Paso 1

Crear directorio

```
ub@ub:~$ mkdir -p red1/httpd/public-html red1/firewall
ub@ub:~$ cd red1
```

```
ub@ub:~/red1/httpd$ touch Dockerfile-httpd
```

```
ub@ub:~/red1$ tree
.
├── firewall
└── httpd
    ├── Dockerfile-httpd
    └── public-html
```

Escribir un archivo Dockerfile

```
ub@ub:~/red1/httpd$ sudo nano Dockerfile-httpd
```

```
  GNU nano 7.2                                  Dockerfile-httpd *
FROM httpd:latest
COPY ./public-html/ /usr/local/apache2/htdocs/
```

Crear una página de prueba web

```
ub@ub:~/red1/httpd$ cd public-html
ub@ub:~/red1/httpd/public-html$ sudo nano index.html
```

Escribir el archivo Dockerfile para el cortafuegos

```
ub@ub:~/red1/httpd/public-html$ cd ../../firewall
ub@ub:~/red1/firewall$ sudo nano Dockerfile-firewall
```

```
  GNU nano 7.2                                  Dockerfile-firewall *
FROM ubuntu:latest
RUN apt-get update && apt-get install -y iptables && apt-get clean
COPY ./firewall-rules.sh /usr/local/bin/firewall-rules.sh
RUN chmod +x /usr/local/bin/firewall-rules.sh
ENTRYPOINT ["/usr/local/bin/firewall-rules.sh"]
```

Escribir scripts de reglas de firewall

```
ub@ub:~/red1/firewall$ sudo nano firewall-rules.sh
```

```
#!/bin/bash
iptables -F

iptables -A INPUT -i eth0 -s 192.168.118.0/24 -j ACCEPT

iptables -A INPUT -j DROP
```

Crear docker-compose.yml

```
ub@ub:~/red1$ sudo nano docker-compose.yml
```

```
version: '3.8'

services:
  web1:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.2

  web2:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.3

  firewall:
    build:
      context: ./firewall
      dockerfile: Dockerfile-firewall
    cap_add:
      - NET_ADMIN
    networks:
      mynetwork:
        ipv4_address: 172.20.0.4

networks:
  mynetwork:
    driver: bridge
    ipam:
      config:
        - subnet: 172.20.0.0/16
```

```
 GNU nano 7.2                                  docker-compose.yml
version: '3.8'

services:
  web1:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.2

  web2:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.3

  firewall:
    build:
      context: ./firewall
      dockerfile: Dockerfile-firewall
    cap_add:
      - NET_ADMIN
    networks:
      mynetwork:
        ipv4_address: 172.20.0.4

networks:
  mynetwork:
    driver: bridge
    ipam:
      config:
        - subnet: 172.20.0.0/16
```

Entorno de arranque

- sudo docker-compose up --build -d

```
ub@ub:~/red1$ sudo docker-compose up --build -d
```

```
✔red1-firewall                Built
✔red1-web1                    Built
✔red1-web2                    Built
✔Network red1_mynetwork       Created
✔Container red1-firewall-1    Started
✔Container red1-web1-1        Started
✔Container red1-web2-1        Started
```

- sudo docker-compose ps

```
ub@ub:~/red1$ sudo docker-compose ps
WARN[0000] /home/ub/red1/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to
 avoid potential confusion
NAME          IMAGE       COMMAND              SERVICE   CREATED          STATUS          PORTS
red1-web1-1   red1-web1   "httpd-foreground"   web1      54 seconds ago   Up 54 seconds   80/tcp
red1-web2-1   red1-web2   "httpd-foreground"   web2      54 seconds ago   Up 54 seconds   80/tcp
```

Modifique los archivos index.html correspondientes para web1 y web2.

- sudo docker exec -it red1-web1-1 bash -c "echo '<h1>Web Server 1</h1>' > /usr/local/apache2/htdocs/index.html"
- sudo docker exec -it red1-web2-1 bash -c "echo '<h1>Web Server 2</h1>' > /usr/local/apache2/htdocs/index.html"

```
ub@ub:~/red1$ sudo docker exec -it red1-web1-1 bash -c "echo '<h1>Web Server 1</h1>' > /usr/local/apache2/htdocs/index.html"
ub@ub:~/red1$ sudo docker exec -it red1-web2-1 bash -c "echo '<h1>Web Server 2</h1>' > /usr/local/apache2/htdocs/index.html"
```

Paso 2

Crea el directorio Parrot y el archivo Dockerfile.

```
ub@ub:~/red1$ mkdir parrotsec
ub@ub:~/red1$ cd parrotsec
ub@ub:~/red1/parrotsec$ sudo nano Dockerfile-parrot
```

```
  GNU nano 7.2                                             Dockerfile-parrot *
FROM parrotsec/security:latest

RUN apt-get update && apt-get install -y \
  metasploit-framework \
  nmap \
  burpsuite \
  wireshark \
  john \
  hydra \
  git \
  vim \
  wget \
  iputils-ping \
  tshark \
  && apt-get clean

WORKDIR /root

CMD ["/bin/bash"]
```

Construye la imagen

- sudo docker build -t parrot-pentest -f Dockerfile-parrot .

```
ub@ub:~/red1/parrotsec$ sudo docker build -t parrot-pentest -f Dockerfile-parrot .
[sudo] contraseña para ub:
[+] Building 123.2s (7/7) FINISHED                                                           docker:default
 => [internal] load build definition from Dockerfile-parrot                                            0.0s
 => => transferring dockerfile: 339B                                                                   0.0s
 => [internal] load metadata for docker.io/parrotsec/security:latest                                   1.1s
 => [internal] load .dockerignore                                                                      0.0s
 => => transferring context: 2B                                                                        0.0s
 => CACHED [1/3] FROM docker.io/parrotsec/security:latest@sha256:2ae5782497b1af8a05695e898896867fb19f1cca6cbc75569c0e  0.0s
 => => resolve docker.io/parrotsec/security:latest@sha256:2ae5782497b1af8a05695e898896867fb19f1cca6cbc75569c0e88671ae  0.0s
 => [2/3] RUN apt-get update  && apt-get install -y --no-install-recommends     nmap     metasploit-framework     jo  64.6s
 => [3/3] WORKDIR /root                                                                                0.3s
 => exporting to image                                                                                57.1s
 => => exporting layers                                                                               46.5s
 => => exporting manifest sha256:b22a20084d5a61f79a042af86f283ba7e7105500d8b5a366f0971480289ae4be      0.0s
 => => exporting config sha256:c8354b1031041e401c95c81d90191aad766c219245413 4cfe4d0e147ba26407e       0.0s
 => => exporting attestation manifest sha256:8c8e514fc1eaac5c89cdf63019638c0c839327de153f2d4e3e72d51c3080f916  0.0s
 => => exporting manifest list sha256:6a4080f9a2d6a1cc61ffc73403c65e694d819d928740a815cd60d7f744e1140f  0.0s
 => => naming to docker.io/library/parrot-pentest:latest                                               0.0s
 => => unpacking to docker.io/library/parrot-pentest:latest                                           10.5s
```

Inicie el contenedor y verifique.

```
sudo docker run -it \
  --name parrot-test \
  --cap-add=NET_RAW \
  --cap-add=NET_ADMIN \
  parrot-pentest /bin/bash
```

Paso 3

Añade el contenedor Parrot a docker-compose.yml.

```
version: '3.8'
services:
  web1:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.2

  web2:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    networks:
      mynetwork:
        ipv4_address: 172.20.0.3

  firewall:
    build:
      context: ./firewall
      dockerfile: Dockerfile-firewall
    cap_add:
      - NET_ADMIN
    networks:
      mynetwork:
        ipv4_address: 172.20.0.4

  parrot:
    build:
      context: ./parrotsec
      dockerfile: Dockerfile-parrot
    cap_add:
      - SYS_ADMIN
      - NET_ADMIN
    stdin_open: true
```

```
    tty: true
    networks:
      mynetwork:
        ipv4_address: 172.20.0.5

networks:
  mynetwork:
    driver: bridge
    ipam:
      config:
        - subnet: 172.20.0.0/16
```

```yaml
  parrot:
    build:
      context: ./parrotsec
      dockerfile: Dockerfile-parrot
    cap_add:
      - SYS_ADMIN
      - NET_ADMIN
    stdin_open: true
    tty: true
    networks:
      mynetwork:
        ipv4_address: 172.20.0.5

networks:
  mynetwork:
    driver: bridge
    ipam:
      config:
        - subnet: 172.20.0.0/16
```

Iniciar todos los servicios

- sudo docker-compose up --build -d

```
✔red1-web2                    Built
✔red1-firewall                Built
✔red1-parrot                  Built
✔red1-web1                    Built
✔Network red1_mynetwork       Created
✔Container red1-web2-1        Started
✔Container red1-firewall-1    Started
✔Container red1-parrot-1      Started
✔Container red1-web1-1        Started
```

- sudo docker-compose ps

```
ub@ub:~/red1$ sudo docker-compose ps
WARN[0000] /home/ub/red1/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to av
oid potential confusion
NAME              IMAGE             COMMAND                  SERVICE    CREATED              STATUS              PORTS
red1-firewall-1   red1-firewall     "/usr/local/bin/fire…"   firewall   About a minute ago   Up About a minute
red1-parrot-1     red1-parrot       "bash"                   parrot     About a minute ago   Up About a minute
red1-web1-1       red1-web1         "httpd-foreground"       web1       About a minute ago   Up About a minute   80/tcp
red1-web2-1       red1-web2         "httpd-foreground"       web2       About a minute ago   Up About a minute   80/tcp
```

- sudo docker exec -it red1-parrot-1 ip a

```
ub@ub:~/red1$ sudo docker exec -it red1-parrot-1 ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host proto kernel_lo
       valid_lft forever preferred_lft forever
2: eth0@if14: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether d2:60:39:71:10:e4 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 172.20.0.5/16 brd 172.20.255.255 scope global eth0
       valid_lft forever preferred_lft forever
```

Paso 4

Usar Nmap para escanear la red

Primero, ingresa al contenedor Parrot

```
ub@ub:~/red1$ sudo docker exec -it red1-parrot-1 bash
┌──[root@5e5342f2c1a9]─[~]
└──╼ #
```

Escanear toda la subred Docker

```
┌──[root@5e5342f2c1a9]─[~]
└──╼ #nmap -sn 172.20.0.0/24
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:08 UTC
Nmap scan report for ub (172.20.0.1)
Host is up (0.000053s latency).
MAC Address: EE:D8:FA:0C:C5:1D (Unknown)
Nmap scan report for red1-web1-1.red1_mynetwork (172.20.0.2)
Host is up (0.0000070s latency).
MAC Address: B2:D7:96:3A:D1:9A (Unknown)
Nmap scan report for red1-web2-1.red1_mynetwork (172.20.0.3)
Host is up (0.0000060s latency).
MAC Address: 52:23:49:5B:76:B7 (Unknown)
Nmap scan report for red1-firewall-1.red1_mynetwork (172.20.0.4)
Host is up (0.000017s latency).
MAC Address: CE:2F:A4:92:A2:2F (Unknown)
Nmap scan report for 5e5342f2c1a9 (172.20.0.5)
Host is up.
Nmap done: 256 IP addresses (5 hosts up) scanned in 1.98 seconds
```

Escanear los puertos de web1

- nmap 172.20.0.2

```
┌──[root@5e5342f2c1a9]─[~]
└─── #nmap 172.20.0.2
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:12 UTC
Nmap scan report for red1-web1-1.red1_mynetwork (172.20.0.2)
Host is up (0.0000030s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE
80/tcp open  http
MAC Address: B2:D7:96:3A:D1:9A (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 0.12 seconds
```

Escanear los puertos de web2

- nmap 172.20.0.2

```
┌──[root@5e5342f2c1a9]─[~]
└─── #nmap 172.20.0.3
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:13 UTC
Nmap scan report for red1-web2-1.red1_mynetwork (172.20.0.3)
Host is up (0.0000030s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE
80/tcp open  http
MAC Address: 52:23:49:5B:76:B7 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 0.11 seconds
```

Detección de servicio y versión

- nmap -sV 172.20.0.2

```
┌──[root@5e5342f2c1a9]─[~]
└─── #nmap -sV 172.20.0.2
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:14 UTC
Nmap scan report for red1-web1-1.red1_mynetwork (172.20.0.2)
Host is up (0.0000030s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE VERSION
80/tcp open  http    Apache httpd 2.4.66 ((Unix))
MAC Address: B2:D7:96:3A:D1:9A (Unknown)

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 6.28 seconds
```

- nmap -sV 172.20.0.3

```
┌──[root@5e5342f2c1a9]─[~]
└─── #nmap -sV 172.20.0.3
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:14 UTC
Nmap scan report for red1-web2-1.red1_mynetwork (172.20.0.3)
Host is up (0.0000040s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE VERSION
80/tcp open  http    Apache httpd 2.4.66 ((Unix))
MAC Address: 52:23:49:5B:76:B7 (Unknown)

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 6.23 seconds
```

Escaneo completo de puertos

- nmap -p- 172.20.0.2

```
┌──[root@5e5342f2c1a9]─[~]
└─── #nmap -p- 172.20.0.2
Starting Nmap 7.95 ( https://nmap.org ) at 2026-01-07 11:16 UTC
Nmap scan report for red1-web1-1.red1_mynetwork (172.20.0.2)
Host is up (0.0000030s latency).
Not shown: 65534 closed tcp ports (reset)
PORT   STATE SERVICE
80/tcp open  http
MAC Address: B2:D7:96:3A:D1:9A (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 0.54 seconds
```

Paso 5

Comprueba primero la interfaz de red antes de capturar paquetes.

- ip a
- sudo tshark -i ens33 port 80

```
ub@ub:~/red1$ sudo tshark -i ens33 port 80
Running as user "root" and group "root". This could be dangerous.
Capturing on 'ens33'
```

Generar tráfico en otra terminal

```
ub@ub:~/red1$ curl http://172.20.0.2
<h1>Hola desde Web Server</h1>
<p>Este es un servidor Apache en Docker</p>
```

Volviendo a la terminal anterior, podemos observar el tráfico capturado.

```
ub@ub:~/red1$ sudo tshark -i ens33 port 80
Running as user "root" and group "root". This could be dangerous.
Capturing on 'ens33'
    1 0.000000000 192.168.118.142 → 185.125.190.17 TCP 74 34480 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=2364621873 TSecr=0 WS=128
    2 0.032701845 185.125.190.17 → 192.168.118.142 TCP 60 80 → 34480 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460
    3 0.032725406 192.168.118.142 → 185.125.190.17 TCP 54 34480 → 80 [ACK] Seq=1 Ack=1 Win=64240 Len=0
    4 0.032886733 192.168.118.142 → 185.125.190.17 HTTP 142 GET / HTTP/1.1
    5 0.033032231 185.125.190.17 → 192.168.118.142 TCP 60 80 → 34480 [ACK] Seq=1 Ack=89 Win=64240 Len=0
    6 0.064697701 185.125.190.17 → 192.168.118.142 HTTP 243 HTTP/1.1 204 No Content
    7 0.064831732 192.168.118.142 → 185.125.190.17 TCP 54 34480 → 80 [FIN, ACK] Seq=89 Ack=191 Win=64050 Len=0
    8 0.065205139 185.125.190.17 → 192.168.118.142 TCP 60 80 → 34480 [ACK] Seq=191 Ack=90 Win=64239 Len=0
```

Paso 6

Ver interfaz de red virtual de Docker

- ip a | grep docker

```
ub@ub:~/red1$ ip a | grep docker
5: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
```

- sudo tshark -i docker0 -f "net 172.20.0.0/16"

```
ub@ub:~/red1$ sudo tshark -i docker0 -f "net 172.20.0.0/16"
Running as user "root" and group "root". This could be dangerous.
Capturing on 'docker0'
```

- sudo tshark -i docker0 -f "tcp port 80"

```
ub@ub:~/red1$ sudo tshark -i docker0 -f "tcp port 80"
Running as user "root" and group "root". This could be dangerous.
Capturing on 'docker0'
```

Paso 7

Añade el siguiente contenido a docker-compose.yml

```
 GNU nano 7.2                                          docker-compose.yml *
version: '3.8'
services:
  web1:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    ports:
      - "8080:80"
    networks:
      mynetwork:
        ipv4_address: 172.20.0.2

  web2:
    build:
      context: ./httpd
      dockerfile: Dockerfile-httpd
    ports:
      - "8081:80"
    networks:
      mynetwork:
```

Reiniciar

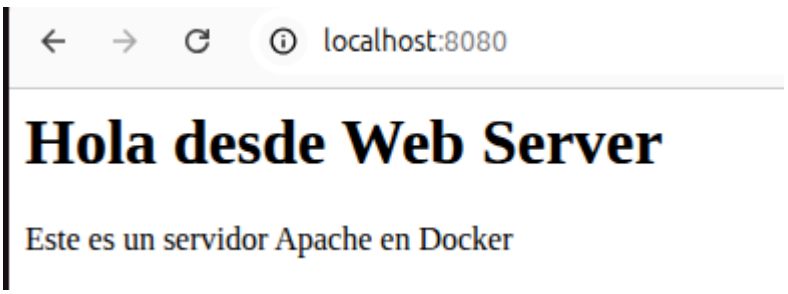
- sudo docker-compose down

```
ub@ub:~/red1$ sudo docker-compose down
WARN[0000] /home/ub/red1/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potentia
l confusion
[+] Running 5/5
 ✔Container red1-firewall-1  Removed                                                                                          10.1s
 ✔Container red1-web1-1      Removed                                                                                           1.2s
 ✔Container red1-parrot-1    Removed                                                                                          10.1s
 ✔Container red1-web2-1      Removed                                                                                           1.2s
 ✔Network red1_mynetwork     Removed                                                                                           0.1s
```

- sudo docker-compose up -d

```
ub@ub:~/red1$ sudo docker-compose up -d
WARN[0000] /home/ub/red1/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potentia
l confusion
[+] Running 5/5
 ✔Network red1_mynetwork     Created                                                                                           0.0s
 ✔Container red1-parrot-1    Started                                                                                           0.5s
 ✔Container red1-web1-1      Started                                                                                           0.5s
 ✔Container red1-web2-1      Started                                                                                           0.5s
 ✔Container red1-firewall-1  Started                                                                                           0.5s
```

Acceso a través de un navegador web
http://localhost:8080



http://localhost:8081

Paso 8

Inicie sesión en su cuenta de Docker

- docker login -u …

```
ub@ub:~/red1$ docker login -u lxin0704

i Info → A Personal Access Token (PAT) can be used instead.
         To create a PAT, visit https://app.docker.com/settings


Password:

WARNING! Your credentials are stored unencrypted in '/home/ub/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
```

Crear un espejo local

- sudo docker build -t lxin0704/web1:latest -f ./httpd/Dockerfile-httpd ./httpd

```
ub@ub:~/red1$ sudo docker build -t lxin0704/web1:latest -f ./httpd/Dockerfile-httpd ./httpd
[+] Building 1.3s (7/7) FINISHED                                                                                    docker:default
 => [internal] load build definition from Dockerfile-httpd                                                                   0.0s
 => => transferring dockerfile: 108B                                                                                         0.0s
 => [internal] load metadata for docker.io/library/httpd:latest                                                              1.2s
 => [internal] load .dockerignore                                                                                            0.0s
 => => transferring context: 2B                                                                                              0.0s
 => [internal] load build context                                                                                            0.0s
 => => transferring context: 74B                                                                                             0.0s
 => [1/2] FROM docker.io/library/httpd:latest@sha256:e19cdd61f51985351ca9867d384cf1b050487d26bb1b49c470f2fcda1b5f276c        0.0s
 => => resolve docker.io/library/httpd:latest@sha256:e19cdd61f51985351ca9867d384cf1b050487d26bb1b49c470f2fcda1b5f276c        0.0s
 => CACHED [2/2] COPY ./public-html/ /usr/local/apache2/htdocs/                                                              0.0s
 => exporting to image                                                                                                       0.0s
 => => exporting layers                                                                                                      0.0s
 => => exporting manifest sha256:4fbd1b30ee17eb42bde77ed825d864efb4252d1fdd428125305a224c8a70e3f7                            0.0s
 => => exporting config sha256:d1c3217e0eb0d4674b5f40fb28ae5656e053e1d837f212b47da3e8c79e5546f6                              0.0s
 => => exporting attestation manifest sha256:9151f7a02b1210e61636292730436e301bee111500ebe18825235a9c4a1d6111                0.0s
 => => exporting manifest list sha256:fe52447cc36638b9bad6f2255749a1a149ef04564e8fa15721e9150e38ce25c                        0.0s
 => => naming to docker.io/lxin0704/web1:latest                                                                              0.0s
 => => unpacking to docker.io/lxin0704/web1:latest                                                                           0.0s
```

- sudo docker build -t lxin0704/web2:latest -f ./httpd/Dockerfile-httpd ./httpd

```
ub@ub:~/red1$ sudo docker build -t lxin0704/web2:latest -f ./httpd/Dockerfile-httpd ./httpd
[+] Building 0.6s (7/7) FINISHED                                                                                    docker:default
 => [internal] load build definition from Dockerfile-httpd                                                                   0.0s
 => => transferring dockerfile: 108B                                                                                         0.0s
 => [internal] load metadata for docker.io/library/httpd:latest                                                              0.5s
 => [internal] load .dockerignore                                                                                            0.0s
 => => transferring context: 2B                                                                                              0.0s
 => [internal] load build context                                                                                            0.0s
 => => transferring context: 74B                                                                                             0.0s
 => [1/2] FROM docker.io/library/httpd:latest@sha256:e19cdd61f51985351ca9867d384cf1b050487d26bb1b49c470f2fcda1b5f276c        0.0s
 => => resolve docker.io/library/httpd:latest@sha256:e19cdd61f51985351ca9867d384cf1b050487d26bb1b49c470f2fcda1b5f276c        0.0s
 => CACHED [2/2] COPY ./public-html/ /usr/local/apache2/htdocs/                                                              0.0s
 => exporting to image                                                                                                       0.0s
 => => exporting layers                                                                                                      0.0s
 => => exporting manifest sha256:4fbd1b30ee17eb42bde77ed825d864efb4252d1fdd428125305a224c8a70e3f7                            0.0s
 => => exporting config sha256:d1c3217e0eb0d4674b5f40fb28ae5656e053e1d837f212b47da3e8c79e5546f6                              0.0s
 => => exporting attestation manifest sha256:4401c9d13e510b5d334a582f4a968c01495764bacbf0b44568967d7bd0a37303                0.0s
 => => exporting manifest list sha256:87c1a24b27ff69c2d899a75cca8a2e6226da46058130bc4f1121b188fdbfa492                        0.0s
 => => naming to docker.io/lxin0704/web2:latest                                                                              0.0s
 => => unpacking to docker.io/lxin0704/web2:latest                                                                           0.0s
```

- sudo docker build -t lxin0704/firewall:latest -f ./firewall/Dockerfile-firewall ./firewall

```
ub@ub:~/red1$ sudo docker build -t lxin0704/firewall:latest -f ./firewall/Dockerfile-firewall ./firewall
[+] Building 1.2s (9/9) FINISHED                                                                                docker:default
 => [internal] load build definition from Dockerfile-firewall                                                             0.0s
 => => transferring dockerfile: 286B                                                                                      0.0s
 => [internal] load metadata for docker.io/library/ubuntu:latest                                                          1.1s
 => [internal] load .dockerignore                                                                                         0.0s
 => => transferring context: 2B                                                                                           0.0s
 => [1/4] FROM docker.io/library/ubuntu:latest@sha256:c35e29c9450151419d9448b0fd75374fec4fff364a27f176fb458d472dfc9e54    0.0s
 => => resolve docker.io/library/ubuntu:latest@sha256:c35e29c9450151419d9448b0fd75374fec4fff364a27f176fb458d472dfc9e54     0.0s
 => [internal] load build context                                                                                         0.0s
 => => transferring context: 38B                                                                                          0.0s
 => CACHED [2/4] RUN apt-get update && apt-get install -y iptables && apt-get clean                                       0.0s
 => CACHED [3/4] COPY ./firewall-rules.sh /usr/local/bin/firewall-rules.sh                                                0.0s
 => CACHED [4/4] RUN chmod +x /usr/local/bin/firewall-rules.sh                                                            0.0s
 => exporting to image                                                                                                    0.0s
 => => exporting layers                                                                                                   0.0s
 => => exporting manifest sha256:8ba17181cfafac81005c7eca7b7a857489ee9d4b99d389cb41a8f082c5ec2245                         0.0s
 => => exporting config sha256:840288e3bc9c9699a4f4855c13cfff3c7858035dedbd746941892bda37a021aa                           0.0s
 => => exporting attestation manifest sha256:802a6df19c6d293d68bdc3ee06eb6ab8531211b059b7929fb049be18faa7743b             0.0s
 => => exporting manifest list sha256:42808bb79cedd92088e9e59552c01fbef3ba78842eec7403345eccf3e8fa86e5                    0.0s
 => => naming to docker.io/lxin0704/firewall:latest                                                                       0.0s
 => => unpacking to docker.io/lxin0704/firewall:latest                                                                    0.0s
```

- sudo docker build -t lxin0704/parrotsec:latest -f ./parrotsec/Dockerfile-parrot ./parrotsec

```
ub@ub:~/red1$ sudo docker build -t lxin0704/parrotsec:latest -f ./parrotsec/Dockerfile-parrot ./parrotsec
[+] Building 1.2s (7/7) FINISHED                                                                                docker:default
 => [internal] load build definition from Dockerfile-parrot                                                               0.0s
 => => transferring dockerfile: 312B                                                                                      0.0s
 => [internal] load metadata for docker.io/parrotsec/security:latest                                                      1.1s
 => [internal] load .dockerignore                                                                                         0.0s
 => => transferring context: 2B                                                                                           0.0s
 => [1/3] FROM docker.io/parrotsec/security:latest@sha256:cc54717390058e6848fffbf3ac8dea8efdf4a350fe8360da2d82f6a0e935cacc  0.0s
 => => resolve docker.io/parrotsec/security:latest@sha256:cc54717390058e6848fffbf3ac8dea8efdf4a350fe8360da2d82f6a0e935cacc  0.0s
 => CACHED [2/3] RUN apt-get update  && apt-get install -y --no-install-recommends     nmap     john     hydra     git     vim  0.0s
 => CACHED [3/3] WORKDIR /root                                                                                            0.0s
 => exporting to image                                                                                                    0.0s
 => => exporting layers                                                                                                   0.0s
 => => exporting manifest sha256:97d4c94cd1c729bbadab071d625eba28af22330f88e5b5b13ce95277f16c4fc9                         0.0s
 => => exporting config sha256:0bd2ecd8b66b22ab90b42d3fe59e30da71f7c436f23e9acb38d09eab30eafb4d                           0.0s
 => => exporting attestation manifest sha256:37aaa45aed99ad013603f17258a987649ce1ee61b10476bfc195bdc1185623ae             0.0s
 => => exporting manifest list sha256:855712075a93874d234a52d9b5d6954ce982fd33663191177c9f7a9c24dcf787                    0.0s
 => => naming to docker.io/lxin0704/parrotsec:latest                                                                      0.0s
 => => unpacking to docker.io/lxin0704/parrotsec:latest                                                                   0.0s
```

Enviar la imagen a Docker Hub

- sudo docker push lxin0704/web1:latest

```
ub@ub:~/red1$ sudo docker push lxin0704/web1:latest
The push refers to repository [docker.io/lxin0704/web1]
02d7611c4eae: Pushed
b5be9d562803: Pushed
af0709a53cc2: Pushed
3809d5ef631d: Pushed
5a84161993ab: Pushed
2cb5846404a4: Pushed
4f4fb700ef54: Mounted from library/wordpress
8eb44842f200: Pushed
latest: digest: sha256:fe52447cc36638b9bad6f2255749a1a149ef04564e8fa157721e9150e38ce25c size: 856
```

- sudo docker push lxin0704/web2:latest

```
ub@ub:~/red1$ sudo docker push lxin0704/web2:latest
The push refers to repository [docker.io/lxin0704/web2]
02d7611c4eae: Mounted from lxin0704/web1
5a84161993ab: Mounted from lxin0704/web1
46483da6c558: Pushed
2cb5846404a4: Mounted from lxin0704/web1
8eb44842f200: Mounted from lxin0704/web1
b5be9d562803: Mounted from lxin0704/web1
af0709a53cc2: Mounted from lxin0704/web1
4f4fb700ef54: Mounted from lxin0704/web1
latest: digest: sha256:87c1a24b27ff69c2d899a75cca8a2e6226da46058130bc4f1121b188fdbfa492 size: 856
```

- sudo docker push lxin0704/firewall:latest

```
ub@ub:~/red1$ sudo docker push lxin0704/firewall:latest
The push refers to repository [docker.io/lxin0704/firewall]
d0496b2aa5db: Pushed
6d6c34926766: Pushed
20043066d3d5: Pushed
039c654b6bfe: Pushed
ff5a95719a3d: Pushed
latest: digest: sha256:42808bb79cedd92088e9e59552c01fbef3ba78842eec7403345eccf3e8fa86e5 size: 856
```

- sudo docker push lxin0704/parrotsec:latest

```
ub@ub:~/red1$ sudo docker push lxin0704/parrotsec:latest
The push refers to repository [docker.io/lxin0704/parrotsec]
c173048fb11b: Pushed
4f4fb700ef54: Mounted from lxin0704/web2
54deb8a02396: Pushed
d5f846662d7e: Pushed
963f59e946de: Pushed
0003226fecde: Pushed
latest: digest: sha256:855712075a93874d234a52d9b5d6954ce982fd33663191177c9f7a9c24dcf787 size: 856
```

Paso 9

Sube a GitHub, crea un repositorio y configura los ajustes

```
ub@ub:~/red1$ git init
ayuda: Usando 'master' como el nombre de la rama inicial. Este nombre de rama predeterminado
ayuda: está sujeto a cambios. Para configurar el nombre de la rama inicial para usar en todos
ayuda: de sus nuevos repositorios, reprimiendo esta advertencia, llama a:
ayuda:
ayuda:  git config --global init.defaultBranch <nombre>
ayuda:
ayuda: Los nombres comúnmente elegidos en lugar de 'master' son 'main', 'trunk' y
ayuda: 'development'. Se puede cambiar el nombre de la rama recién creada mediante este comando:
ayuda:
ayuda:  git branch -m <nombre>
Inicializado repositorio Git vacío en /home/ub/red1/.git/
ub@ub:~/red1$ echo "# -Locos-por-los-Retos" >> README.md
ub@ub:~/red1$ git add README.md
ub@ub:~/red1$ git commit -m "first commit"
[master (commit-raíz) 4dabecd] first commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
ub@ub:~/red1$ git branch -M main
ub@ub:~/red1$ git remote add origin https://github.com/lxin0704-12138/-Locos-por-los-Retos.git
ub@ub:~/red1$ git push -u origin main
Username for 'https://github.com': lxin0704-12138
Password for 'https://lxin0704-12138@github.com':
Enumerando objetos: 3, listo.
Contando objetos: 100% (3/3), listo.
Escribiendo objetos: 100% (3/3), 231 bytes | 231.00 KiB/s, listo.
Total 3 (delta 0), reusados 0 (delta 0), pack-reusados 0
To https://github.com/lxin0704-12138/-Locos-por-los-Retos.git
 * [new branch]      main -> main
rama 'main' configurada para rastrear 'origin/main'.
```

Sube el archivo docker-compose.yml a GitHub

```
ub@ub:~/red1$ git add docker-compose.yml
ub@ub:~/red1$ git commit -m "docker-compose.yml"
[main 8bbeacd] docker-compose.yml
 1 file changed, 43 insertions(+)
 create mode 100644 docker-compose.yml
```

```
ub@ub:~/red1$ git push -u origin main
Username for 'https://github.com': lxin0704-12138
Password for 'https://lxin0704-12138@github.com':
Enumerando objetos: 4, listo.
Contando objetos: 100% (4/4), listo.
Compresión delta usando hasta 4 hilos
Comprimiendo objetos: 100% (3/3), listo.
Escribiendo objetos: 100% (3/3), 546 bytes | 546.00 KiB/s, listo.
Total 3 (delta 0), reusados 0 (delta 0), pack-reusados 0
To https://github.com/lxin0704-12138/-Locos-por-los-Retos.git
   4dabecd..8bbeacd  main -> main
rama 'main' configurada para rastrear 'origin/main'.
```

Utilice el siguiente comando para recuperar
git clone https://github.com/lxin0704-12138/-Locos-por-los-Retos

```
ub@ub:~$ mkdir logos-retos
ub@ub:~$ cd logos-retos
ub@ub:~/logos-retos$ git clone https://github.com/lxin0704-12138/-Locos-por-los-Retos
Clonando en '-Locos-por-los-Retos'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 0), reused 6 (delta 0), pack-reused 0 (from 0)
Recibiendo objetos: 100% (6/6), listo.
ub@ub:~/logos-retos$ ll
total 12
drwxrwxr-x  3 ub ub 4096 ene  7 14:18 ./
drwxr-x--- 22 ub ub 4096 ene  7 14:18 ../
drwxrwxr-x  3 ub ub 4096 ene  7 14:18 -Locos-por-los-Retos/
```