

# Guía Completa de Comandos Docker

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#  Gua Completa de Comandos Docker con Ejemplos
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```
##  1. Introduccion & Comprobacion
```

```
```bash
```

```
docker --version
```

```
docker info
```

```
docker system info
```

```
```
```

```
##  2. Imagenes (Images)
```

```
###  Descargar imagenes
```

```
```bash
```

```
docker pull nginx
```

```
docker pull ubuntu:22.04
```

```
```
```

```
###  Buscar imagenes
```

```
```bash
```

```
docker search postgres
```

```
```
```

```
###  Listar imagenes
```

```
```bash
```

```
docker images
```

```
```
```

```
###  Eliminar imagenes
```

```
```bash
```

```
docker rmi nginx
```

```
docker rmi -f imagen_id
```

```
```
```

```
##  3. Contenedores (Containers)
```

```
###  Crear y correr contenedores
```

```
```bash
```

```
docker run hello-world
```

```
docker run -it ubuntu bash
```

```
docker run -d nginx
```

```
docker run -p 8080:80 nginx
```

```
docker run -v $(pwd):/app ubuntu
```

```
docker run --name miweb nginx
```

```
```
```

```
###  Listar contenedores
```

```
```bash
```

```
docker ps
```

```
docker ps -a
```

```
```
```

```
###  Control de ejecucion
```

```
```bash
```

```
docker stop contenedor_id
```

```
docker start contenedor_id
```

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```
docker restart contenedor_id
docker pause contenedor_id
docker unpause contenedor_id
```

### Eliminar contenedores
```bash
docker rm contenedor_id
docker rm -f contenedor_id
```

## 4. Docker Exec & Attach
### Ejecutar comandos dentro del contenedor
```bash
docker exec -it contenedor_id bash
docker exec -it contenedor_id ls /var/www
```

### Adjuntar a un contenedor
```bash
docker attach contenedor_id
```

## 5. Dockerfile (Crear imagenes personalizadas)
### Ejemplo bsico de Dockerfile
```Dockerfile
FROM node:18
WORKDIR /app
COPY package*.json ./
RUN npm install
COPY . .
EXPOSE 3000
CMD ["node", "index.js"]
```

### Build y uso
```bash
docker build -t mi-app .
docker run -p 3000:3000 mi-app
```

## 6. Docker Volmenes (Persistencia de datos)
### Crear y montar volumen
```bash
docker volume create mi_volumen
docker run -v mi_volumen:/data ubuntu
```

### Ver volmenes
```bash
docker volume ls
docker volume inspect mi_volumen
```

### Eliminar volumen
```bash
```
```

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```
docker volume rm mi_volumen
...
```

### ## 7. Redes (Networking)

#### ### Ver redes existentes

```
```bash
docker network ls
...
```

#### ### Crear red

```
```bash
docker network create mi_red
...
```

#### ### Asignar contenedor a red

```
```bash
docker run -d --network=mi_red --name=web nginx
docker run -d --network=mi_red --name=app mi-app
...
```

### ## 8. Docker Compose

#### ### Ejemplo `docker-compose.yml`

```
```yaml
version: '3.8'
services:
  web:
    image: nginx
    ports:
      - "8080:80"

  app:
    build: .
    ports:
      - "3000:3000"
    volumes:
      - ./app
    depends_on:
      - db

  db:
    image: postgres
    environment:
      POSTGRES_PASSWORD: ejemplo123
...
```
```

#### ### Comandos

```
```bash
docker-compose up
docker-compose up -d
docker-compose down
docker-compose ps
docker-compose logs -f
...
```
```

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### ## 9. Limpieza de recursos

```
```bash
docker system prune
docker container prune
docker image prune
docker volume prune
```
```

### ## 10. Tips tiles

- Inspeccionar contenedor o imagen:

```
```bash
docker inspect nombre_o_id
```
```

- Copiar archivos dentro/fuera de contenedor:

```
```bash
docker cp archivo.txt contenedor:/destino/
docker cp contenedor:/archivo.txt ./
```
```

- Logs de un contenedor:

```
```bash
docker logs contenedor
docker logs -f contenedor
```
```