

# Replacing Docker With Podman

By Dan Walsh @rhatdan

```
dnf install -y podman
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```
alias docker=podman
```

# Questions

Blog: <https://podman.io/blogs>

Github:

- <https://github.com/projectatomic/libpod> (podman)
- <https://github.com/containers/storage>
- <https://github.com/containers/image>
- <https://github.com/containers/buildah>

IRC: freenode: #podman

Site: <https://cri-o.io>



# docker=podman

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 **RDO** @RDOcommunity  
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 **Alex Polvi** @polvi  
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**Spieth**  
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 **Alan Moran** @ialanmoran  
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I completely forgot that ~2 months ago I set up "alias docker='podman'" and it has been a dream. #nobigfatdaemons @projectatomic


11:49 PM · 29 May 2018

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2 Comments 7 Retweets 15 Likes

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 **Alan Moran** @ialanmoran · May 30  
Only downside is no Mac OS support (Main dev machine)

 **Joe Thompson** @caffeinepresent · May 30  
Replying to @ialanmoran @projectatomic  
So, what reminded you?

 **Alan Moran** @ialanmoran · May 30  
docker help 🙄

Please Stand

Please read  
out loud all  
text in

**RED**

I Promise



To say  
**Container Registries**  
Rather than  
Docker registries

I Promise

To say  
**Container Images**  
Rather than  
Docker images

I Promise

To say  
**Containers**  
Or  
**OCI Containers**  
Rather than  
Docker Containers

Sit Down

! \$ \*  
Swear  
Jar  
# @ #



# What do you need to run a container`

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  - OCI Image Bundle Definition





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  - Container Networking Interface
- Tool to monitor container
  - Conmon





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# Introducing podman

podman is tool for managing POD/Containers based on the Docker CLI



<https://github.com/projectatomic/libpod>

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```
# podman images
```

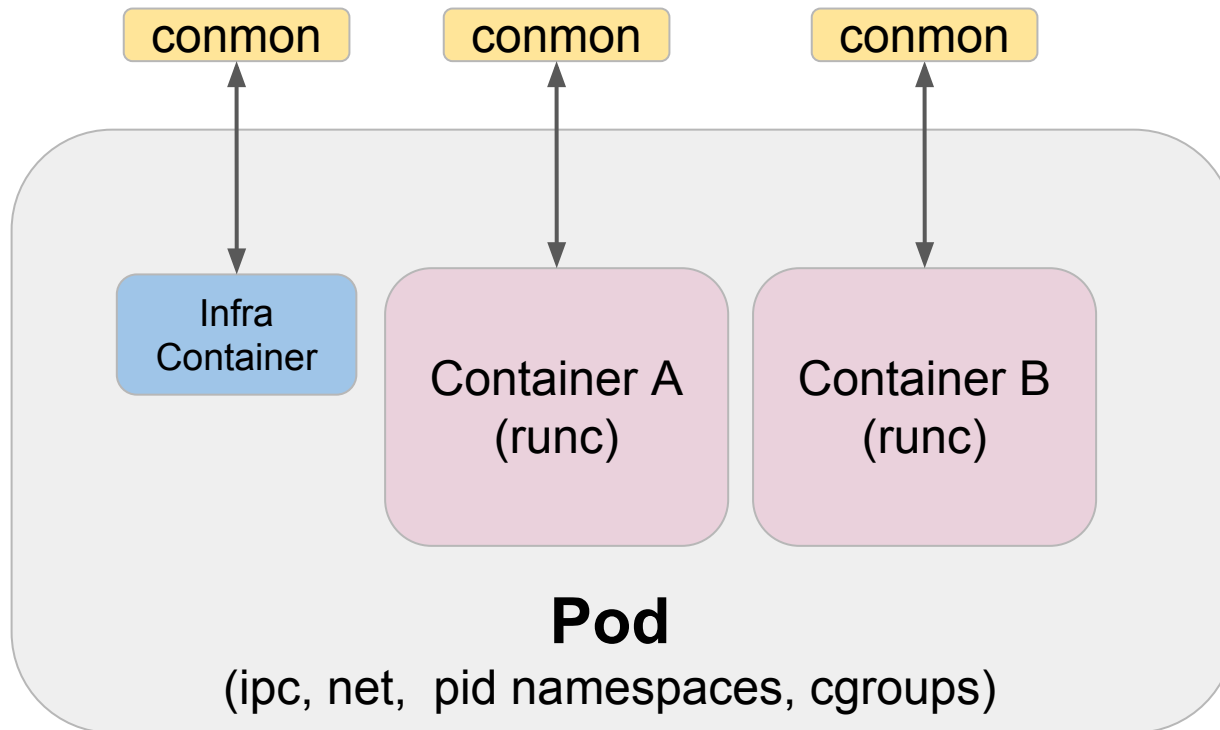
...

<https://github.com/projectatomic/libpod>



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# Pod architecture (runc)



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**DEMO**



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- <https://github.com/containers/skopeo>



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- Can run systemd as PID 1 in container, with no modifications
- Support sd\_notify
- Socket Activation

# Remote API for Podman

- Added Varlink support
- Socket activation of podman system service with varlink

## [Unit]

Description=Podman Remote API Service

Requires=io.podman.socket

After=io.podman.socket

Documentation=man:podman-varlink(1)

## [Service]

Type=simple

ExecStart=/usr/bin/podman varlink unix:/run/podman/io.podman

## [Install]

WantedBy=multi-user.target

Also=io.podman.socket

# Python Bindings

```
python3 -c "import podman; import json; c=podman.Client();print(json.dumps(c.system.info(), indent=4))"
```

```
[  
  {  
    "mem_free": 5796605952,  
    "mem_total": 16679206912,  
    "swap_free": 0,  
    "swap_total": 0,  
    "arch": "amd64",  
    "cpus": 4,  
    "hostname": "localhost.localdomain",  
    "kernel": "4.18.9-200.fc28.x86_64",  
    "os": "linux",  
    "uptime": "11h 2m 32.25s (Approximately 0.46 days)"  
  },  
  ...  
]
```

# Remote API Support

pypodman - Python program used for running remote podman commands.

<https://asciinema.org/a/203590>

# Cockpit support

<https://github.com/cockpit-project/cockpit-podman>

# What we don't do

- Autostart, autorestart
  - Systemd should be handling this
- Swarm
  - We support Kubernetes container orchestrator
- Notary
  - We do support simple signing, but would look at PRs for Notary support
- HealthChecks
  - We are looking into this, perhaps systemd support? Side car container in pod?
- Docker API - We have no plans to support this, but we do have Varlink
- Docker volumes
  - It is on the roadmap