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Docker run

The `docker run` command is one of the most used commands when we use the docker CLI (Command Line Interface).

What does happen when we use it and which are the most used options? Check the docs!

But if you don't have time, let’ see it in 2 minutes:

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Under the Hood, `docker run` are 2 commands:

docker create+docker start

- a container layer is created on the top of an image
- the container just created is started

It's important to understand this to avoid confusion between docker run, docker start, and docker create

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Docker RUN Common Options:

--name: assign a name
--rm: remove it when it exits
-p: publish ports
-e: set environment variable
-d: run it in the background
--network: connect it to a network
-i: keep stdin open

--mount: set a volume or bind mount
--user: set a user

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Assign a name (--name)

By default, a random name is assigned, but in general is a good idea to assign a custom name to our containers, as we do to our pets!

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Remove the container when exits (--rm)

Useful for disposable containers and examples. When a container is stopped, it’s automatically removed. Handy

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Publish Ports (-p)

To expose a port or a series of ports on the Host Machine.

You can also specify a protocol, for example -p 8080:80/tcp to Map TCP port 80 in the container to port 8080 in the Host

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Environment Variables (-e)

Sets an environment variable in the container. It can also overwrite existing environment variables defined in the Dockerfile

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Run in background (-d)

To run a container in the background, leaving the terminal free. The container ID will be printed on the terminal for further uses

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Connect to a Network (--network)

Connects to a network.

To attach a running container to an existing network:
Docker network connect
To disconnect a running container from a network:

Docker network disconnect

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Keep STDIN open (-i)

In some cases, a very useful option to access directly on the terminal of the container. Often used in combination with -t, to allocate a pseudo-TTY

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Start a container with a volume (--mount)

Docker volumes are the preferred way to persist data in Docker.
Docker run --mount source=volume1,target=/path
Please note that even if you can use the -v option, the --mount is the new preferred one

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Use a custom User (--user)

Specifies a username for the container, Very useful in some cases to avoid using the default one defined in the image

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