

# Practica 4 – Docker Compose

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# Docker compose

Descargar la aplicación Dockercoins: \$ git clone [https://gitlab.danz.eus/macc/cloud-computing/platforms-and-infrastructures/pi\\_docker/dockercoins\\_compose.git](https://gitlab.danz.eus/macc/cloud-computing/platforms-and-infrastructures/pi_docker/dockercoins_compose.git)

```
x markel in ~/Documents/MACC/1_cuatri/PlataformasEInfraestructuras/PeI/docker/P4_Docker_Compose > git clone https://gitlab.danz.eus/macc/cloud-computing/platforms-and-infrastructures/pi_docker/dockercoins_compose.git
Cloning into 'dockercoins_compose'...
remote: Enumerating objects: 1753, done.
remote: Total 1753 (delta 0), reused 0 (delta 0), pack-reused 1753
Receiving objects: 100% (1753/1753), 8.49 MiB | 8.31 MiB/s, done.
Resolving deltas: 100% (1004/1004), done.
```

## Analiza del docker-compose.yml .Cuantos servicios identificas?

Analizando el docker-compose.yml podemos encontrar los siguientes 5 servicios:

1. Rng
2. Hasher
3. Webui
4. Redis
5. Worker

Genera cada imagen (mediante Dockerfile) para cada servicio y pon un tag adecuado para que cada una de ellas se pueda subir a Docker Hub (a tu repositorio).

```
markel in dockercoins_compose/dockercoins/ > docker build hasher -t markel149/hasher on branch ee2.0
[+] Building 25.0s (11/11) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 190B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 28 0.0s
=> [internal] load metadata for docker.io/library/ruby:alpine 3.4s
=> [auth] library/ruby:pull token for registry-1.docker.io 0.0s
=> [1/5] FROM docker.io/library/ruby:alpine@sha256:c85d400cb9cac84cb0cf136ca4433b2b32076813aac4397a389ac50059f112a 1.8s
=> => resolve docker.io/library/ruby:alpine@sha256:c85d400cb9cac84cb0cf136ca4433b2b32076813aac4397a389ac50059f112a 0.0s
=> => sha256:0461ee50e837289e2d3304edc645ab33a2472563a2012ebe8b0f140e7c990ca 3.64MB / 3.64MB 0.4s
=> => sha256:e6ea4108f61712dd7e071e6442af225dc4adf518217ab5cde7f64d420b3189 224B / 224B 0.5s
=> => sha256:cd49af5ee8921c8ef8d256cb29a4f2ca306e262a7aaad4c42aa7d3026ac66a94 26.34MB / 26.34MB 0.9s
=> => sha256:c85d400cb9cac84cb0cf136ca4433b2b32076813aac4397a389ac50059f112a 1.65kB / 1.65kB 0.0s
=> => sha256:103e3cf7208a365b953428970a7627ba22564a9bf971bf6d19990598b73a9746 1.36kB / 1.36kB 0.0s
=> => sha256:a636ae36504cd62f17e69ef68cf66df5ee0f120d65644ab8b6ab18caf46e5 6.10kB / 6.10kB 0.0s
=> => extracting sha256:0461ee50e837289e2d3304edc645ab33a2472563a2012ebe8b0f140e7c990ca 0.3s
=> => sha256:a18f716f51ae6c8d7b4e1514249aff3e103d8e0dc824faef69daf67bc8d98b43 171B / 171B 0.7s
=> => extracting sha256:e6ea4108f61712dd7e071e6442af225dc4adf518217ab5cde7f64d420b3189 0.7s
=> => extracting sha256:cd49af5ee8921c8ef8d256cb29a4f2ca306e262a7aaad4c42aa7d3026ac66a94 0.7s
=> => extracting sha256:a18f716f51ae6c8d7b4e1514249aff3e103d8e0dc824faef69daf67bc8d98b43 0.0s
=> [internal] load build context 0.0s
=> => transferring context: 336B 0.0s
=> [2/5] RUN apk add --update build-base 1.2s

markel in dockercoins_compose/dockercoins/ > docker build rng -t markel149/rng on branch ee2.0
[+] Building 8.9s (9/9) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 140B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 28 0.0s
=> [internal] load metadata for docker.io/library/python:alpine 2.0s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [internal] load build context 0.0s
=> => transferring context: 732B 0.0s
=> [1/3] FROM docker.io/library/python:alpine@sha256:964a1afa20dd4a3723002560124dd96f2a9e853f7ef5b86f5c2354af336fca37 1.5s
=> => resolve docker.io/library/python:alpine@sha256:964a1afa20dd4a3723002560124dd96f2a9e853f7ef5b86f5c2354af336fca37 0.0s
=> => sha256:964a1afa20dd4a3723002560124dd96f2a9e853f7ef5b86f5c2354af336fca37 1.65kB / 1.65kB 0.0s
=> => sha256:1f7d284b9480f13289d42dc6a19a5be292dcfc2b9bcb68916d1bccb8791177874 1.37kB / 1.37kB 0.0s
=> => sha256:bcf864391ba14029df1321760ebf1f2400c3a07d57414b5c3a8c49f84cbd99a 7.42kB / 7.42kB 0.0s
=> => sha256:ba51967de001c6e85f574865082c7306be70f40d685b22a82fb7577a67506548 656.38kB / 656.38kB 0.4s
=> => sha256:472f8c18fd1c38b6c11d236ae77cf74f4588d3d5f80954cd67765668d1e26a58 11.52MB / 11.52MB 0.7s
=> => sha256:02e5da7e751ef65ac9898612f62e7f9f13e345f26b35dddf88e68751e0244f25 230B / 230B 0.2s
=> => sha256:ee2011448a5d48733d47bfc1d4df518f860ba81b8a7b6b35a5adbe14bacc131 2.35MB / 2.35MB 0.7s
=> => extracting sha256:ba51967de001c6e85f574865082c7306be70f40d685b22a82fb7577a67506548 0.2s
=> => extracting sha256:472f8c18fd1c38b6c11d236ae77cf74f4588d3d5f80954cd67765668d1e26a58 0.4s
=> => extracting sha256:02e5da7e751ef65ac9898612f62e7f9f13e345f26b35dddf88e68751e0244f25 0.0s
=> => extracting sha256:ee2011448a5d48733d47bfc1d4df518f860ba81b8a7b6b35a5adbe14bacc131 0.2s
=> [2/3] RUN pip install Flask==0.11.1 5.0s
```

```
markel in dockercoins_compose/dockercoins/ > docker build webui -t markel149/webui on branch ee2.8
[+] Building 18.2s (11/11) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 178B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/node:4-slim 3.4s
=> [auth] library/node:pull token for registry-1.docker.io 0.0s
=> [1/5] FROM docker.io/library/node:4-slim@sha256:26e656b2f02a3a038d52529cc09d4036fe17e278c8b4477bfa17db75ee301405 6.7s
=> resolve docker.io/library/node:4-slim@sha256:26e656b2f02a3a038d52529cc09d4036fe17e278c8b4477bfa17db75ee301405 0.0s
=> sha256:b5ae41b735cad519ae32cd6eeafbc1191c2d8e9056baf421a17f1c666c2a3753 1.58kB / 1.58kB 0.0s
=> sha256:3d77ce4481b119f00e53bee9b4a443469c42c224db954ddaa2e6b74cd73cd5d0 54.26MB / 54.26MB 2.5s
=> sha256:534514c83d698ad8a2ef994eeedaed92738e401d735e453d47e635cca02901b6 17.58MB / 17.58MB 1.2s
=> sha256:26e656b2f02a3a038d52529cc09d4036fe17e270c8b4477bfa17db75ee301405 1.73kB / 1.73kB 0.0s
=> sha256:c953ec480e11ebfc7530d69e3b11f8e955159899f5fe48b72ec13f45dd5d079a 6.09kB / 6.09kB 0.0s
=> sha256:02d86970c40400552472f8836ab621ff4456ada7ba86dd75fd7e273d4518fb1b 4.41kB / 4.41kB 0.9s
=> sha256:de288f5266ab553a6b931facc9f72f837014fa542e08bef8b8a2b5030356a684 117.62kB / 117.62kB 1.2s
=> sha256:85bd110f6aff92bdd722f4c5726b33a733b3950fd07ef9a7606ad97b6486285b 12.65MB / 12.65MB 1.7s
=> sha256:e8f17c7701dc5a3c4f82e3540b131fdb11528a0c8990b3e05f31fee5e759f200 1.06MB / 1.06MB 1.8s
=> extracting sha256:3d77ce4481b119f00e53bee9b4a443469c42c224db954ddaa2e6b74cd73cd5d0 2.2s
=> extracting sha256:534514c83d698ad8a2ef994eeedaed92738e401d735e453d47e635cca02901b6 0.6s
=> extracting sha256:02d86970c40400552472f8836ab621ff4456ada7ba86dd75fd7e273d4518fb1b 0.0s
=> extracting sha256:de288f5266ab553a6b931facc9f72f837014fa542e08bef8b8a2b5030356a684 0.0s
=> extracting sha256:85bd110f6aff92bdd722f4c5726b33a733b3950fd07ef9a7606ad97b6486285b 0.7s
markel in dockercoins_compose/dockercoins/ > docker build worker -t markel149/worker on branch ee2.8
[+] Building 5.9s (9/9) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 153B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/python:alpine 0.6s
=> [internal] load build context 0.0s
=> => transferring context: 1.74kB 0.0s
=> CACHED [1/4] FROM docker.io/library/python:alpine@sha256:964a1afa20dd4a3723002560124dd96f2a9e853f7ef5b86f5c2354af336fca37 0.0s
=> [2/4] RUN pip install redis 3.2s
=> [3/4] RUN pip install requests 1.8s
=> [4/4] COPY worker.py / 0.0s
=> exporting to image 0.1s
=> => exporting layers 0.1s
=> writing image sha256:dd791371072370d4e56215e3aa010c5555eb09606239fbc323500758250a8a8e 0.0s
=> naming to docker.io/markel149/worker 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
```

Abre el fichero docker-compose. yml y cambia el nombre de las imágenes para que coincidan con los que acabas de crear.

```
markel in dockercoins_compose/dockercoins/ > docker images on branch ee2.8
REPOSITORY TAG IMAGE ID CREATED SIZE
markel149/worker latest dd7913710723 57 seconds ago 54.1MB
markel149/webui latest 6c23f94d849a About a minute ago 218MB
markel149/rng latest c5c37e517b65 3 minutes ago 56.6MB
markel149/hashe latest e3e4e1d34eca 3 minutes ago 263MB
```

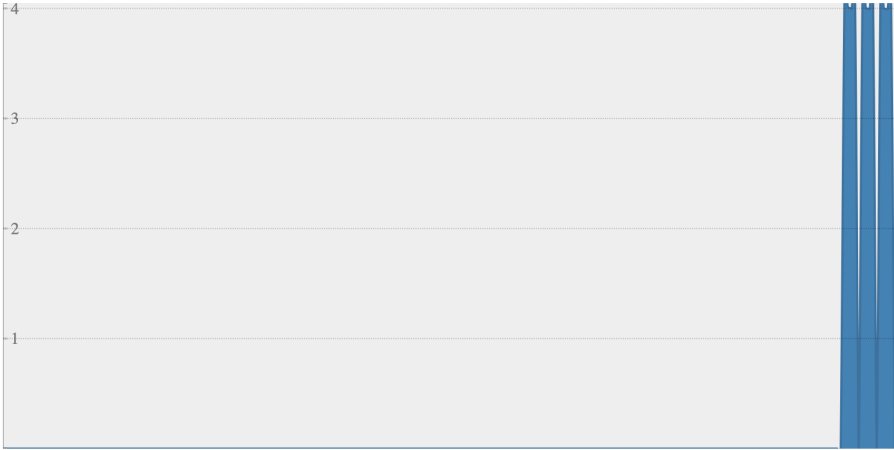
```
0 version: "3.1"
1
2 services:
3   rng:
4     image: markel149/rng:latest
5     networks:
6     - dockercoins
7     ports:
8     - "8001:80"
9
10  hasher:
11    image: markel149/hasher:latest
12    networks:
13    - dockercoins
14    ports:
15    - "8002:80"
16
17  webui:
18    image: markel149/webui:latest
19    networks:
20    - dockercoins
21    ports:
22    - "8000:80"
23
24  redis:
25    image: redis
26    networks:
27    - dockercoins
28
29  worker:
```

**Pon en marcha los contenedores y verifica su funcionamiento mediante el web server.**

Para poner en marcha los contenedores:

*docker-compose up -d*

DockerCoin Miner WebUI



Current mining speed: ~0.0 hashes/second [\(Tweet this!\)](#)

Comprueba los contenedores que están en marcha mediante el Docker Compose.

```
markel in dockercoins_compose/dockercoins/ > docker-compose ps
Name                                Command                                State      Ports
-----
dockercoins_hasher_1                ruby hasher.rb                        Up         0.0.0.0:8002->80/tcp,:::8002->80/tcp
dockercoins_redis_1                 docker-entrypoint.sh redis ...       Up         6379/tcp
dockercoins_rng_1                    python rng.py                         Up         0.0.0.0:8001->80/tcp,:::8001->80/tcp
dockercoins_webui_1                  node webui.js                         Up         0.0.0.0:8000->80/tcp,:::8000->80/tcp
dockercoins_worker_1                 python worker.py                      Up
```