Docker Buildx

Docker's BuildKit CLI

CONCEPTS

Buildx is the front end for BuildKit. Only the default docker driver builds into your local image store; other drivers need --load or --push.

Dockerfile or bake file

↓ `buildx build`

Builder BuildKit driver

↓ `--load / --push`

Output local store or registry

BUILD

`docker buildx build -t <tag> .`
Build an image from a Dockerfile

`docker buildx build --load -t <tag> .`
Build and load into local Docker

`docker buildx build --push -t <tag> .`
Build and push to a registry

`docker buildx build -f <dockerfile> <context>`
Use another Dockerfile

`docker buildx build --target <stage> .`
Stop at a multi-stage target

`docker buildx build --build-arg <KEY>=<value> .`
Set a build argument

`docker buildx build --no-cache .`
Ignore the cache

`docker buildx build --progress=plain .`
Show full, unfolded build logs

`docker buildx build --secret id=<id>,src=<file> .`
Pass a secret without baking it in

MULTI-PLATFORM

`docker buildx build --platform linux/amd64,linux/arm64 --push -t <tag> .`
Build and push a multi-arch image

`docker buildx build --platform linux/arm64 --load -t <tag> .`
Build one other-arch image locally

MULTI-PLATFORM (cont.)

`docker buildx imagetools inspect <image>`
Show platforms of an image

`docker buildx imagetools create -t <new> <src1> <src2>`
Merge per-arch images into one tag

BUILDERS

`docker buildx ls`
List builders and their nodes

`docker buildx create --name <name> --use`
Create a builder and switch to it

`docker buildx create --driver docker-container --use`
BuildKit in a container (multi-arch, cache export)

`docker buildx use <name>`
Make a builder the default

`docker buildx inspect --bootstrap`
Show the current builder, starting it

CACHE

`docker buildx build --cache-from type=registry,ref=<r> --cache-to type=registry,ref=<r>,mode=max`
Registry-backed cache

`docker buildx build --cache-from type=local,src=<dir> --cache-to type=local,dest=<dir> .`
Cache in a local directory

`docker buildx build --cache-from type=gha --cache-to type=gha,mode=max .`
GitHub Actions cache

`docker buildx prune`
Remove dangling build cache

`docker buildx prune -a`
Remove all build cache

BAKE

`docker buildx bake`
Build the default group of a bake file

`docker buildx bake <target>`
Build one or more named targets