

Writing a Dockerfile

Computing

The instruction order that keeps builds fast and images small.

Each instruction is a cached layer; a change invalidates it and everything after it.

1

Pin the base image

FROM node:22-alpine, not node:latest. Reproducibility matters more than freshness.

2

Copy the manifests only

COPY package*.json ./ then install. Dependencies re-install only when they change.

3

Then copy the source

COPY . . after installing, so a code change does not re-run the install.

4

Use multi-stage builds

Build in one stage, copy only the artefacts into a slim runtime stage.

5

Run as a non-root user

USER node. Root inside a container is a real risk.

ALSO

.dockerignore for node_modules and .git

One process per container

Prefer COPY over ADD

Copying source before installing dependencies is the single most common cause of slow Docker builds.