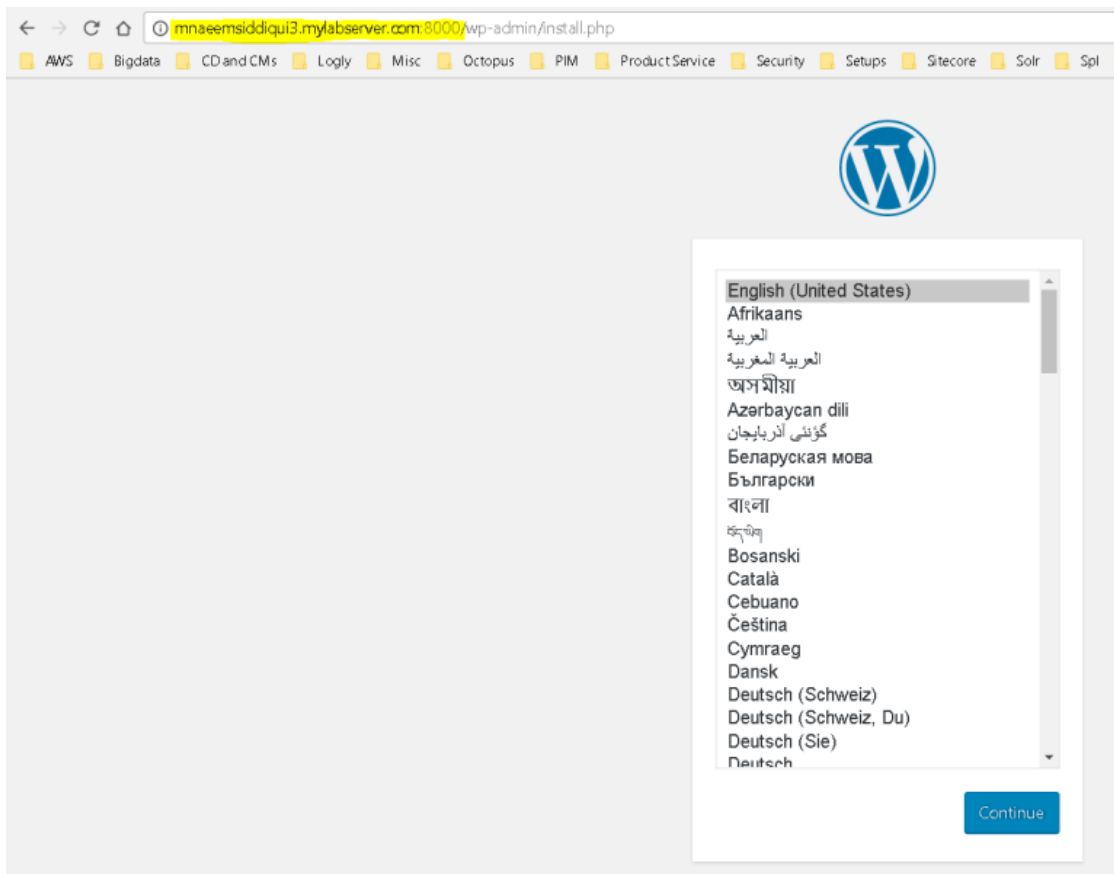
- check if docker-compose is installed
 - **docker-compose --version**

```
mnaeemsiddiqui3 login: user
Password:
Last login: Mon Apr  2 01:08:39 on pts/1
[user@mnaeemsiddiqui3 ~]$ sudo su
[sudo] password for user:
[root@mnaeemsiddiqui3 user]# ls
Desktop  TicTacToe  VNCHOWTO  xrdp-chansrv.log
[root@mnaeemsiddiqui3 user]# mkdir mywordpress && cd mywordpress
[root@mnaeemsiddiqui3 mywordpress]# nano docker-compose.yml
[root@mnaeemsiddiqui3 mywordpress]# ls
docker-compose.yml
[root@mnaeemsiddiqui3 mywordpress]# sudo curl -L https://github.com/docker/compose/releases/download/1.20.1/docker-compose-`uname -s`-`uname -m` -o /usr/local/bin/docker-compose
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left   Speed
100 617    0 617    0    0  2447    0 --:--:-- --:--:-- --:--:-- 2458
100 10.3M 100 10.3M    0    0 18.0M    0 --:--:-- --:--:-- --:--:-- 42.4M
[root@mnaeemsiddiqui3 mywordpress]# sudo chmod +x /usr/local/bin/docker-compose
[root@mnaeemsiddiqui3 mywordpress]# export PATH=${PATH}:/usr/local/bin
[root@mnaeemsiddiqui3 mywordpress]# docker-compose --version
docker-compose version 1.20.1, build 5d8c71b
[root@mnaeemsiddiqui3 mywordpress]#
```

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- Build the project – **docker-compose up -d**
- Below is the output of the command

```
2a650284a6a8: Pull complete
5b5108d08c6d: Pull complete
beaff1261757: Pull complete
c1a55c6375b5: Pull complete
8181cde51c65: Pull complete
Digest: sha256:691c55aabb3c4e3b89b953dd2f022f7ea845e5443954767d321d5f5fa394e28c
Status: Downloaded newer image for mysql:5.7
Pulling wordpress (wordpress:latest)...
latest: Pulling from library/wordpress
2a72cbf407d6: Already exists
273cd543cb15: Pull complete
ec5ac8875de7: Pull complete
9106e19b56c1: Pull complete
ee2f70ac7c7d: Pull complete
7257ad6985e8: Pull complete
18f5c2055da2: Pull complete
85293a6fdd80: Pull complete
9e797eeb0c14: Pull complete
09b55b88e646: Pull complete
2cd18314711e: Pull complete
88b610931a5f: Pull complete
b90052b881e9: Pull complete
36317e1f49af: Pull complete
6dbef1d5801a: Pull complete
f98e14d31e08: Pull complete
dbc1b2b39588: Pull complete
280991283b71: Pull complete
5c4360fbc4f6: Pull complete
0623bccc9390: Pull complete
Digest: sha256:b6189dc683704a5011f64d71166f3e712d64816d96750ba4636bcbf137c00903
Status: Downloaded newer image for wordpress:latest
Creating mywordpress_db_1 ... done
Creating mywordpress_wordpress_1 ... done
[root@mnaeemsiddiqui3 mywordpress]#
```

- Lets access the website:
 - Yay!!!, WordPress is up.
 - Since my DNS name is `liek` this tahts why I am running with DNS name : **<http://mnaeemsiddiqui3.mylabserver.com:8000>** (**<http://mnaeemsiddiqui3.mylabserver.com:8000>**).
 - You can either use your DNS name like : **<http://yourDNSwebsite:8000>** (**<http://yourDNSwebsite:8000>**) or **<http://localhost:8000>** (**<http://localhost:8000>**) if you are running locally.



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