ko Go images, no Dockerfile

CONCEPTS

ko runs go build on your machine and layers the static binary onto a small base image: no Dockerfile and no Docker daemon. It suits one pure-Go binary per image.

Go package package main
↓ `go build`
ko layer on base image
↓ `push`
KO_DOCKER_REPO digest reference
↓ `ko:// replaced`
Kubernetes YAML resolve / apply

ko compiles locally and pushes straight to the registry; YAML is rewritten on the way to the cluster

Image names under KO_DOCKER_REPO

Flag	Resulting name
`(default)`	<repo>/<pkg>-<md5 of import path>
`-B`	<repo>/<last path element>
`-P`	<repo>/<full import path>
`--bare`	<repo> itself

Special KO_DOCKER_REPO values: ko.local loads into the local Docker daemon, kind.local loads into a kind cluster.

BUILD & PUBLISH

`ko build` *<importpath>*
Build, push, print image digest

`ko build -B` *<importpath>*
Short name, no hash suffix

`ko build -t` *<tag>*
Tag instead of only latest

`ko build --push=false` *<importpath>*
Build without pushing

`ko build --local` *<importpath>*
Load into local Docker daemon

`ko build --bare` *<importpath>*
Use KO_DOCKER_REPO as the full name

PLATFORMS & IMAGES

`ko build --platform=all` *<importpath>*
Every platform the base supports

PLATFORMS & IMAGES (cont.)

`ko build --platform=linux/amd64,linux/arm64` *<importpath>*
Chosen platforms, one index

KUBERNETES

`ko resolve -f` *<path>*
Print YAML with images built and pinned

`ko apply -f` *<path>*
Resolve and kubectl apply

`ko apply -f` *<path>* `--` *<kubectl flags>*
Pass flags through to kubectl

`ko run` *<importpath>*
Build and run as a one-off pod

ko:// reference in a manifest

```
containers:
- name: app
  image: ko://github.com/<user>/<repo>/
cmd/app
```

CONFIG & ENVIRONMENT

KO_DOCKER_REPO
Registry to push to (required)

KO_DATA_PATH
In-container path of kodata files

.ko.yaml top-level keys

Key	Sets
`defaultBaseImage`	Base image for all builds
`baseImageOverrides`	Base image per import path
`defaultPlatforms`	Target platforms
`defaultEnv / defaultFlags / defaultLdflags`	Build defaults
`builds`	Per-build id, dir, main, env, flags, ldflags

AUTH

`ko login` *<registry>* `-u` *<user>* `-p` *<pass>*
Log in to a registry

`ko login` *<registry>* `-u` *<user>* `--password-stdin`
Read the password from stdin