Build

Buildah, Skopeo and Podman

The problem

First, let's talk about our problem:

> A: It works on my machine.
>
> B: Let's ship your machine.

or

> A: What do I need to build it?
>
> B: nodejs in version x, 29 devel packages, 9 other packages, ...

Docker to the rescue (Build)

Let's build it:

```
docker build .
```

This works, if Docker is running as a service.

Docker to the rescue (Dockerfile)

```
FROM docker.io/library/node:16 as build

WORKDIR /app

COPY ember-sample/. /app/

RUN npm install
RUN ./node-modules/ember-cli/bin/ember build

FROM docker.io/library/httpd:2

COPY --from=build --chown=33:33 /app/dist/ /usr/local/apache2/htdocs/
```

Docker in Docker

It's more like Docker executeable, mounting Docker from the host, but this would be a weird name.

Mounting the `docker.sock` socket requires privilges (root).

It does not work if your Kubernetes runs on CRI-O, runc or containerd.

What about Podman? (Build)

In Podman it's similar:

```
podman build .
```

What about Podman (Explain)

Podman is:

- daemonless

- rootless

- docker-cli replacement

- systemd native

- can run/generate kubernetes manifests

Find it at podman.io.

And Buildah? (Build)

```
buildah bud .
```

And Buildah? (Explain)

But wait...

```
$ buildah from docker.io/library/node:16 as build
node-working-container

buildah copy node-working-container ember-sample app/
ae67b3b681a7e379e1c9fb35f2ff8283ddf83e5a219038019bbc6d51f80bf955
```

And Buildah? (Explain 2)

And how does this help?

- build your own script

- with all the if-then-else you can imagine
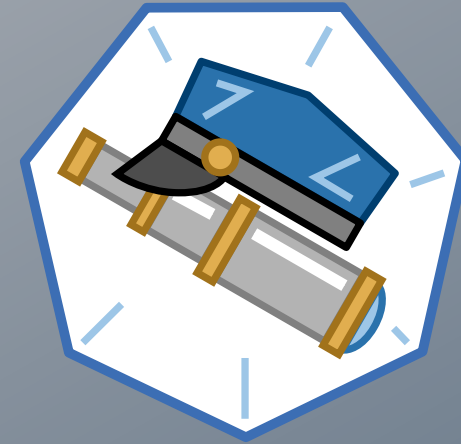
- template your build

- also no daemon needed

Find it at buildah.io.

Skopeo someone? (Build)

Skopeo cannot build, but:

- remote copy

- remote inspect

- remote delete

- sync registries

Find it at GitHub.

One last thing

Podman, Buildah and Skopeo are already there in all Fedora and RedHat-family Linux derivates.

They are also available as container images and installation sources for all your needs.

Thank you ❤️

Slides and example code at: https://github.com/dschier-wtd/presentations/.