



Section 8 - Build Images - The Dockerfile Basics

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1 Building Images - The Dockerfile Basics

Dockerfile

- The Dockerfile is a recipe for creating a Docker image.
- It contains the instructions on how to build a Docker image.
- All official images on Docker Hub are created from Dockerfiles.
- It is similar to a shell script.
- The default file name is Dockerfile but you can use custom name as well by specifying the `--file` option.

Dockerfile example

- The [Dockerfile](#) of this example is available in the `resources` directory:
(`resources/dockerfile-sample-1/Dockerfile`)

package manager

- The base linux distribution defined in the FROM section of the *Dockerfile* determines the package manager that we can use to install additional software.
- For example:
 - `apt-get` is used from Ubuntu or Debian base images
 - `yum` is used from CentOS or Fedora base images
 - `apk` is used from Alpine base image

The base images usually have a minimal set of packages installed, many tools such as `curl` could be missing.

Dockerfile - On line documentation

[docker docs/Dockerfile reference](https://docs.docker.com/engine/reference/builder/)

refers to the file specified in an instruction, for example, a `COPY` instruction. To increase the build's performance, exclude files and directories by adding a `.dockerignore` file to the context directory. For information about how to create a `.dockerignore` file see the documentation on this page.

Traditionally, the `Dockerfile` is called `Dockerfile` and located in the root of the context. You use the `-f` flag with `docker build` to point to a Dockerfile anywhere in your file system.

```
$ docker build -f /path/to/a/Dockerfile .
```

You can specify a repository and tag at which to save the new image if the build succeeds:

FROM

Understand how ARG and FROM interact

RUN

Known issues (RUN)

CMD

LABEL

MAINTAINER (deprecated)

EXPOSE

ENV

ADD

COPY

ENTRYPOINT