# skopeo Move container images

**START HERE**

`skopeo inspect docker://<image>`
Look without pulling

`skopeo sync --src docker --dest docker <src> <dst>`
Mirror a repo

`skopeo list-tags docker://<repo>`
List a repo's tags

`skopeo login <registry>`
Store credentials

`skopeo copy docker://<src> docker://<dst>`
Registry to registry

`skopeo delete docker://<image>`
Mark for deletion

`skopeo copy docker://<image> dir:<path>`
Save to a directory

`skopeo copy --all <src> <dst>`
Keep all architectures

**Source** docker:// dir: oci: → `skopeo copy` → **skopeo** no daemon, no root → `writes` → **Destination** docker:// dir: oci-archive:

copy moves manifest, layers and signatures between any two transports

## CONCEPTS

Skopeo needs no daemon and no root: it talks to registries and storage directly, without pulling images first.

**Transports (image name prefixes)**

| Prefix | Points at |
|---|---|
| `docker://<ref>` | Registry (Docker Registry API v2) |
| `dir:<path>` | Directory of manifest and layer files |
| `oci:<path>:<tag>` | OCI image layout directory |
| `oci-archive:<path>:<tag>` | Tar of an OCI layout |
| `docker-archive:<path>` | Tar made by docker save |
| `docker-daemon:<ref>` | Local Docker daemon (needs tag) |
| `containers-storage:<ref>` | Podman/ Buildah local storage |

Global options such as --override-arch go before the subcommand; subcommand options go after it.

## INSPECT & LIST

`skopeo inspect docker://<image>`
Show manifest summary without pulling

`skopeo list-tags docker://<repo>`
List tags in a repository

`skopeo inspect --config docker://<image>`
Show the image config (env, cmd, arch)

## INSPECT & LIST (cont.)

`skopeo inspect --raw docker://<image>`
Print the raw manifest
*For a multi-arch image this is the manifest list, which shows every platform.*

`skopeo inspect --format '{{ .Digest }}' docker://<image>`
Pick one field with a Go template

`skopeo inspect --no-tags docker://<image>`
Leave out the long tag list

## COPY

`skopeo copy <src> <dst>`
Copy an image between transports

`skopeo copy docker://<image> dir:<path>`
Download layers to a directory

`skopeo copy docker://<image> oci:<path>:<tag>`
Save as OCI layout

`skopeo copy docker://<image> docker-archive:<file>:<ref>`
Save as a docker save tarball

`skopeo copy --all <src> <dst>`
Copy every platform plus the list

`skopeo copy --multi-arch=<system|all|index-only|list> <src> <dst>`
Choose which platforms to copy

`skopeo copy --format <oci|v2s1|v2s2> <src> <dst>`
Convert manifest type

`skopeo copy --digestfile <file> <src> <dst>`
Write resulting digest to a file

`skopeo copy --retry-times <n> --retry-delay <t> <src> <dst>`
Retry flaky transfers

## SYNC & DELETE

`skopeo sync --src docker --dest docker <src> <dst>`
Mirror all tags of a repo

`skopeo sync --src docker --dest dir <repo> <dir>`
Registry to local directory

`skopeo sync --src dir --dest docker <dir> <registry>`
Local directory to registry

`skopeo sync --src yaml --dest docker <file.yml> <dst>`
Sync what a YAML file lists

`skopeo sync --all --src docker --dest docker <src> <dst>`
Include every platform

`skopeo sync --dry-run --src docker --dest docker <src> <dst>`
Preview without copying

`skopeo delete docker://<image>`
Mark an image for deletion
*Only marks the image: the registry's own garbage collector frees the space, and the registry must allow deletes.*

## AUTH & TLS

`skopeo login <registry>`
Log in and store credentials

`skopeo logout <registry>`
Remove stored credentials

`skopeo login -u <user> --password-stdin <registry>`
Log in with password from stdin
*Prefer this over -p, which leaves the password in shell history.*

`skopeo inspect --creds <user>:<pass> docker://<image>`
One-off credentials

`skopeo inspect --authfile <file> docker://<image>`
Use a specific auth file

## AUTH & TLS (cont.)

`skopeo copy --src-creds <u:p> --dest-creds <u:p> <src> <dst>`
Separate credentials per side

`skopeo copy --dest-tls-verify=false <src> <dst>`
Allow plain HTTP or bad certs

## PLATFORM & POLICY

`skopeo --override-arch <arch> inspect docker://<image>`
Look at another architecture

`skopeo --debug copy <src> <dst>`
Verbose debug output

`skopeo --insecure-policy copy <src> <dst>`
Skip the policy.json check

`skopeo copy --sign-by <key-id> <src> <dst>`
Sign with a GPG key while copying

`skopeo --require-signed copy <src> <dst>`
Refuse unsigned images

## RECIPES

**Mirror one tag between registries**

```
skopeo login registry-a.example.com
skopeo login registry-b.example.com
skopeo copy --all \
  docker://registry-a.example.com/app:1.0 \
  docker://registry-b.example.com/app:1.0
```

**Air-gapped transfer via a directory**

```
skopeo sync --src docker --dest dir \
  registry.example.com/app /media/usb
# on the offline side
skopeo sync --src dir --dest docker \
  /media/usb/app my-registry.lan/
```