

TALLER EN CLASE – DOCKER COMPUSE

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1. INSTALAMOS DOCKER COMPUSE – CREAMOS EL DIRECTORIO PARA CREAR EL ARCHIVO DE LLAMADO- Docker file , requerimientos y archivo . yaml

```
#####
# WARNING!!!!
# This is a sandbox environment. Using personal credentials
# is HIGHLY! discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The FWD team.
#####
(node1) (local) root@192.168.0.8 ~
$ mkdir composetest
(node1) (local) root@192.168.0.8 ~
$ cd composetest/
(node1) (local) root@192.168.0.8 ~/composetest
$ pwd
/root/composetest
(node1) (local) root@192.168.0.8 ~/composetest
$ vim app.py
(node1) (local) root@192.168.0.8 ~/composetest
$ ls -ls
total 4
 4 app.py
(node1) (local) root@192.168.0.8 ~/composetest
$ vim app.py
(node1) (local) root@192.168.0.8 ~/composetest
$
```

03:50:36

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8

OPEN PORT

Memory
1.38% (55.15MiB / 3.906GiB)

CPU
0.84%

SSH
ssh ip172-18-0-23-ckijemfm18g00acg5lg@direct.labs.play-

DELETE

EDITOR

```
1 import time
2
3 import redis
4 from flask import Flask
5
6 app = Flask(__name__)
7 cache = redis.Redis(host='redis', port=6379)
8
9 def get_hit_count():
10     retries = 5
11     while True:
12         try:
13             return cache.incr('hits')
14         except redis.exceptions.ConnectionError as exc:
15             if retries == 0:
16                 raise exc
17             retries -= 1
18             time.sleep(0.5)
19
20 app.route('/')
21 def hello():
22     count = get_hit_count()
23     return 'Hello World! I have been seen {} times.\n'.format(count)
24
25 "app.py" 23L, 514B
```

6.1 All

03:37:23

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckijumf_ckiuk74snmng009rb0q0

IP
192.168.0.8
OPEN PORT
8000

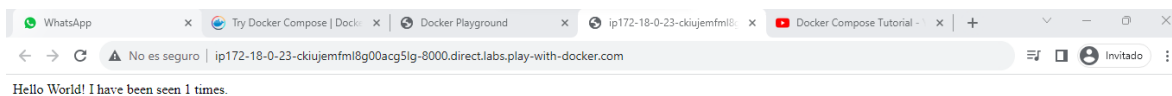
Memory
10.45% (418.1MiB / 3.906GiB)

CPU
1.40%

SSH
ssh ip172-18-0-23-ckijumfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
$ pwd
/root/composetest
[node1] (local) root@192.168.0.8 ~/composetest
$ vim app.py
[node1] (local) root@192.168.0.8 ~/composetest
$ ls -ls
total 4
4 app.py
[node1] (local) root@192.168.0.8 ~/composetest
$ vim app.py
[node1] (local) root@192.168.0.8 ~/composetest
$ vim requirements.txt
[node1] (local) root@192.168.0.8 ~/composetest
$ vim Dockerfile
[node1] (local) root@192.168.0.8 ~/composetest
$ ls -ls
total 12
4 Dockerfile      4 app.py      4 requirements.txt
[node1] (local) root@192.168.0.8 ~/composetest
$ vim compose.yaml
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose up
[+] Running 3/3
 ✓ redis 7 layers [|||||] 0B/0B  Pulled      2.3s
 ✓ 96526aa774ef Pull complete                                0.1s
```



Editamos el compuse file

```
[node1] (local) root@192.168.0.8 ~/composetest
$ ls -ls
total 16
4 Dockerfile      4 app.py      4 compose.yaml      4 requirements.txt
[node1] (local) root@192.168.0.8 ~/composetest
$ vim compose.yaml
[node1] (local) root@192.168.0.8 ~/composetest
$
```

03:32:29

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckuijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8

OPEN PORT

Memory
9.20% (368.2MiB / 3.906GiB)

CPU
0.36%

SSH
ssh ip172-18-0-23-ckuijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
1 services:
2   web:
3     build: .
4     ports:
5       - "8000:5000"
6     volumes:
7       - ./code
8     environment:
9       FLASK_DEBUG: "true"
10    redis:
11      image: "redis:alpine"
12
```

Volvemos a lanzar

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose up -d
```

03:28:54

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckuijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8

OPEN PORT
8000

Memory
10.72% (428.7MiB / 3.906GiB)

CPU
0.65%

SSH
ssh ip172-18-0-23-ckuijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose up -d
[+] Building 0.0s (0/0)
[+] Running 2/2
✓ Container composetest-web-1 Started
✓ Container composetest-redis-1 Started
[node1] (local) root@192.168.0.8 ~/composetest
$
```

← → ↻ No es seguro | ip172-18-0-23-ckuijemfml8g00acg5lg-8000.direct.labs.play-with-docker.com

Hello World! I have been seen 3 times.

Editamos el archivo app.py

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose stop
[+] Stopping 2/2
  ✓ Container composetest-redis-1 Stopped 0.5s
  ✓ Container composetest-web-1 Stopped 0.5s
[node1] (local) root@192.168.0.8 ~/composetest
$ ls -ls
total 16
 4 Dockerfile      0 __pycache__      4 app.py           4 compose.yaml     4 requirements.txt
[node1] (local) root@192.168.0.8 ~/composetest
$ vim app.py
```

03:25:29

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8
OPEN PORT

Memory
9.22% (368.8MiB / 3.906GiB)

CPU
0.35%

SSH
ssh ip172-18-0-23-ckijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
1 | import time
2
3 | import redis
4 | from flask import Flask
5
6 | app = Flask(__name__)
7 | cache = redis.Redis(host='redis', port=6379)
8
9 | def get_hit_count():
10 |     retries = 5
11 |     while True:
12 |         try:
13 |             return cache.incr("hits")
14 |         except redis.exceptions.ConnectionError as exc:
15 |             if retries == 0:
16 |                 raise exc
17 |             retries -= 1
18 |             time.sleep(0.5)
19
20 | @app.route("/")
21 | def hello():
22 |     count = get_hit_count()
23 |     return 'Hello from Docker! I have been seen {} times.\n'.format(count)
24
25 |
```

03:20:47

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8
OPEN PORT 8000

Memory
10.76% (430.2MiB / 3.906GiB)

CPU
0.72%

SSH
ssh ip172-18-0-23-ckijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose up -d
[+] Building 0.0s (0/0)
[+] Running 2/2
  ✓ Container composetest-redis-1 Started 0.8s
  ✓ Container composetest-web-1 Started 0.9s
[node1] (local) root@192.168.0.8 ~/composetest
$
```

Hello from Docker! I have been seen 4 times.

Ver variables de entorno

+ ADD NEW INSTANCE

192.168.0.8
node1

SSH

ssh ip172-18-0-23-ckijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose run web env
[+] Building 0.0s (0/0)
[+] Building 0.0s (0/0)
PATH=/usr/local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
HOSTNAME=df13eb9c61
TERM=xterm
PLASK_DEBUG=true
LANG=C.UTF-8
GPG_KEY=0D96DF4D4110E5C43FBFB17F2D347EA6AA65421D
PYTHON_VERSION=3.7.17
PYTHON_PIP_VERSION=23.0.1
PYTHON_SETUPTOOLS_VERSION=57.5.0
PYTHON_GET_PIP_URL=https://github.com/pypa/get-pip/raw/9af82b715db434abb94a0a6f3569f43e72157346/public/get-pip.py
PYTHON_GET_PIP_SHA256=45a2bb8bf2bb5eff16dd00faef6f29731831c7c59bd9fc2bf13bed511ff1fe
PLASK_APP=app.py
PLASK_RUN_HOST=0.0.0.0
HOME=/root
[node1] (local) root@192.168.0.8 ~/composetest
$
```

Detener servicios de Docker compose

03:16:54

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ckijemf_ckiuk74snmng009rb0q0

IP
192.168.0.8 OPEN PORT

Memory
9.18% (367.3MiB / 3.906GiB)

CPU
0.76%

SSH

ssh ip172-18-0-23-ckijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose stop
[+] Stopping 2/2
✓ Container composetest-redis-1 Stopped 0.5s
✓ Container composetest-web-1 Stopped 0.5s
[node1] (local) root@192.168.0.8 ~/composetest
$
```

Remover volúmenes

+ ADD NEW INSTANCE

192.168.0.8
node1

SSH



ssh ip172-18-0-23-ckijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
[node1] (local) root@192.168.0.8 ~/composetest
$ docker compose down --volumes
[+] Removing 3/3
✓ Container composetest-redis-1 Removed 0.0s
✓ Container composetest-web-1 Removed 0.0s
✓ Network composetest_default Removed 0.1s
[node1] (local) root@192.168.0.8 ~/composetest
$
```

Parte 2

Clonamos el repositorio - iniciamos fastapi




Memory
12.23% (489.2MiB / 3.906GiB)

CPU
2.09%

SSH
ssh ip172-18-0-40-ckuijemfml8g00acg5lg@direct.labs.play-

DELETE EDITOR

```
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilities. #
# The PWD team. #
#####
[node1] (local) root@192.168.0.8 ~
$ git clone https://github.com/docker/awesome-compose.git
Cloning into 'awesome-compose'...
remote: Enumerating objects: 2392, done.
remote: Total 2392 (delta 0), reused 0 (delta 0), pack-reused 2392
Receiving objects: 100% (2392/2392), 5.88 MiB | 13.29 MiB/s, done.
Resolving deltas: 100% (1068/1068), done.
[node1] (local) root@192.168.0.8 ~
$ pwd
/root
[node1] (local) root@192.168.0.8 ~
$ ls -l
total 4
drwxr-xr-x  44 root   root    4096 Oct 11 01:29 awesome-compose
[node1] (local) root@192.168.0.8 ~
$ cd awesome-compose/
[node1] (local) root@192.168.0.8 ~/awesome-compose
```



```
drwxr-xr-x  2 root   root    61 Oct 11 01:29 wordpress-mysql
[node1] (local) root@192.168.0.8 ~/awesome-compose
$ cd fastapi/
[node1] (local) root@192.168.0.8 ~/awesome-compose/fastapi
$ ls -l
total 16
-rw-r--r--  1 root   root    515 Oct 11 01:29 Dockerfile
-rw-r--r--  1 root   root   1915 Oct 11 01:29 README.md
drwxr-xr-x  2 root   root    40 Oct 11 01:29 app
-rw-r--r--  1 root   root   190 Oct 11 01:29 compose.yaml
-rw-r--r--  1 root   root    16 Oct 11 01:29 requirements.txt
[node1] (local) root@192.168.0.8 ~/awesome-compose/fastapi
$ docker compose up -d
[+] Building 17.6s (12/12) FINISHED
=> [api internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 554B 0.0s
=> [api internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [api] resolve image config for docker.io/docker/dockerfile:1.4 0.8s
=> [api] docker-image://docker.io/docker/dockerfile:1.4@sha256:9ba7531bd80fb0a858632727cf7a112f 0.7s
=> => resolve docker.io/docker/dockerfile:1.4@sha256:9ba7531bd80fb0a858632727cf7a112f 0.0s
=> => sha256:9ba7531bd80fb0a858632727cf7a112fbd19b17e94c4e54ced31e24 2.00kB / 2.00kB 0.0s
=> => sha256:ad7fb05993d1b71f9a1cfc140ec4aafcb253b1dabebf569785d6e61683 528B / 528B 0.0s
=> => sha256:1e3a16266d1c0a63fa6917a9c7284e94e40ced14e9b0d06372235 2.37kB / 2.37kB 0.0s
=> => sha256:1328b37c40fca9bcef2970d8ecob72ab373a1124a72dadce44d8b8a8b 3.94MB / 3.94MB 0.2s
```

Docker Playground x ip172-18-0-40-ckuijemfml8g00 x +

← → ↺ No es seguro | ip172-18-0-40-ckuijemfml8g00acg5lg-8000.direct.labs.play-with-docker.com

{"message": "OK"}


Angular - salimos de la carpeta de fastapi , listamos nuestro repositorio clonado y escogemos el de angular


```
[node1] (local) root@192.168.0.8 ~/awesome-compose/fastapi
$ cd ..
[node1] (local) root@192.168.0.8 ~/awesome-compose
$ ls -l
total 116
-rw-r--r-- 1 root root 4386 Oct 11 01:29 CONTRIBUTING.md
-rw-r--r-- 1 root root 7048 Oct 11 01:29 LICENSE
-rw-r--r-- 1 root root 936 Oct 11 01:29 MAINTAINERS
-rw-r--r-- 1 root root 9927 Oct 11 01:29 README.md
drwxr-xr-x 4 root root 109 Oct 11 01:29 angular
drwxr-xr-x 4 root root 69 Oct 11 01:29 apache-php
drwxr-xr-x 3 root root 72 Oct 11 01:29 aspnet-mssql
-rwxr-xr-x 1 root root 70948 Oct 11 01:29 awesome-compose.jpg
drwxr-xr-x 4 root root 69 Oct 11 01:29 django
drwxr-xr-x 3 root root 59 Oct 11 01:29 elasticsearch-logstash-kibana
drwxr-xr-x 4 root root 111 Oct 11 01:29 fastapi
drwxr-xr-x 4 root root 69 Oct 11 01:29 flask
```


```
drwxr-xr-x 2 root root 61 Oct 11 01:29 wordpress-mysql
[node1] (local) root@192.168.0.8 ~/awesome-compose
$ cd angular/
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ ls -l
total 344
-rw-r--r-- 1 root root 2154 Oct 11 01:29 README.md
drwxr-xr-x 3 root root 293 Oct 11 01:29 angular
-rw-r--r-- 1 root root 172 Oct 11 01:29 compose.yaml
-rw-r--r-- 1 root root 341124 Oct 11 01:29 output.png
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ docker compose up -d
[+] Building 149.3s (14/14) FINISHED
=> [web internal] load build definition from Dockerfile
=> => transferring dockerfile: 629B
=> [web internal] load .dockerignore
=> => transferring context: 54B
=> [web] resolve image config for docker.io/docker/dockerfile:1.4
=> CACHED [web] docker-image://docker.io/docker/dockerfile:1.4@sha256:9ba7531bd80fb0a858632727cf7a112
=> [web internal] load metadata for docker.io/library/node:17.0.1-bullseye-slim
=> [web builder 1/7] FROM docker.io/library/node:17.0.1-bullseye-slim@sha256:e30d97d2a7b6a32b855b8bbbc
=> => resolve docker.io/library/node:17.0.1-bullseye-slim@sha256:e30d97d2a7b6a32b855b8bbbc773af6a27d28
=> => sha256:7d63c13d9b9b6ec5f05a2b07daadacaa9c610d01102a662ae9b1d082105f1ffa 31.36MB / 31.36MB
```


Comprobamos el estado y detenemos fastapi – seguidamente probamos el puerto


```
=> [web builder 6/7] RUN npm ci 98.9s
=> [web builder 7/7] COPY . . 0.1s
=> [web] exporting to image 16.4s
=> => exporting layers 16.4s
=> => writing image sha256:c6431eb3d975619005143ef2007d7fb9aef6a4227ae3026b40acela6f425alab 0.0s
=> => naming to docker.io/library/angular-web 0.0s
[+] Running 2/2
✓ Network angular_default Created 0.1s
✓ Container angular-web-1 Started 16.6s
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
db3ce1f4be6f angular-web "docker-entrypoint.s..." About a minute ago Up About a minute 0.0.0.0:4200->4200/tcp angular-web-1
c442a9d4ddfd fastapi-api "/start.sh" 9 minutes ago Up 9 minutes 80/tcp, 0.0.0.0:8000->8000/tcp fastapi-application
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ docker stop c442c
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ docker stop c442a
c442a
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
db3ce1f4be6f angular-web "docker-entrypoint.s..." 3 minutes ago Up 2 minutes 0.0.0.0:4200->4200/tcp angular-web-1
[node1] (local) root@192.168.0.8 ~/awesome-compose/angular
$
```

 Docker Playground



 ip172-18-0-40-ckijemfml8g00a





 No es seguro | ip172-18-0-40-ckijemfml8g00acg5lg-4200.direct.labs.play-with-docker.com

Invalid Host header