

Podman community meeting

Podman containers
in
Apple Container...
VM

Apple Container (AC)

- Announced at WWDC 2025

*A tool for creating and running Linux containers **images*** using lightweight virtual machines on a Mac. (<-- VZ)
It is written in Swift, and optimized for Apple silicon.*

- But still only at version 0.5.0
- Like Kata Containers* for Linux (actually uses their kernel)
- Also like WSL2 for Windows (but one kernel per “distro”)

* it doesn't actually run containers

Podman local

1)Run fedora

2)Install podman

```
$ container run -it fedora
[root@a12395f2-682a-49bb-a330-cca420161188 /]# dnf install podman
Updating and loading repositories:
  Fedora 42 openh264 (From Cisco) - aarc 100% |    4.1 KiB/s |    5.8 KiB |   00m01s
  Fedora 42 - aarch64 - Updates           100% |   10.2 MiB/s |   23.0 MiB |   00m02s
  Fedora 42 - aarch64                     100% |   10.7 MiB/s |   34.0 MiB |   00m03s
Repositories loaded.
Package                               Arch      Version                               Reposito      Size
Installing:
  podman                               aarch64  5:5.6.2-1.fc42                       updates       44.7 MiB
Installing dependencies:
...

Transaction Summary:
  Installing:           106 packages

Total size of inbound packages is 84 MiB. Need to download 84 MiB.
After this operation, 355 MiB extra will be used (install 355 MiB, remove 0 B).
Is this ok [y/N]: y
...
Complete!
[root@a12395f2-682a-49bb-a330-cca420161188 /]# podman version
Client:           Podman Engine
Version:          5.6.2
API Version:      5.6.2
Go Version:       go1.24.7
Git Commit:       9dd5e1ed33830612bc200d7a13db00af6ab865a4
Built:            Tue Sep 30 00:00:00 2025
Build Origin:     Fedora Project
OS/Arch:          linux/arm64
```

Podman remote

- **vminitd** (also written in Swift)

```
[root@8d826b5c-9a15-426a-82a7-ee54d559db0c /]# podman --remote version
Cannot connect to Podman. Please verify your connection to the Linux system using `podman system connection list`,
or try `podman machine init` and `podman machine start` to manage a new Linux VM
Error: unable to connect to Podman socket: Get "http://d/v5.6.2/libpod/_ping": dial unix /run/podman/podman.sock:
connect: no such file or directory: unix:///run/podman/podman.sock
```

```
[root@8d826b5c-9a15-426a-82a7-ee54d559db0c /]# systemctl start podman.socket
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to system scope bus via local transport: Host is down
```

```
[root@8d826b5c-9a15-426a-82a7-ee54d559db0c /]# podman system service --time=0 &
```

```
[root@8d826b5c-9a15-426a-82a7-ee54d559db0c /]# podman --remote info
```

```
...
  cgroupManager: cgroupfs
  cgroupVersion: v2
...
  remoteSocket:
    exists: true
    path: unix:///run/podman/podman.sock
...
```

Podman remote

```
FROM fedora
RUN dnf install -y systemd
```

```
ENTRYPOINT ["/usr/lib/systemd/systemd"]
STOPSIGNAL SIGRTMIN+3
```

1)Run fedora

2)Exec bash

```
RUN dnf install -y podman
```

```
# systemctl enable podman.socket
RUN <<EOF
ln -s /usr/lib/systemd/\
system/podman.socket \
/etc/systemd/system/\
sockets.target.wants/podman.socket
EOF
```

```
VOLUME /var/lib/containers
```

```
$ container build -t fedora-podman .
...
Successfully built fedora-podman:latest
$ container volume create podman
podman
$ container=$(container run -d -v podman:/var/lib/containers fedora-podman)
$ container exec -it $container bash
[root@da01bc64-9ad6-40da-ba28-5521e2cfbba9 /]# systemctl status
• da01bc64-9ad6-40da-ba28-5521e2cfbba9
  State: running
  Units: 230 loaded (incl. loaded aliases)
  Jobs: 0 queued
  Failed: 0 units
...
[root@da01bc64-9ad6-40da-ba28-5521e2cfbba9 /]# podman --remote version
Client:      Podman Engine
Version:     5.6.2
API Version: 5.6.2
Go Version:  go1.24.7
Git Commit:  9dd5e1ed33830612bc200d7a13db00af6ab865a4
Built:       Tue Sep 30 00:00:00 2025
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OS/Arch:     linux/arm64

Server:      Podman Engine
Version:     5.6.2
API Version: 5.6.2
Go Version:  go1.24.7
Git Commit:  9dd5e1ed33830612bc200d7a13db00af6ab865a4
Built:       Tue Sep 30 00:00:00 2025
OS/Arch:     linux/arm64
```

Storage

~/Library/Application\ Support/com.apple.container

```
4,0K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/config.json
511M containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/initfs.ext4
14M containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/kernel.bin
4,0K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/kernel.json
4,0K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/options.json
741M containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/rootfs.ext4
4,0K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/rootfs.json
0B containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/service.log
4,0K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/service.plist
0B containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/stdio.log
28K containers/cb9421f9-0dfa-4cc6-b55e-a7a14119e20f/vminitd.log
```

```
4,0K volumes/podman/entity.json
66M volumes/podman/volume.img
```

Discussion

- <https://github.com/apple/container>
 - macOS 15
 - macOS 26+
- <https://github.com/afbjorklund>
 - 20 years of containers*, 10 years of “machine”
 - docker → minikube → podman → linux (lima)



- <https://github.com/containers/podman/issues/26395>
- <https://github.com/lima-vm/lima/discussions/3829>

* see <https://wiki.openvz.org/History>

One More Thing...

https://en.wikipedia.org/wiki/OS-level_virtualization

