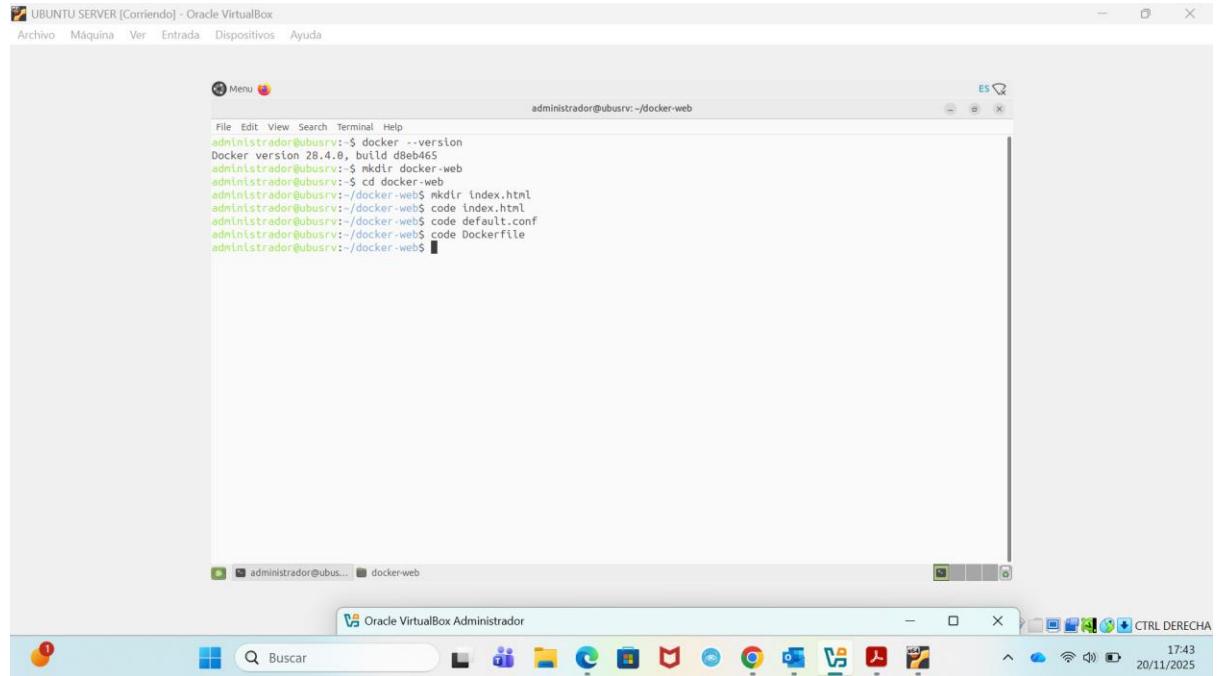


Despliegue de una Página Web con Docker

Parte 1: Configuración del entorno:

1. Crear un directorio para el proyecto

En tu terminal, crea un directorio llamado docker-web y accede a él:

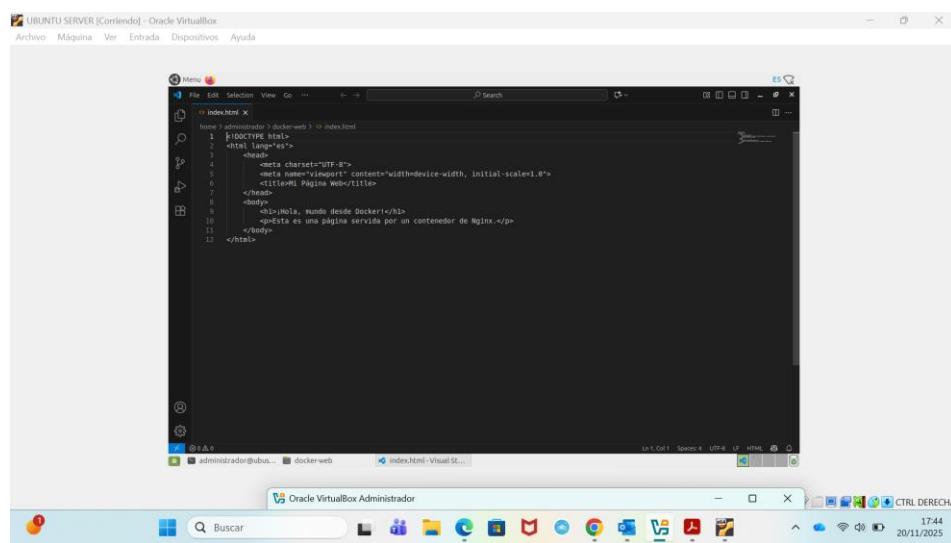


The screenshot shows a terminal window titled "UBUNTU SERVER [Corriendo] - Oracle VirtualBox". The user is navigating through a directory structure and creating files. The terminal output is as follows:

```
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web
administrador@ubusrv:~$ docker --version
Docker version 28.4.0, build d8eb465
administrador@ubusrv:~$ mkdir docker-web
administrador@ubusrv:~$ cd docker-web
administrador@ubusrv:~/docker-web$ mkdir index.html
administrador@ubusrv:~/docker-web$ code index.html
administrador@ubusrv:~/docker-web$ code default.conf
administrador@ubusrv:~/docker-web$ code Dockerfile
administrador@ubusrv:~/docker-web$
```

2. Crear una página web personalizada

Dentro del directorio docker-web, crea un archivo llamado index.html con el siguiente contenido:

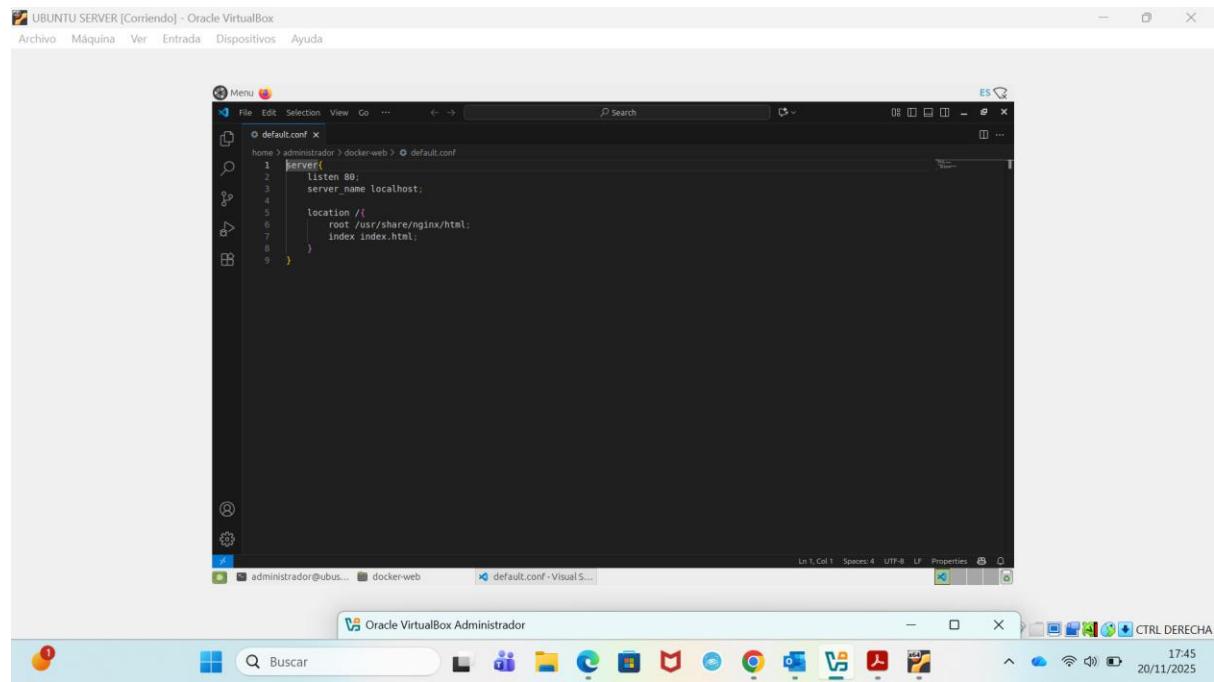


The screenshot shows a Visual Studio Code window with an open file named "index.html". The code editor displays the following HTML content:

```
<!DOCTYPE html>
<html lang="es">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta name="viewport" content="width=device-width, initial-scale=1.0" title="Mi Página Web" />
  </head>
  <body>
    <p>Hola, mundo desde Docker!</p>
    <p>Este es una página servida por un contenedor de Nginx.</p>
  </body>
</html>
```

3. Crear un archivo de configuración para Nginx

Crea un archivo con en editor de texto llamado default.conf en el mismo directorio con la siguiente configuración básica para Nginx:

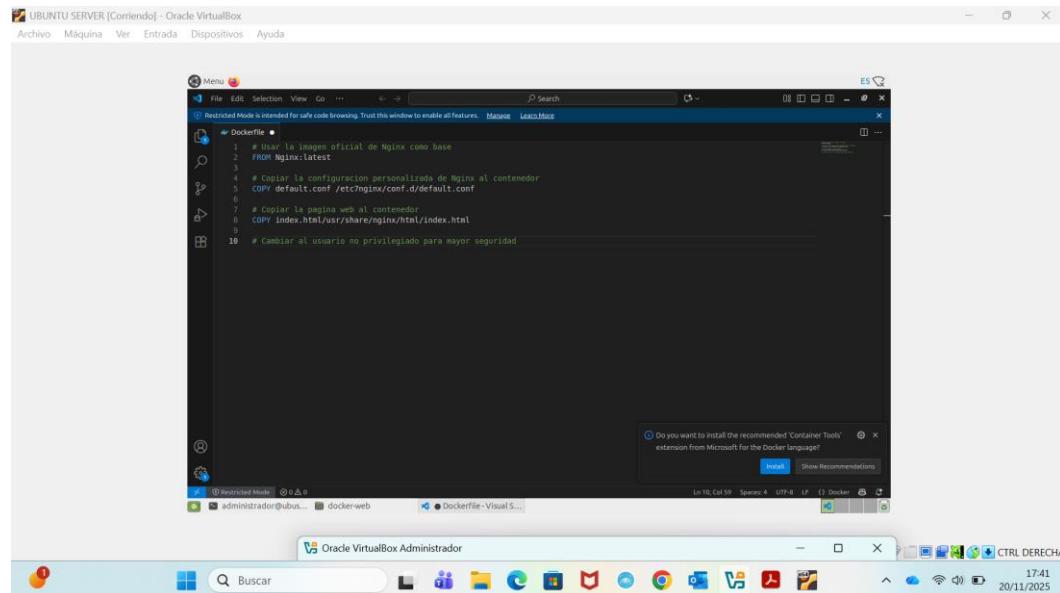


```
home /administrador > docker-web > default.conf
1 server{
2   listen 80;
3   server_name localhost;
4
5   location /{
6     root /usr/share/nginx/html;
7     index index.html;
8   }
9 }
```

Parte 2: Construcción del contenedor

1. Crear un archivo Dockerfile

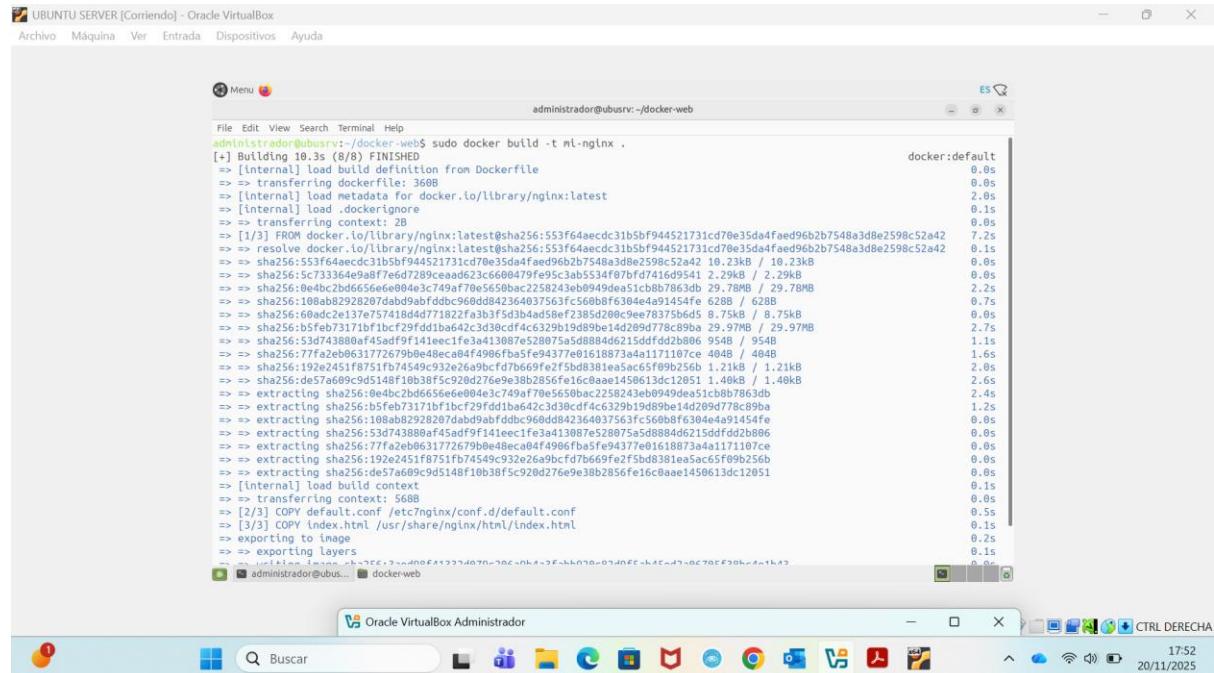
En el directorio docker-web, crea un archivo llamado Dockerfile sin extensión con el siguiente contenido:



```
1 # Usar la imagen oficial de Nginx como base
2 FROM nginx:latest
3
4 # Copiar la configuración personalizada de Nginx al contenedor
5 COPY default.conf /etc/nginx/conf.d/default.conf
6
7 # Copiar la página web al contenedor
8 COPY index.html /usr/share/nginx/html/index.html
9
10 # Cambiar al usuario no privilegiado para mayor seguridad
```

2. Construir la imagen personalizada

Construye la imagen utilizando el siguiente comando:



3. Verificar que la imagen se creó correctamente

Lista las imágenes disponibles en tu sistema:



Parte 3: Despliegue del servidor web 1.

1. Ejecutar el contenedor

Inicia un contenedor basado en la imagen que acabas de crear:

```
administrador@ubusrv:~/docker-web$ sudo docker run -d --name servidor-web -p 8080:80 mi-nginx  
f8e908dea869177ada978200d623b6080c1077a015a80ce6b6ed302f8c7e373d  
administrador@ubusrv:~/docker-web$
```

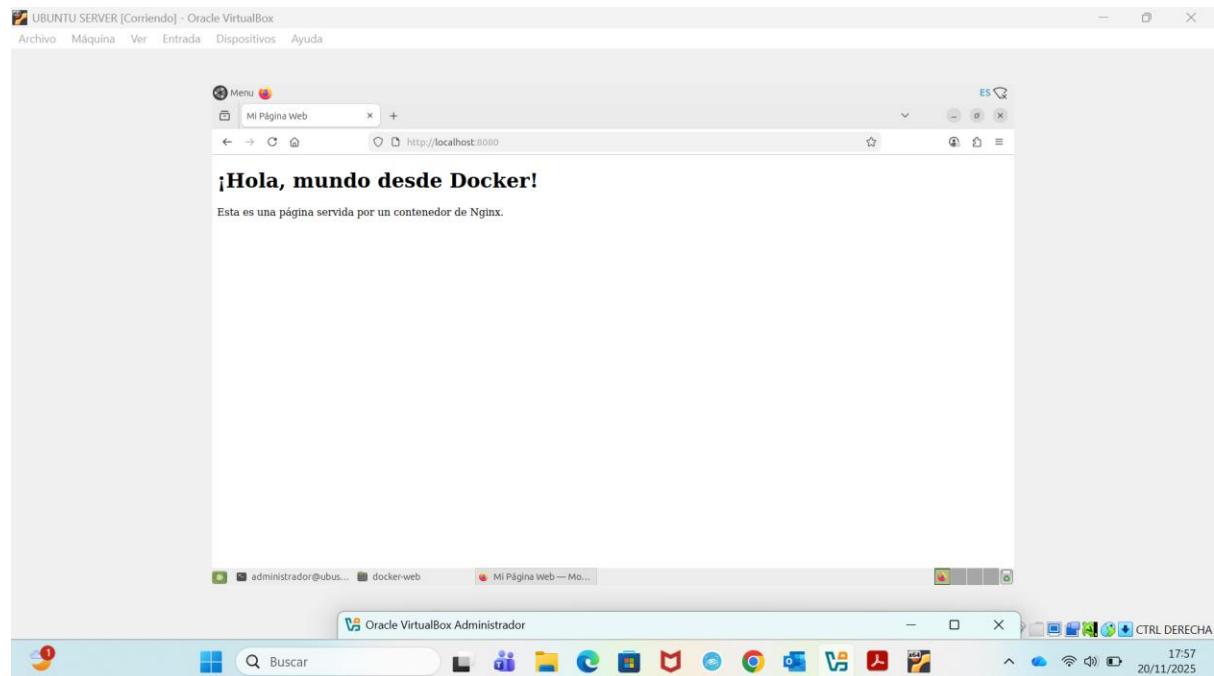
2. Verificar que el contenedor está corriendo

Comprueba los contenedores en ejecución:

```
administrador@ubusrv:~/docker-web$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
f8e908dea869 mi-nginx "/docker-entrypoint..." About a minute ago Up About a minute 0.0.0.0:8080->80/tcp, [::]:8080->80/tcp
servidor-web
administrador@ubusrv:~/docker-web$
```

3. Probar la página web

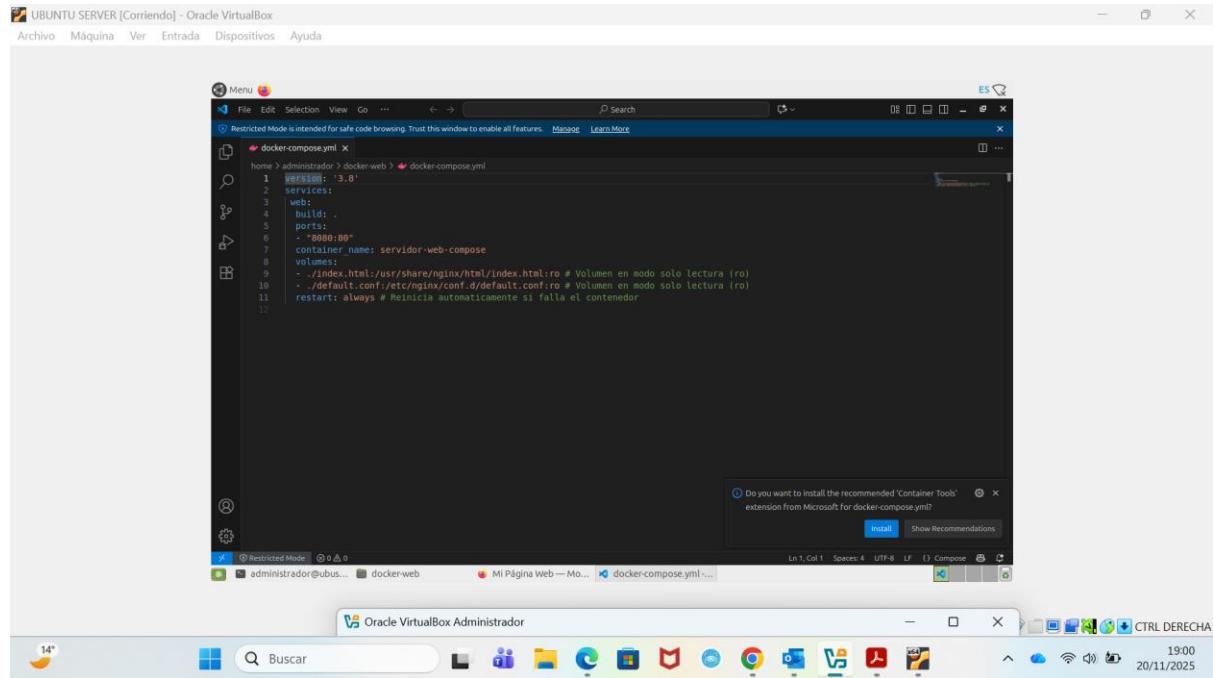
Abre tu navegador y visita <http://localhost:8080>. Deberías ver la página personalizada que creaste.



Parte 4: Uso de Docker Compose

1. Crear un archivo docker-compose.yml

En el directorio docker-web, crea un archivo llamado docker-compose.yml con el siguiente contenido:



```
UBUNTU SERVER [Corriendo] - Oracle VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda

Menu ES
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
docker-compose.yml
home > administrador > docker-web > docker-compose.yml
1 version: '3.8'
2 services:
3   web:
4     build: .
5     ports:
6       - "8080:80"
7     container_name: servidor-web-compose
8     volumes:
9       - ./index.html:/usr/share/nginx/html/index.html:ro # Volumen en modo solo lectura (ro)
10      - ./default.conf:/etc/nginx/conf.d/default.conf:ro # Volumen en modo solo lectura (ro)
11      restart: always # Reinicia automáticamente si faltó el contenido
12

Do you want to install the recommended 'Container Tools' extension from Microsoft for docker-compose.yml?
Install Show Recommendations
Ln 1, Col 1 Spaces: 4 UTF-8 LF ⓘ Compose

Oracle VirtualBox Administrador
14° Buscar 19:00 20/11/2025
```

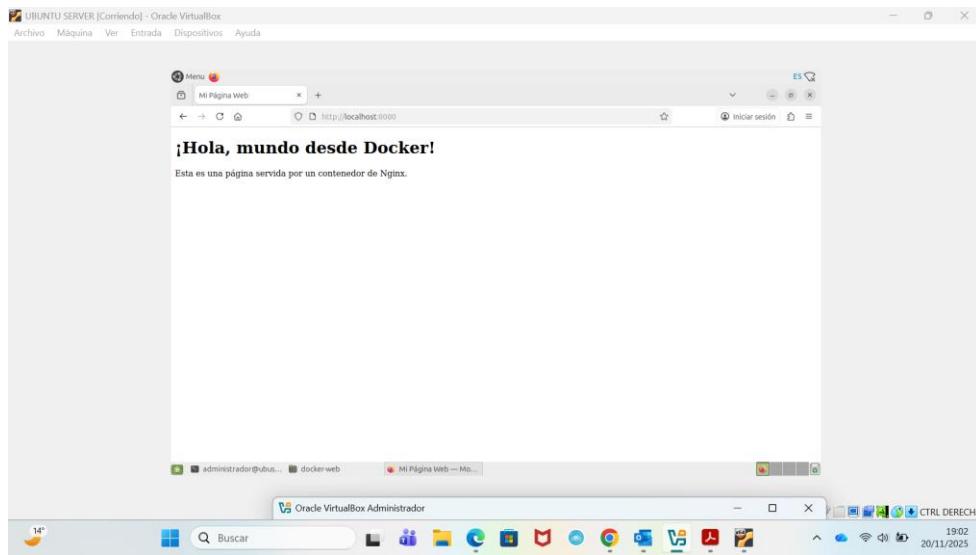
2. Iniciar los servicios con Docker Compose

Ejecuta el siguiente comando para iniciar el servicio definido en segundo plano (modo "detached"):

```
administrador@ubusrv:~/docker-web$ sudo docker-compose up -d
WARN[0000] /home/administrador/docker-web/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please
remove it to avoid potential confusion
[+] Running 1/1
✓ Container servidor-web-compose Started
administrador@ubusrv:~/docker-web$ 0.2s
```

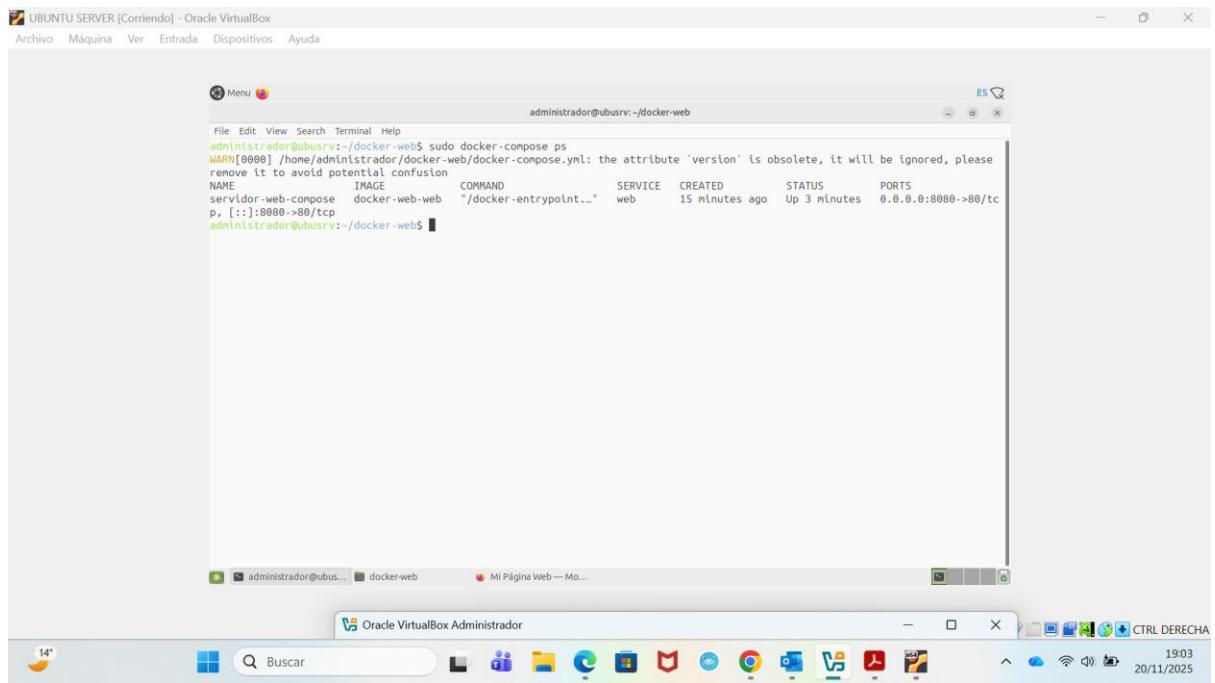
3. Comprobar que funciona

Visita nuevamente <http://localhost:8080> en tu navegador.



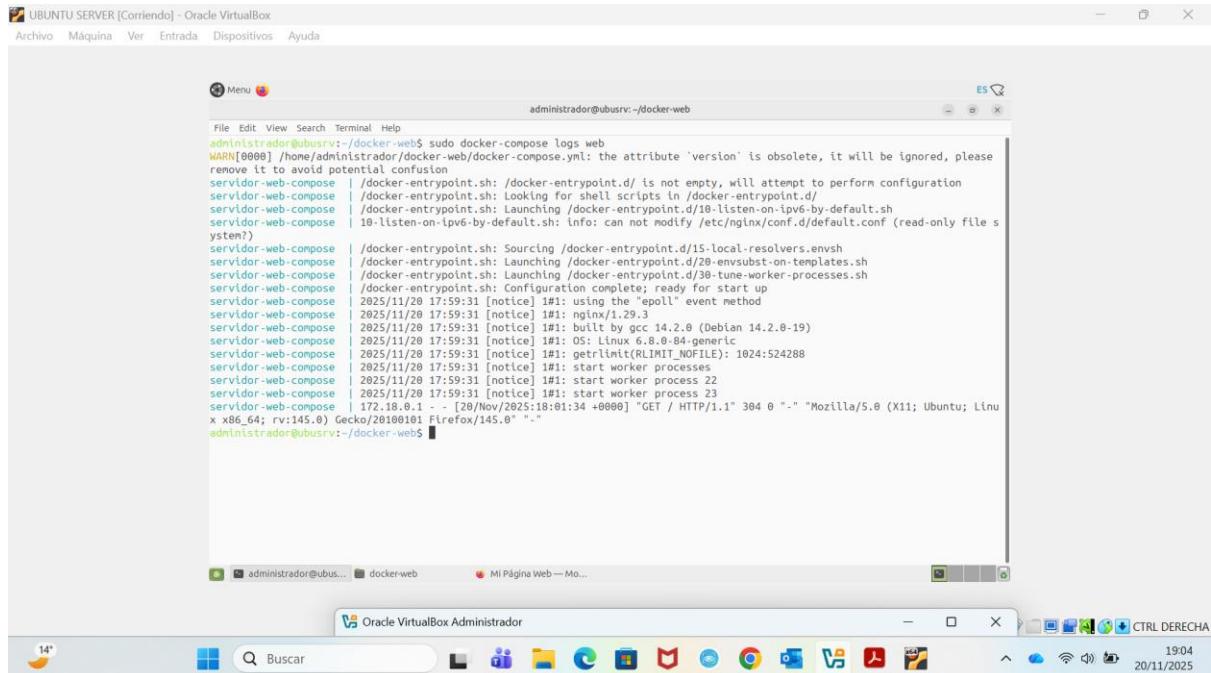
4. Verificar los servicios levantados

Comprueba los servicios activos con:



5. Ver los logs del servicio

Muestra los registros generados por Nginx:

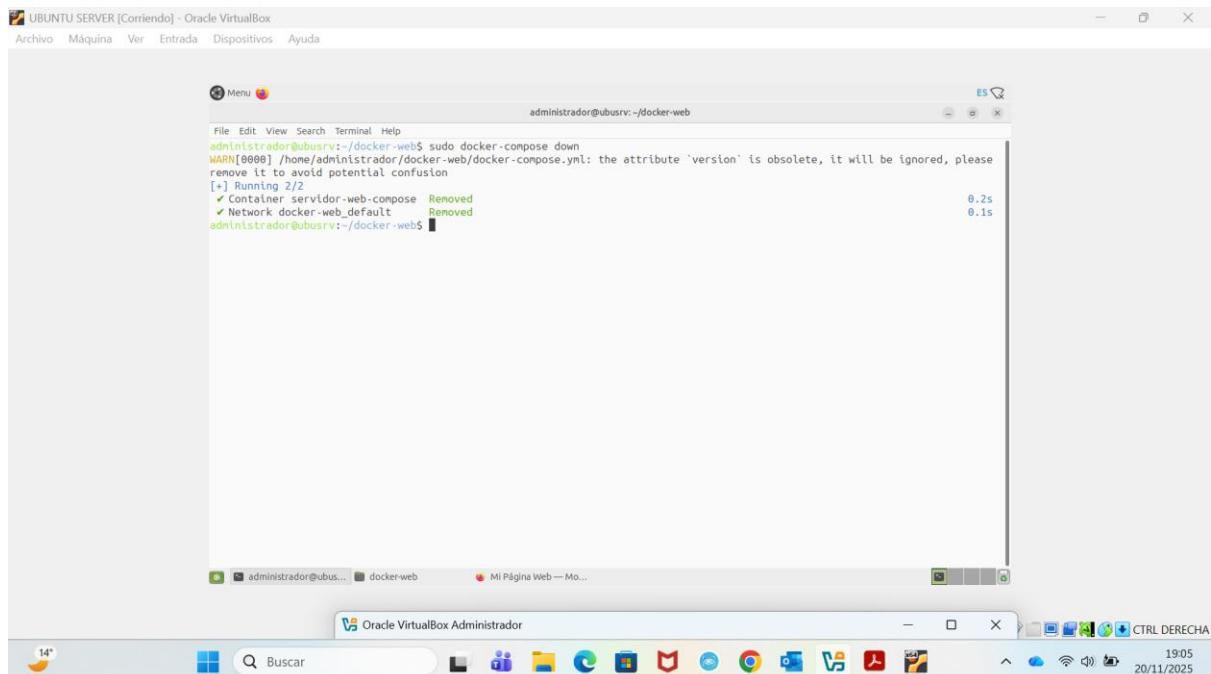


The screenshot shows a terminal window titled "UBUNTU SERVER [Corriendo] - Oracle VirtualBox". The command run is "sudo docker-compose logs web". The output shows the configuration of the Docker entrypoint script, the launching of worker processes, and the start of the Nginx server. It also includes a log entry from a browser requesting the page.

```
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web$ sudo docker-compose logs web
WARN[0008] /home/administrador/docker-web/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please
remove it to avoid potential confusion
servidor-web-compose | /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
servidor-web-compose | /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
servidor-web-compose | /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
servidor-web-compose | 10-listen-on-ipv6-by-default.sh: Info: can not modify /etc/nginx/conf.d/default.conf (read-only file s
ystem?)
servidor-web-compose | /docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
servidor-web-compose | /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
servidor-web-compose | /docker-entrypoint.sh: Configuration complete; ready for start up
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: using the "epoll" event method
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: nginx/1.29.3
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: built by gcc 14.2.0 (Debian 14.2.0-19)
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: OS Linux 6.8.0-84-generic
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: setrlimit(RLIMIT_NOFILE): 1024:524288
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: start worker processes
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: start worker process 22
servidor-web-compose | 2025/11/20 17:59:31 [notice] 1#1: start worker process 23
servidor-web-compose | 172.18.0.1 - - [26/Nov/2025:18:01:34 +0000] "GET / HTTP/1.1" 304 0 "-" "Mozilla/5.0 (X11; Ubuntu; Linu
x x86_64; rv:145.0) Gecko/20100101 Firefox/145.0"
administrador@ubusrv:~/docker-web$
```

6. Detener y eliminar los servicios

Cuando termines, detén y elimina los servicios creados con este comando:



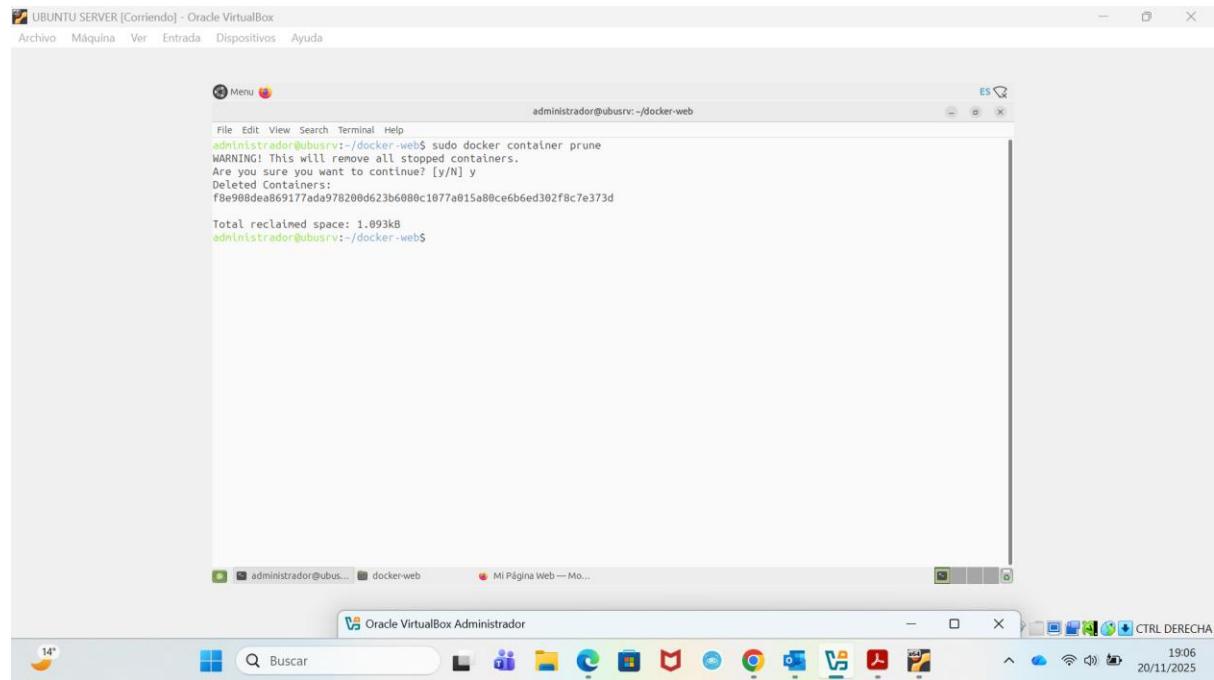
The screenshot shows a terminal window titled "UBUNTU SERVER [Corriendo] - Oracle VirtualBox". The command run is "sudo docker-compose down". The output shows the stopping and removal of the "servidor-web" service, which includes its container and network. The removal process took 0.2s for the container and 0.1s for the network.

```
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web$ sudo docker-compose down
WARN[0008] /home/administrador/docker-web/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please
remove it to avoid potential confusion
[+] Running 2/2
  ✓ Container servidor-web-compose Removed
  ✓ Network docker-web_default Removed
administrador@ubusrv:~/docker-web$ 0.2s
0.1s
```

Parte 5: Limpieza

1. Eliminar todos los contenedores detenidos

Elimina todos los contenedores detenidos para liberar espacio; ¡OJO SI TIENES MAS CONTENEDORES NO LO HAGAS!



```
UBUNTU SERVER [Corriendo] - Oracle VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda

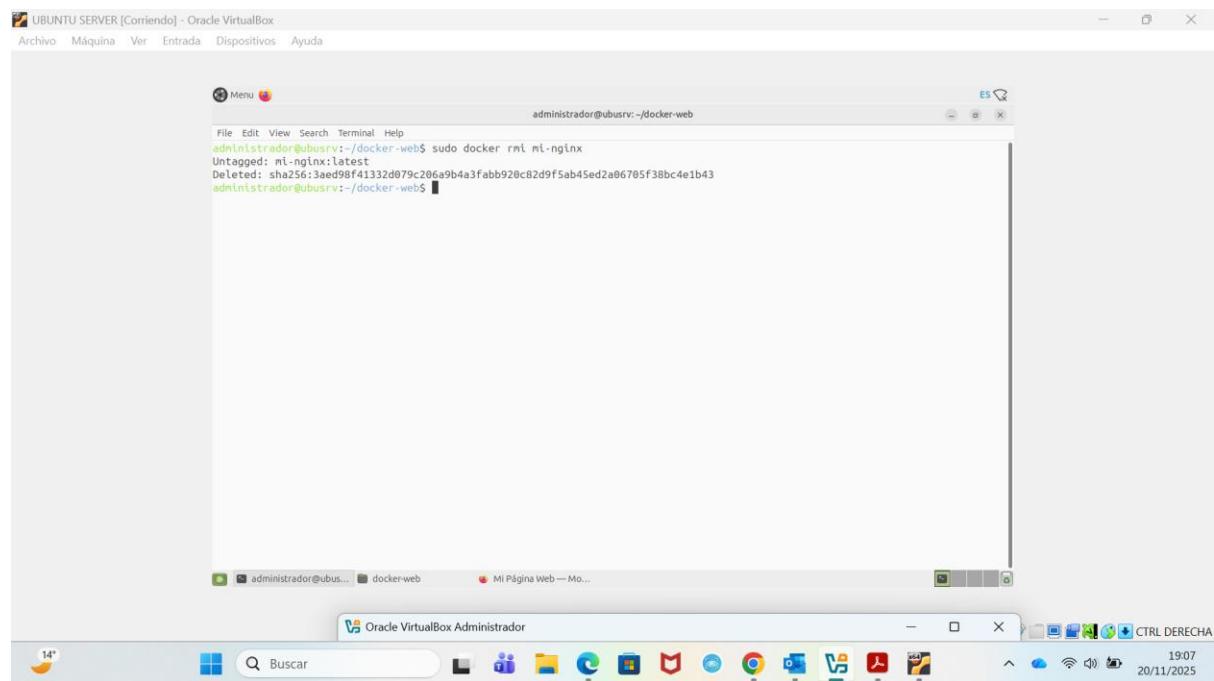
Ubuntu Server [Corriendo] - Oracle VirtualBox
File Edit View Search Terminal Help
administrador@ubusrv: ~/docker-web
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
f8e908dea869177ada978208d623b6088c1077a015a80ce6b6ed302f8c7e373d

Total reclaimed space: 1.093kB
administrador@ubusrv: ~/docker-web$
```

The screenshot shows a terminal window titled "UBUNTU SERVER [Corriendo] - Oracle VirtualBox". The user is running the command "sudo docker container prune". The terminal shows the warning message, the user's confirmation ("y"), the deleted container ID, and the total reclaimed space (1.093kB). The window has a standard Linux desktop interface with a menu bar, file icons, and a status bar at the bottom.

2. Eliminar la imagen creada

Elimina la imagen personalizada si ya no es necesaria:



```
UBUNTU SERVER [Corriendo] - Oracle VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda

Ubuntu Server [Corriendo] - Oracle VirtualBox
File Edit View Search Terminal Help
administrador@ubusrv: ~/docker-web
sudo docker rmi mi-nginx
Untagged: mi-nginx:latest
Deleted: sha256:3ae98f41332d079c206a9b4a3fabb92c82d9f5ab45ed2a06705f38bc4e1b43
administrador@ubusrv: ~/docker-web$
```

The screenshot shows a terminal window titled "UBUNTU SERVER [Corriendo] - Oracle VirtualBox". The user is running the command "sudo docker rmi mi-nginx". The terminal shows the untagged image name and the deleted image ID. The window has a standard Linux desktop interface with a menu bar, file icons, and a status bar at the bottom.