

## Parte 1: Configuración del entorno

- Crear un directorio para el proyecto:

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

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

- Crear una página web personalizada:




The screenshot shows a terminal window with the nano 7.2 editor open to a file named `index.html`. The editor's content is as follows:

```
GNU nano 7.2 index.html
<!DOCTYPE>
<html lan ="es">
<head>
  <meta charset ="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Mi Página Web</title>
</head>
<body>
  <h1>Hola, mundo desde Docker!</h1>
  <p>Esta es una página servida por un contenedor de Nginx.</p>
</body>
</html>
```

The terminal window also shows a taskbar at the bottom with various application icons and a status bar indicating the current directory is `~/docker-web`.

- Crear un archivo de configuración para Nginx:



The screenshot shows a terminal window with the nano 7.2 editor open to a file named `default.conf`. The editor's content is as follows:

```
GNU nano 7.2 default.conf
server{

    listen 80;

    server_name localhost;


    location/{

        root /usr/share/nginx/html;

        index index.html;

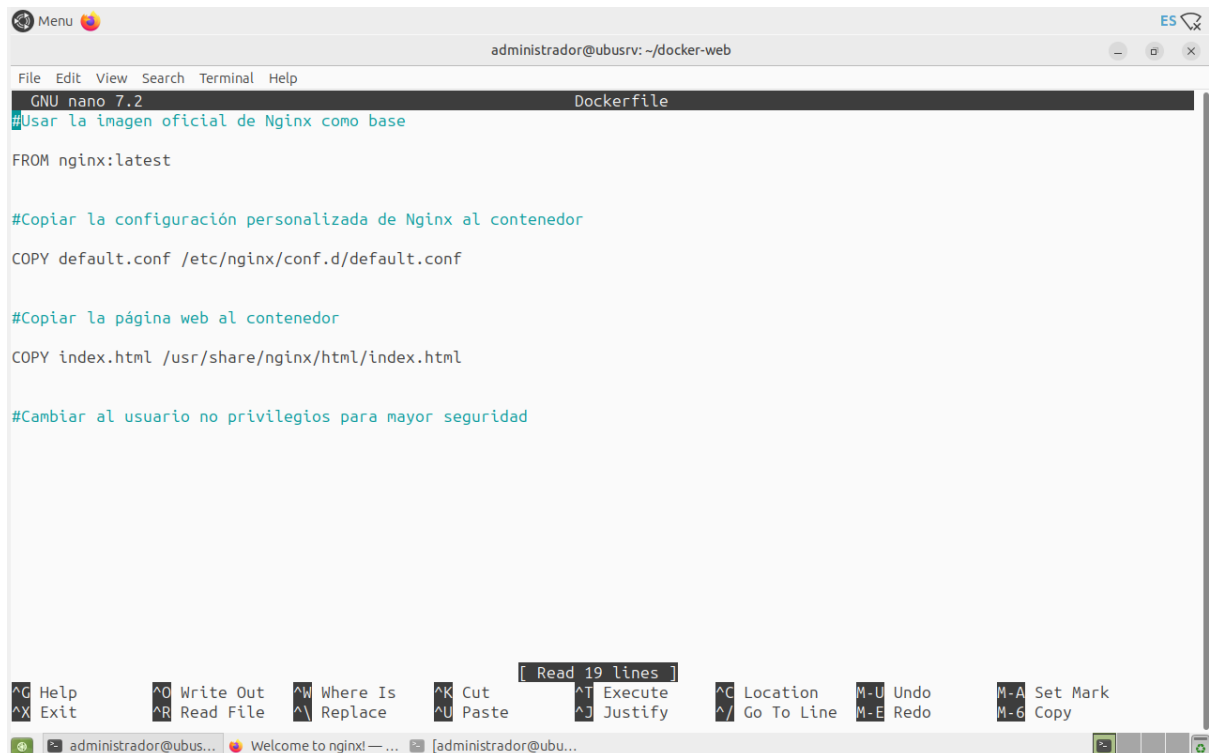
    }

}
```

The terminal window also shows a taskbar at the bottom with various application icons and a status bar indicating the current directory is `~/docker-web`.

## Parte 2: Construcción del contenedor:

-Crear un archivo Dockerfile:



```

GNU nano 7.2 Dockerfile
#Usar la imagen oficial de Nginx como base

FROM nginx:latest

#Copiar la configuración personalizada de Nginx al contenedor

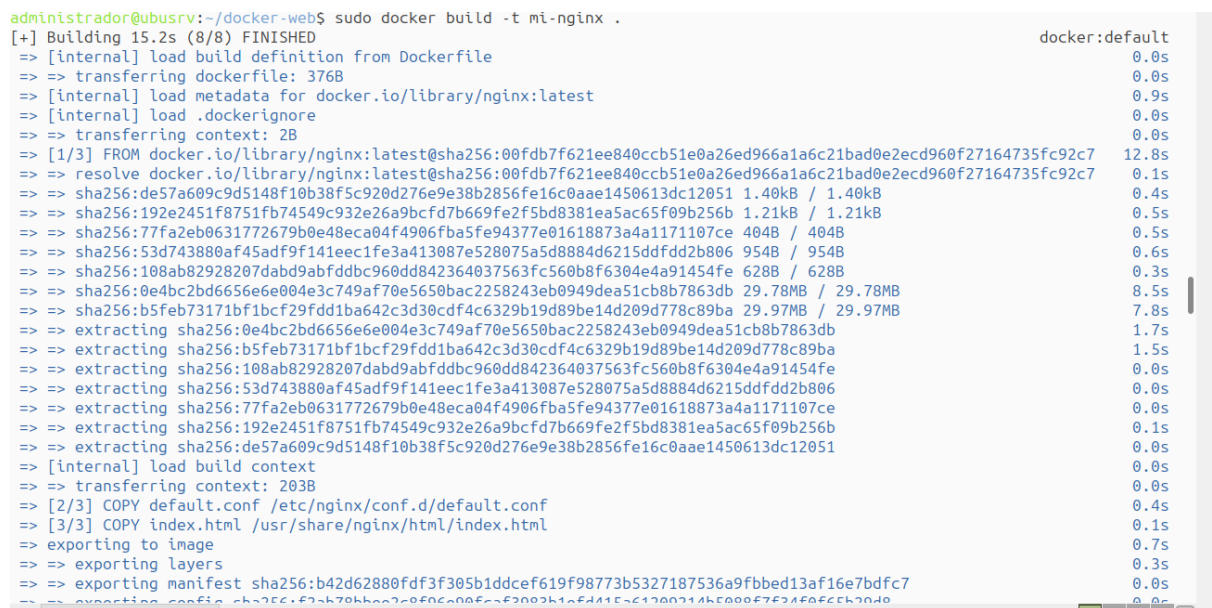
COPY default.conf /etc/nginx/conf.d/default.conf

#Copiar la página web al contenedor

COPY index.html /usr/share/nginx/html/index.html

#Cambiar al usuario no privilegios para mayor seguridad
  
```

- Construir la imagen personalizada



```

administrador@ubusrv:~/docker-web$ sudo docker build -t mi-nginx .
[+] Building 15.2s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 376B
=> [internal] load metadata for docker.io/nginx:latest
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/nginx:latest@sha256:00fdb7f621ee840ccb51e0a26ed966a1a6c21bad0e2ecd960f27164735fc92c7
=> => resolve docker.io/library/nginx:latest@sha256:00fdb7f621ee840ccb51e0a26ed966a1a6c21bad0e2ecd960f27164735fc92c7
=> => sha256:de57a609c9d5148f10b38f5c920d276e9e38b2856fe16c0aae1450613dc12051 1.40kB / 1.40kB
=> => sha256:192e2451f8751fb74549c932e26a9bcfd7b669fe2f5bd8381ea5ac65f09b256b 1.21kB / 1.21kB
=> => sha256:77fa2eb0631772679b0e48eca04f4906fba5fe94377e01618873a4a1171107ce 404B / 404B
=> => sha256:53d743880af45adf9f141eec1fe3a413087e528075a5d8884d6215ddfdd2b806 954B / 954B
=> => sha256:108ab82928207dabd9abfddbc960dd842364037563fc560b8f6304e4a91454fe 628B / 628B
=> => sha256:0e4bc2bd6656e6e004e3c749af70e5650bac2258243eb0949dea51cb8b7863db 29.78MB / 29.78MB
=> => sha256:b5feb7317bf1bcf29fdd1ba642c3d30cdf4c6329b19d89be14d209d778c89ba 29.97MB / 29.97MB
=> => extracting sha256:0e4bc2bd6656e6e004e3c749af70e5650bac2258243eb0949dea51cb8b7863db 1.7s
=> => extracting sha256:b5feb7317bf1bcf29fdd1ba642c3d30cdf4c6329b19d89be14d209d778c89ba 1.5s
=> => extracting sha256:108ab82928207dabd9abfddbc960dd842364037563fc560b8f6304e4a91454fe 0.0s
=> => extracting sha256:53d743880af45adf9f141eec1fe3a413087e528075a5d8884d6215ddfdd2b806 0.0s
=> => extracting sha256:77fa2eb0631772679b0e48eca04f4906fba5fe94377e01618873a4a1171107ce 0.0s
=> => extracting sha256:192e2451f8751fb74549c932e26a9bcfd7b669fe2f5bd8381ea5ac65f09b256b 0.1s
=> => extracting sha256:de57a609c9d5148f10b38f5c920d276e9e38b2856fe16c0aae1450613dc12051 0.0s
=> [internal] load build context
=> => transferring context: 203B
=> [2/3] COPY default.conf /etc/nginx/conf.d/default.conf
=> [3/3] COPY index.html /usr/share/nginx/html/index.html
=> exporting to image
=> => exporting layers
=> => exporting manifest sha256:b42d62880fdf3f305b1ddcef619f98773b5327187536a9fbbbed13af16e7bdfc7
=> => exporting config sha256:f3b78bba329f06a005cf200231e5d415e61300214b5008f7624f0f6c3040
  
```

- Verificar que la imagen se creó correctamente

```
administrador@ubusrv:~/docker-web$ sudo docker images
```

IMAGE	ID	DISK USAGE	CONTENT SIZE	EXTRA
hello-world:latest	f7931603f70e	20.3kB	3.96kB	
mi-nginx:latest	37813e484037	225MB	59.8MB	U

[Info](#) → [U](#) In Use

### Parte 3: Despliegue del servidor web:

- Ejecutar el contenedor

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

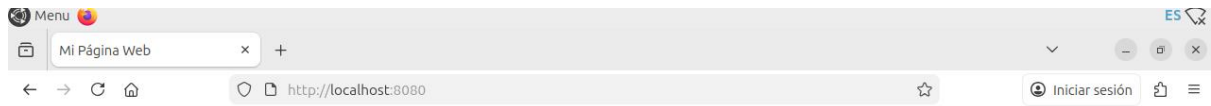
- Verificar que el contenedor está corriendo

```
administrador@ubusrv:~/docker-web$ sudo docker ps
```

```
[sudo] password for administrador:
```

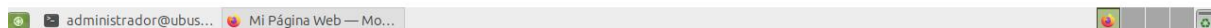
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
AMES					
9b2ff1f5a160	nginx	"/docker-entrypoint...."	33 minutes ago	Up 33 minutes	0.0.0.0:8080->80/tcp, [::]:8080->80/tcp
est-nginx					

- Probar la página web



## ¡Hola, mundo desde Docker!

Esta es una página servida por un contenedor de Nginx.



### Parte 4: Uso de Docker Compose:

- Crear un archivo docker-compose.yml



```
Menu
administrador@ubusrv: ~/docker-web
File Edit View Search Terminal Help
GNU nano 7.2 docker-compose.yml *
version: '3.8'

services:

web:

  build:

  ports:

  - "8080:80"

  container_name: servidor-web-compose

  volumes:

  - ./index.html:/usr/share/nginx/html/index.html:ro #Volumen en modo solo lectura (ro)

  - ./default.conf:/etc/nginx/conf.d/default.conf:ro #Volumen en modo solo lectura (ro)

restart: always #Reinicia automáticamente si falla el contenedor

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify    ^_/ Go To Line  M-E Redo      M-G Copy
administrador@ubus... Welcome to nginx! —... administrador@ubus...
```

### - Iniciar los servicios con Docker Compose

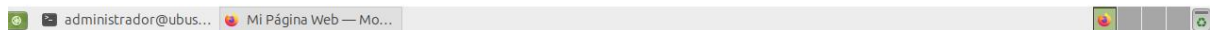
```
administrador@ubusrv:~/docker-web$ sudo docker compose up -d
WARN[0000] /home/administrador/docker-web/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please
remove it to avoid potential confusion
[+] Running 2/2
 ✓ Network docker-web_default Created 0.1s
 ✓ Container servidor-web-compose Started 0.5s
```

### - Comprobar que funciona



### ¡Hola, mundo desde Docker!

Esta es una página servida por un contenedor de Nginx.



#### - Verificar los servicios levantados

```
administrador@ubusrv:~/docker-web$ sudo docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
dd659157a7bd	docker-web-web	"/docker-entrypoint..."	6 minutes ago	Up 6 minutes	0.0.0.0:8080->80/tcp, [::]:8080->80/tcp

```
p servidor-web-compose
```

#### - 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 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: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
servidor-web-compose | /docker-entrypoint.sh: Configuration complete; ready for start up
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: using the "epoll" event method
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: nginx/1.29.3
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: built by gcc 14.2.0 (Debian 14.2.0-19)
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: OS: Linux 6.8.0-87-generic
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1024:524288
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: start worker processes
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: start worker process 20
servidor-web-compose | 2025/11/20 23:41:32 [notice] 1#1: start worker process 21
servidor-web-compose | 172.18.0.1 - - [20/Nov/2025:23:44:46 +0000] "GET / HTTP/1.1" 304 0 "-" "Mozilla/5.0 (X11; Ubuntu; Linu
x x86_64; rv:145.0) Gecko/20100101 Firefox/145.0" "-"
servidor-web-compose | 172.18.0.1 - - [20/Nov/2025:23:49:14 +0000] "GET / HTTP/1.1" 304 0 "-" "Mozilla/5.0 (X11; Ubuntu; Linu
x x86_64; rv:145.0) Gecko/20100101 Firefox/145.0" "-"
```

### - Detener y eliminar los servicios

```
administrador@ubusrv:~/docker-web$ sudo docker compose down
```

## Parte 5: Limpieza:

### -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:
59533196161f26439c7e84cab07f4af2708ea898ec0d208738c931d63c5a4c63
9b2ff1f5a16033094e7312899016428164e8ee75001559a9ac7d0d7539f026db
ea321d81793693828ada51a6f2422b188890f657ff928c5985e39db835a71f21
d9232f153182529775bb5b113bccad83a7c4bd4da21be2cb7e9854fed8031ee
a0f7aa17ba4d7d82a0df34f8d135111022665cee6ec4fee9f4eaf5b9264e7d75
1c2cb4d0ebff860c37acdbc73748f53dc066b87622112df5cf67da6f010475f
bdbdcf86133173c69070bd8ba603543d97c9db9e8bb39ec2c5df81e773e88c3

Total reclaimed space: 102.4kB
administrador@ubusrv:~/docker-web$
```

### - Eliminar la imagen creada

```
administrador@ubusrv:~/docker-web$ sudo docker rmi mi-nginx
```