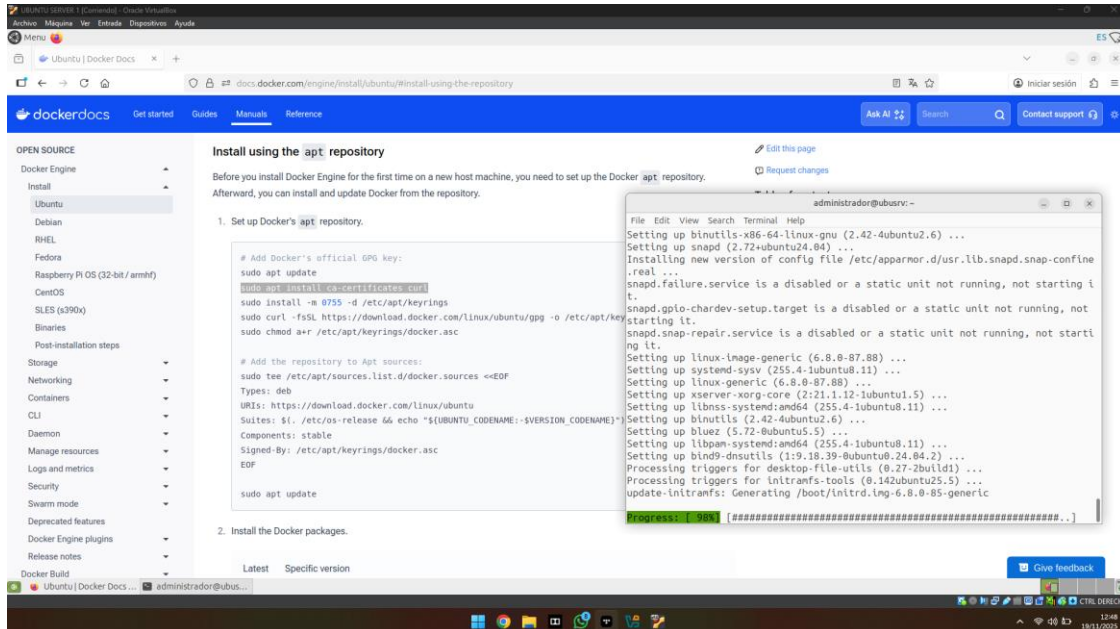


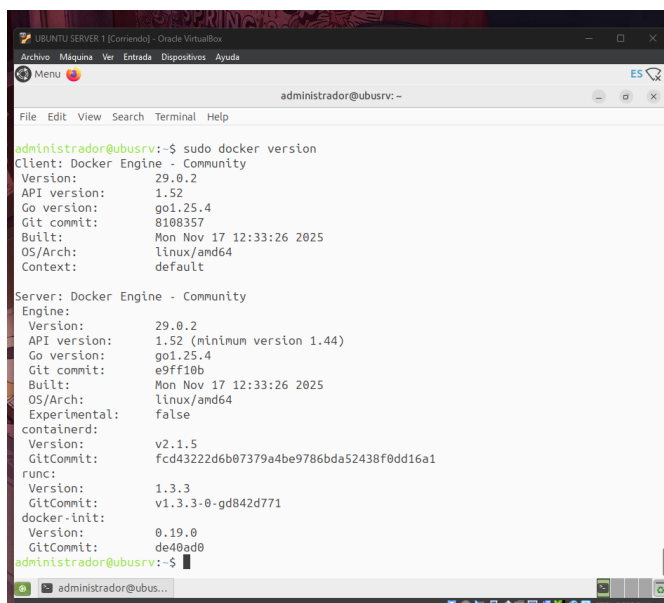
Despliegue de una Página Web con Docker

Requisitos previos

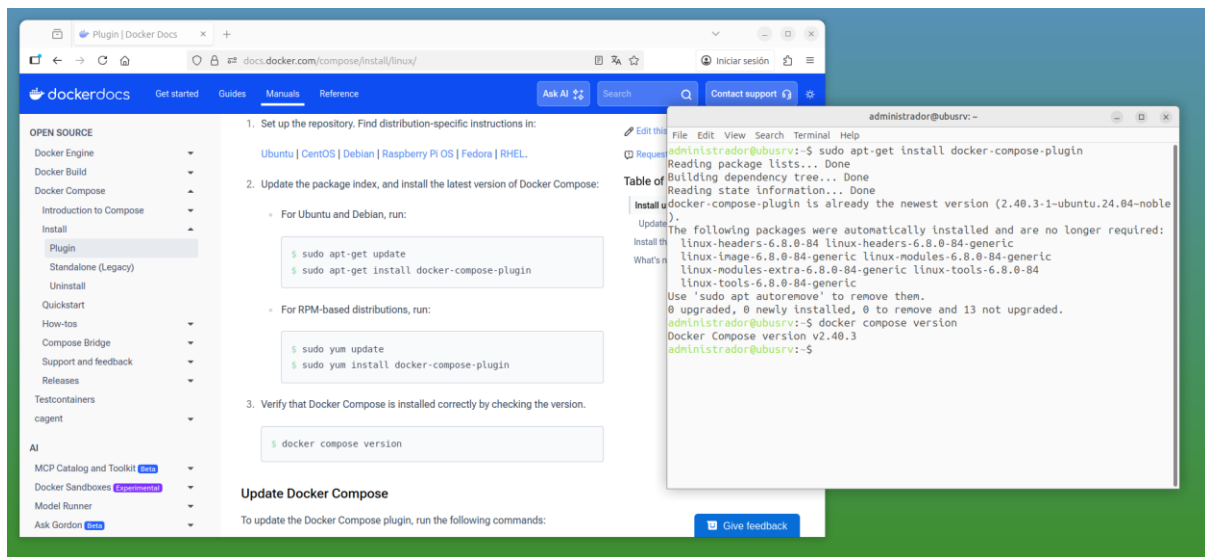
1. Instalar docker y crear un repositorio



1.1 Foto de Docker instalado:



2. Docker compose instalado:



The screenshot shows the Docker Docs website for installing the Docker Compose plugin on Linux. The instructions are as follows:

- Set up the repository. Find distribution-specific instructions in: [Ubuntu](#) | [CentOS](#) | [Debian](#) | [Raspberry Pi OS](#) | [Fedora](#) | [RHEL](#).
- Update the package index, and install the latest version of Docker Compose:
 - For Ubuntu and Debian, run:


```
sudo apt-get update
sudo apt-get install docker-compose-plugin
```
 - For RPM-based distributions, run:


```
sudo yum update
sudo yum install docker-compose-plugin
```
- Verify that Docker Compose is installed correctly by checking the version.

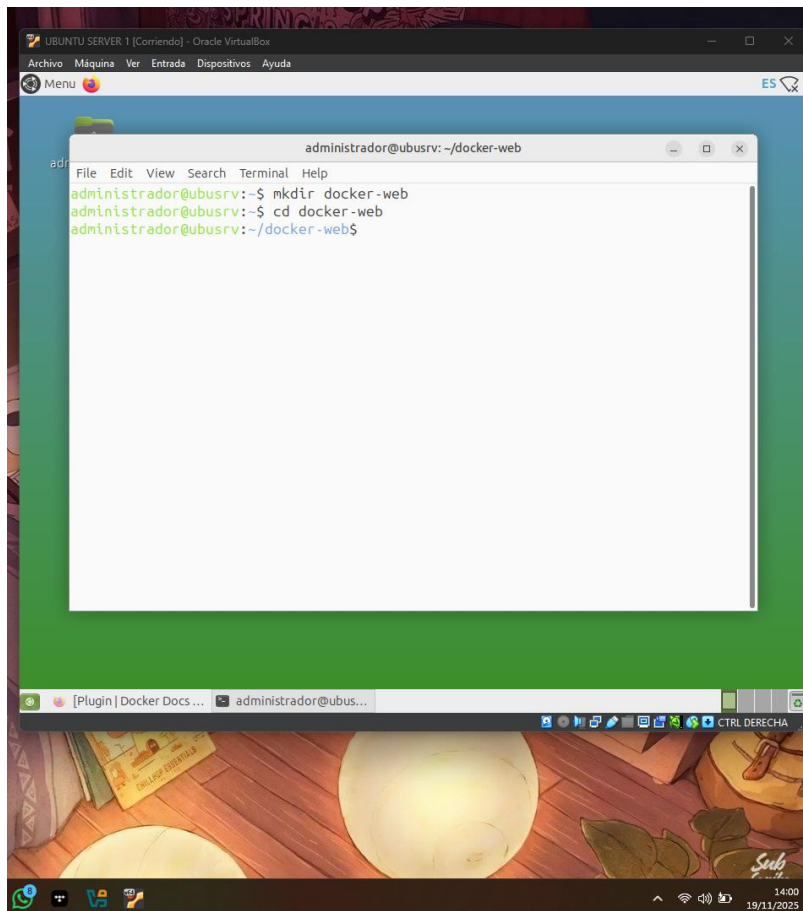

```
docker compose version
```

The terminal window shows the following output:

```
administrador@ubusrv:~$ sudo apt-get install docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker-compose-plugin is already the newest version (2.40.3-1-ubuntu.24.04-noble).
The following packages were automatically installed and are no longer required:
  linux-headers-6.8.0-84 linux-headers-6.8.0-84-generic
  linux-image-6.8.0-84-generic linux-modules-6.8.0-84-generic
  linux-modules-extra-6.8.0-84-generic linux-tools-6.8.0-84
  linux-tools-6.8.0-84-generic
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
administrador@ubusrv:~$ docker compose version
Docker Compose version v2.40.3
administrador@ubusrv:~$
```

Parte 1: Configuración del entorno

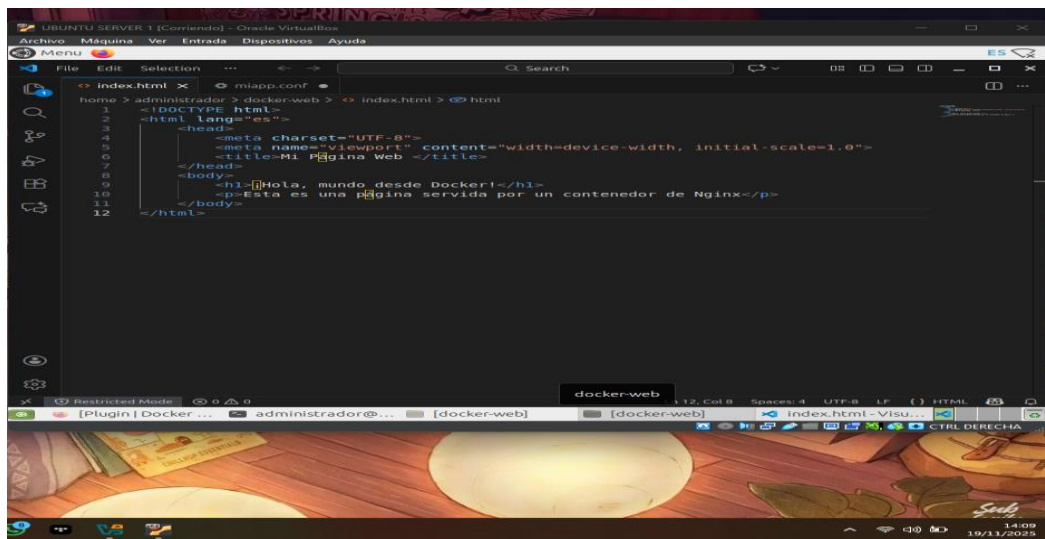
1. Crear un directorio para el proyecto



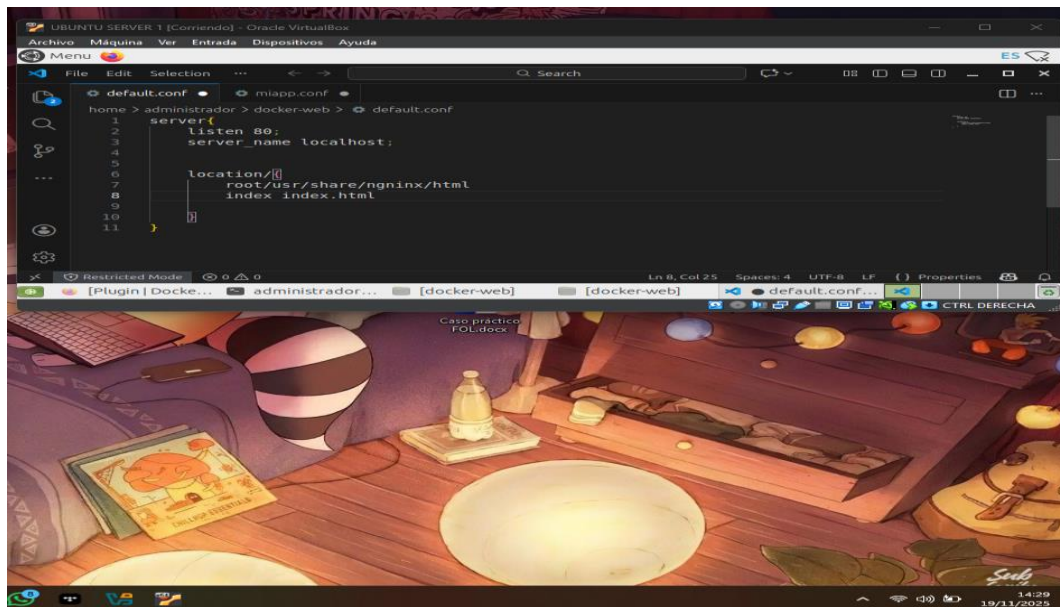
The screenshot shows a terminal window in a virtual machine (Ubuntu Server 1) with the following commands and output:

```
administrador@ubusrv: ~/docker-web
administrador@ubusrv:~$ mkdir docker-web
administrador@ubusrv:~$ cd docker-web
administrador@ubusrv:~/docker-web$
```

2. Crear una página web personalizada

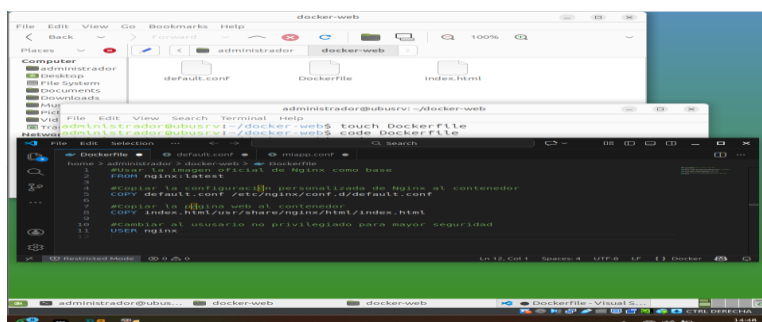


3. Crear un archivo de configuración para Nginx



Parte 2: Construcción del contenedor

1. Crear un archivo Dockerfile



```

administrador@ubusrv: ~/docker-web
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web$ code Dockerfile
administrador@ubusrv:~/docker-web$

Dockerfile
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
11

```

No le he cambiado los permisos al usuario (última línea) porque si no, no me dejaba ejecutar el contenedor.

2. Construir la imagen personalizada

```

administrador@ubusrv: ~/docker-web
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web$ sudo docker build -t mi-nginx .
[+] Building 32.2s (8/8) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 370B 0.0s
=> [internal] load metadata for docker.io/library/nginx:latest 1.8s
=> [internal] load .dockerignore 0.1s
=> => transferring context: 2B 0.0s
=> [1/3] FROM docker.io/library/nginx:latest@sha256:553f64aecdc31b5bf94 28.6s
=> => resolve docker.io/library/nginx:latest@sha256:553f64aecdc31b5bf944 0.1s
=> => sha256:de57a609c9d5148f10b38f5c920d276e9e38b2856fe 1.40kB / 1.40kB 0.3s
=> => sha256:192e2451f8751fb74549c932e26a9bcfd7b669fe2f5 1.21kB / 1.21kB 0.5s
=> => sha256:77fa2eb0631772679b0e48eca04f4906fba5fe94377e016 404B / 404B 0.5s
=> => sha256:53d743880af45adf9f141eec1fe3a413087e528075a5d88 954B / 954B 0.6s
=> => sha256:108ab82928207dabd9abfddbc960dd842364037563fc560 628B / 628B 0.4s
=> => sha256:b5feb73171bf1bcf29fdd1ba642c3d30cdf4c632 29.97MB / 29.97MB 24.4s
=> => sha256:0e4bc2bd6656e6e004e3c749af70e5650bac2258 29.78MB / 29.78MB 23.9s
=> => extracting sha256:0e4bc2bd6656e6e004e3c749af70e5650bac2258243eb094 2.0s
=> => extracting sha256:b5feb73171bf1bcf29fdd1ba642c3d30cdf4c6329b19d89b 1.3s
=> => extracting sha256:108ab82928207dabd9abfddbc960dd842364037563fc560b 0.0s
=> => extracting sha256:53d743880af45adf9f141eec1fe3a413087e528075a5d888 0.0s
=> => extracting sha256:77fa2eb0631772679b0e48eca04f4906fba5fe94377e0161 0.1s
=> => extracting sha256:192e2451f8751fb74549c932e26a9bcfd7b669fe2f5bd838 0.0s
=> => extracting sha256:de57a609c9d5148f10b38f5c920d276e9e38b2856fe16c0a 0.0s

```

3. Verificar que la imagen se creó correctamente

```

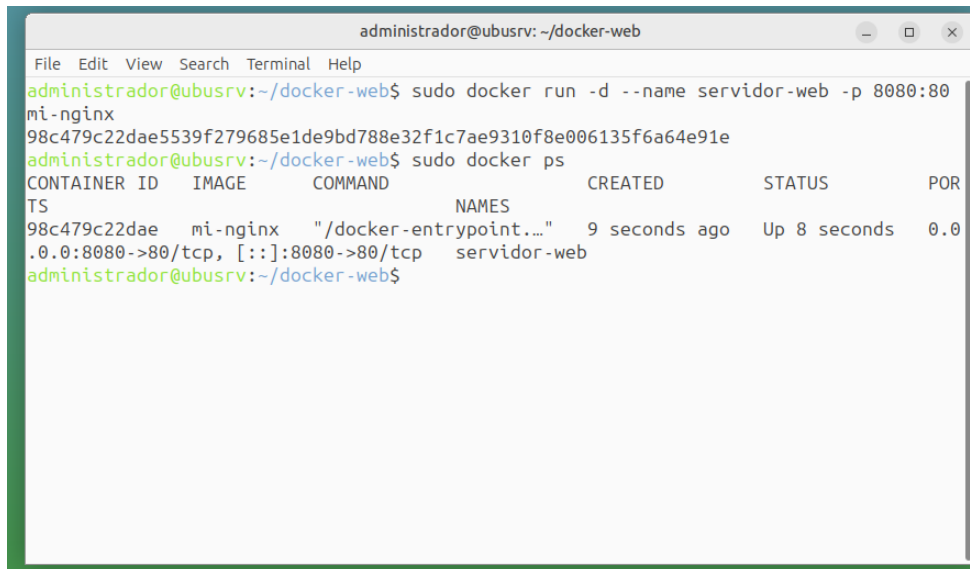
administrador@ubusrv: ~/docker-web
File Edit View Search Terminal Help
administrador@ubusrv:~/docker-web$ sudo docker images

IMAGE          ID                DISK USAGE  CONTENT SIZE  EXTRA
mi-nginx:latest 6581cf85f2fd      225MB       59.8MB
administrador@ubusrv:~/docker-web$

```

Parte 3: Despliegue del servidor web

1. Ejecutar el contenedor y
2. Verificar que el contenedor está corriendo



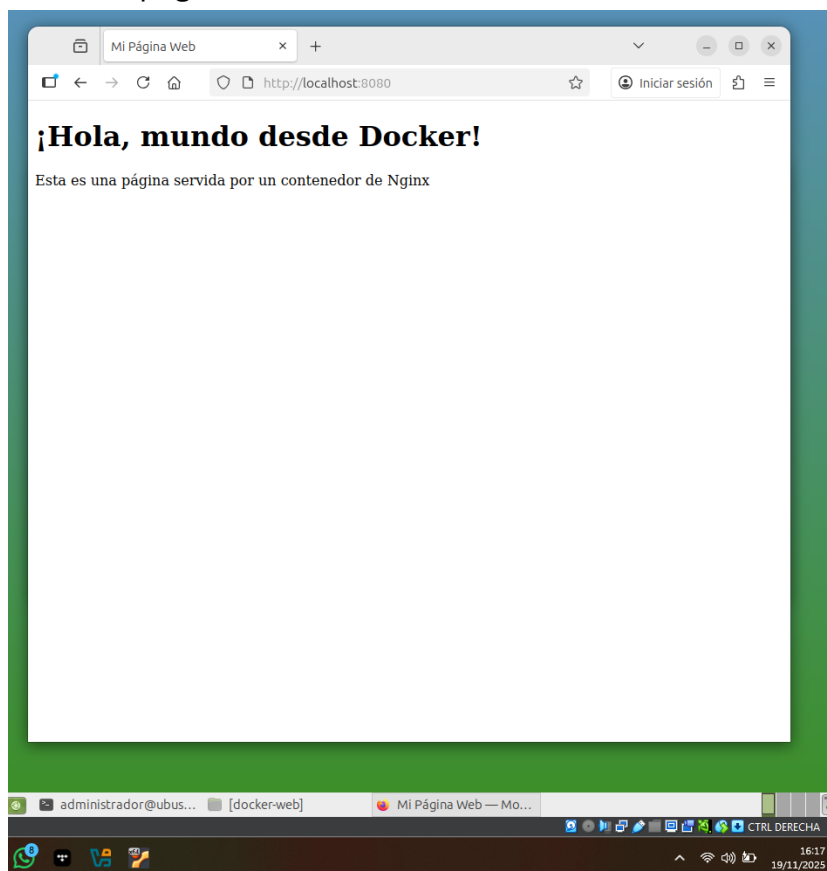
A terminal window titled 'administrador@ubusrv: ~/docker-web' showing the execution of Docker commands. The user runs 'sudo docker run -d --name servidor-web -p 8080:80 mi-nginx', which outputs the container ID '98c479c22dae5539f279685e1de9bd788e32f1c7ae9310f8e006135f6a64e91e'. Then, the user runs 'sudo docker ps', which displays a table of running containers.

```
administrador@ubusrv:~/docker-web$ sudo docker run -d --name servidor-web -p 8080:80 mi-nginx
98c479c22dae5539f279685e1de9bd788e32f1c7ae9310f8e006135f6a64e91e
administrador@ubusrv:~/docker-web$ sudo docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	POR
98c479c22dae	mi-nginx	"/docker-entrypoint...."	9 seconds ago	Up 8 seconds	0.0
.0.0:8080->80/tcp, [::]:8080->80/tcp					

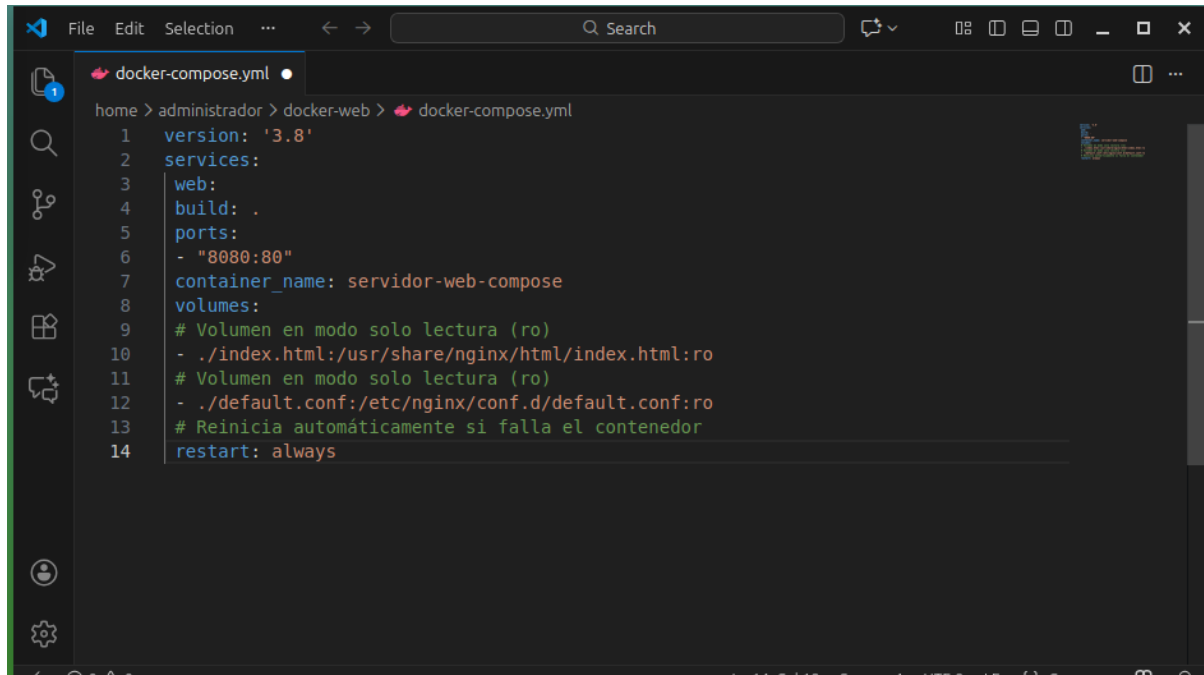
servidor-web
administrador@ubusrv:~/docker-web\$

3. Probar la página web



Parte 4: Uso de Docker Compose

1. Crear un archivo docker-compose.yml



```

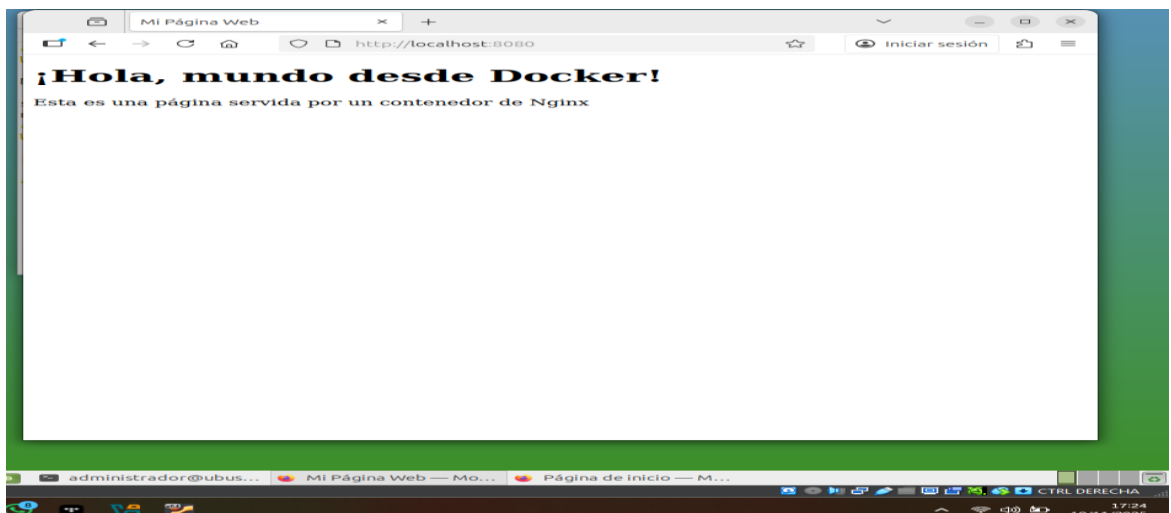
home > administrador > docker-web > docker-compose.yml
1  version: '3.8'
2  services:
3    web:
4      build: .
5      ports:
6        - "8080:80"
7      container_name: servidor-web-compose
8      volumes:
9        # Volumen en modo solo lectura (ro)
10       - ./index.html:/usr/share/nginx/html/index.html:ro
11       # Volumen en modo solo lectura (ro)
12       - ./default.conf:/etc/nginx/conf.d/default.conf:ro
13       # Reinicia automáticamente si falla el contenedor
14     restart: always
  
```

2. Iniciar los servicios con Docker Compose

```

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 Running 0.0s
  
```

3. Comprobar que funciona



4. Verificar los servicios levantados

```
administrador@ubusrv:~/docker-web$ sudo docker compose ps
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
NAME                IMAGE                COMMAND                SERVICE    CREATED
servidor-web-compose  docker-web-web      "/docker-entrypoint...."  web        About a mi
nute ago    Up About a minute    0.0.0.0:8080->80/tcp, [::]:8080->80/tcp
```

5. Ver los logs del servicio

```
administrador@ubusrv:~/docker-web$ sudo docker compose logs web
WARN[0000] /home/administrador/docker-web/docker-compose.yml: the attribute `version` is obsol
ete, 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-ipv
6-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 system?)
servidor-web-compose | /docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolver
s.envsh
servidor-web-compose | /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-t
emplates.sh
servidor-web-compose | /docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-p
rocesses.sh
servidor-web-compose | /docker-entrypoint.sh: Configuration complete; ready for start up
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: using the "epoll" event method
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: nginx/1.29.3
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: built by gcc 14.2.0 (Debian 14.2.0-1
9)
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: OS: Linux 6.8.0-85-generic
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1024:52428
8
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: start worker processes
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: start worker process 21
servidor-web-compose | 2025/11/19 16:19:57 [notice] 1#1: start worker process 22
servidor-web-compose | 172.18.0.1 - - [19/Nov/2025:16:20:21 +0000] "GET / HTTP/1.1" 304 0 "-"
"Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:143.0) Gecko/20100101 Firefox/143.0" "-"
servidor-web-compose | 172.18.0.1 - - [19/Nov/2025:16:20:21 +0000] "GET /favicon.ico HTTP/1.1
" 404 153 "http://localhost:8080/" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:143.0) Gecko/20
100101 Firefox/143.0" "-"
servidor-web-compose | 2025/11/19 16:20:21 [error] 21#21: *1 open() "/usr/share/nginx/html/fa
vicon.ico" failed (2: No such file or directory), client: 172.18.0.1, server: localhost, requ
st: "GET /favicon.ico HTTP/1.1", host: "localhost:8080", referer: "http://localhost:8080/"
```

6. Detener y eliminar los servicios

```
administrador@ubusrv:~/docker-web$ sudo docker compose down
WARN[0000] /home/administrador/docker-web/docker-compose.yml: the attribute `version` is obsol
ete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
✔ Container servidor-web-compose Removed 0.4s
✔ Network docker-web_default Removed 0.2s
```

Parte 5: Limpieza

1. Eliminar todos los contenedores detenidos

```
administrador@ubusrv:~/docker-web$ sudo docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
98c479c22dae5539f279685e1de9bd788e32f1c7ae9310f8e006135f6a64e91e

Total reclaimed space: 77.82kB
```

2. Eliminar la imagen creada

IMAGE	ID	DISK USAGE	CONTENT SIZE	EXTRA
docker-web-web:latest	4843def4df9a	225MB	59.8MB	
mi-nginx:latest	962d82286c27	225MB	59.8MB	

```
administrador@ubusrv:~/docker-web$ sudo docker rmi mi-nginx
Untagged: mi-nginx:latest
Deleted: sha256:962d82286c275df06877c2eb7730f00335518cf98e6530a2ae8bcc232f1804c7
```

```
Untagged: docker-web-web:latest
Deleted: sha256:4843def4df9a0fc4fb91ca389f22c32b0b5fa7d264d680f348b12e223d4c168a
administrador@ubusrv:~/docker-web$
```