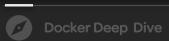# What is the Dockerfile?

Dockerfiles are instructions on how to build an image.

The file contains all commands used to start a container:

- Docker image consists of read-only layers.

- Each layer represents a Dockerfile instruction.

- Layers are stacked.

- Each layer is a delta of the changes from the previous layer.

- Images are built using the `docker image build` command.

Dockerfile Layers

```
FROM ubuntu:15.04
COPY . /app
RUN make /app
CMD python /app/app.py
```

Layers:

- **FROM** creates a layer from the ubuntu:15.04 Docker image.

- **COPY** adds files from your Docker client's current directory.

- **RUN** builds your application with make.

- **CMD** specifies what command to run within the container.

Linux Academy

Docker Deep Dive

Best Practices

General guidelines:

- Keep containers as ephemeral as possible.

- Follow Principle 6 of the 12 Factor App.

- Avoid including unnecessary file.

- Use **.dockerignore**.

- Use multi-stage builds.

- Don't install unnecessary packages.

- Decouple applications.

- Minimize the number of layers.

- Sort multi-line arguments.

- Leverage the build cache.