

Docker → cri-o

Frequently asked questions



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How do I switch from Docker to cri-o?



Answer

That depends...

A kubernetes cluster can use cri-o as a container runtime (OpenShift 4.x and CaaSP 4 do).

How do I switch from Docker to cri-o?



Answer

That depends...

Addressing image builders: cri-o does not bring the toolset for building images.

Häh?



Answer

cri-o is a daemon, only accessible through the Container Runtime Interface (CRI).

cri-o = CRI + OCI

It creates containers from images compliant to the standards defined by the open container initiative (OCI).

Is podman a CLI to cri-o?



Answer

No.

- ▶ `crictl` queries the CRI on the terminal

Is podman a CLI to cri-o?

Answer

No.

- ▶ different backends
- ▶ large overlap between contributors
- ▶ similar design (pods in mind)

How can I try it?



Answer

```
alias docker=podman
```

Do I have to learn new commands?



Answer

No

If you really want to:

- ▶ podman manages containers
- ▶ buildah builds container images
- ▶ skopeo handles images in registries

What do I loose?



Answer

There is no replacement for docker-compose

And there isn't any plan to implement this. cri-o and podman both have kubernetes in mind.

What do I gain?

Answer

Kubernetes export / import

```
> podman generate kube --help
Generate Kubernetes pod YAML from a container or pod
> podman play kube --help
Play a pod based on Kubernetes YAML
```

One step back: Why wouldn't I want to use Docker?



Answer

Docker has a lot of unnecessary functions.
Hardening docker hosts is difficult.
There is a daemon.

I, currently, still use mainly Docker.

One step back: Why wouldn't I want to use Docker?



Answer

Docker has a lot of unnecessary functions.
Hardening docker hosts is difficult.
There is a daemon.

podman / cri-o: containers do not depend on centralized daemon.

One step back: Why wouldn't I want to use Docker?



Answer

Docker has a lot of unnecessary functions.
Hardening docker hosts is difficult.
There is a daemon.

Building images does not require a privileged daemon.

Where do I store images / get them from?



Answer

The same registries you use with docker.

Is the change irreversible?

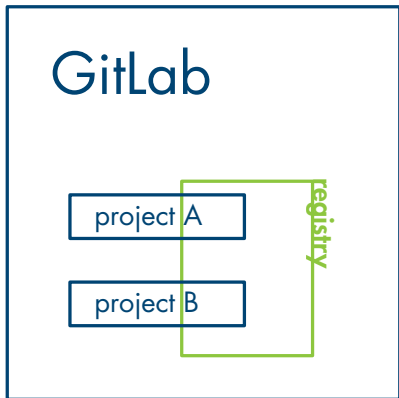


Answer

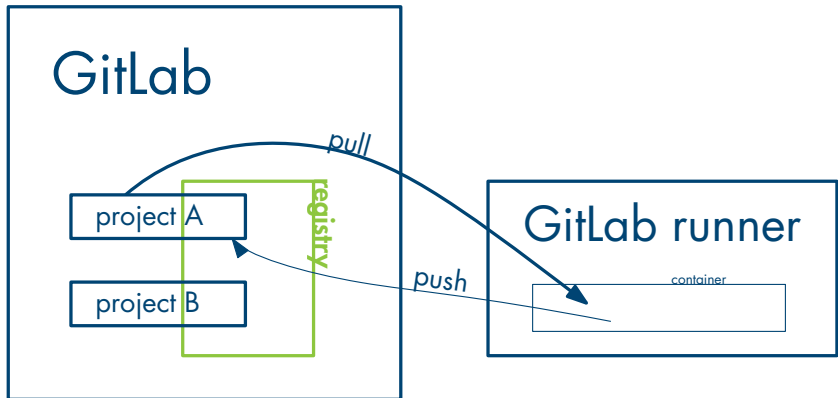
In most cases, you can switch back.

Thanks to standardization and the common image format.

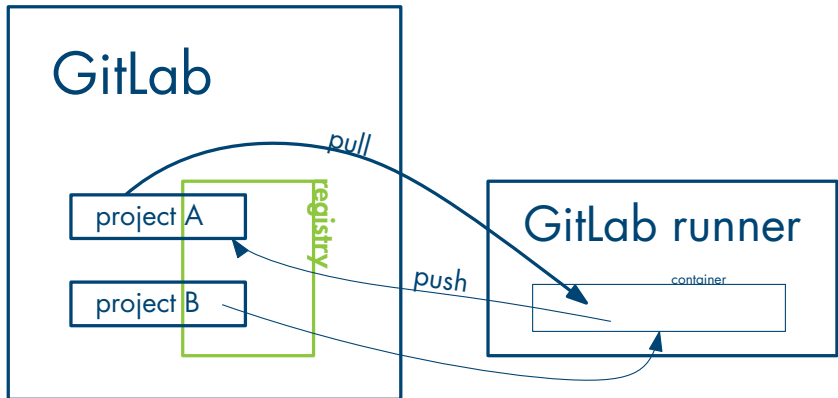
Can I include podman in my CI pipeline?



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```
FROM our.gitlab.server:2313/hub/baseimage:bionic
RUN DEBIAN_FRONTEND=noninteractive apt-get -y --no-install-recommends
    install \
    software-properties-common=0.96\* \
    uidmap=1:4.5\* \
    && add-apt-repository -y -u ppa:projectatomic/ppa \
    && apt-get -y --no-install-recommends install \
    podman=1.6.2-1\* \
    skopeo=0.1.40-1\* \
    buildah=1.10.1-1\* \
    && cp /usr/lib/cri-o-runc/sbin/runc /usr/sbin/runc \
    && rm -rf /var/lib/apt/lists/*
WORKDIR /etc/containers
COPY registries.conf .
COPY storage.conf .
```

Can I use podman in my CI pipeline?



```
stages:
  - build

build:
  stage: build
  image: our.gitlab.server:2313/hub/podman:1.2
  script:
    - buildah login -u $CI_REGISTRY_USER -p
      $CI_REGISTRY_PASSWORD $CI_REGISTRY
    - buildah bud -t $CI_REGISTRY_IMAGE:latest .
    - buildah push $CI_REGISTRY_IMAGE:latest
```

Answer

k8s cluster → CRI → docker (containerd) / cri-o
CLI → docker / podman, buildah, skopeo / rkt