

Lima v1.1 coming soon

<https://lima-vm.io/>

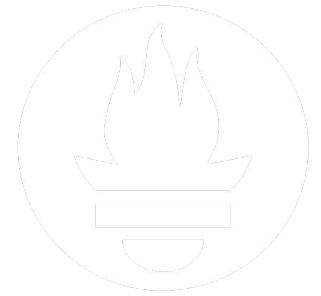
Linux virtual machines (e.g., for running containers on macOS)

- Automatic host filesystem sharing
- Automatic port forwarding
- Built-in integration for containerd

(and Docker, Podman, Kubernetes, Apptainer, ...)

```
$ brew install lima
$ limactl start
$ lima nerdctl run -p 80:80 nginx
```

How it works



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- **Hypervisor**

Virtualization.framework (default) or QEMU

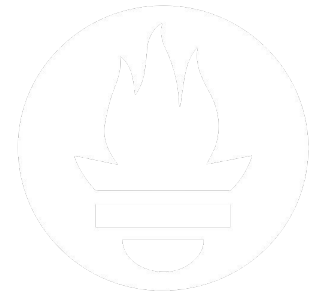
- **Intel-on-ARM binary executor**

Rosetta 2 (Virtualization.framework) or QEMU-user

- **Filesystem sharing**

virtiofs (Virtualization.framework), virtio-9p (QEMU), or reverse-sshfs

How it works



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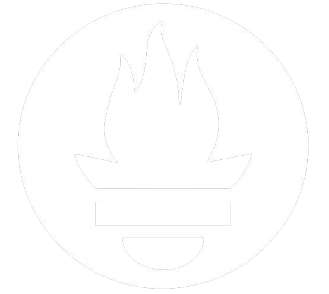
- **Network**

- user mode networking (default)
- `socket_vmnet` (for direct access to the IP, etc. with `sudo`)

- **Port forwarding**

Implemented by watching `/proc/net/tcp`, iptables, and Kubernetes services

Built-in templates



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- **Distros**

almalinux, alpine, archlinux, centos-stream, debian, opensuse, oraclelinux, rocky, ubuntu, ...

- **Container engines**

apptainer, docker, docker-rootful, podman, podman-rootful, ...

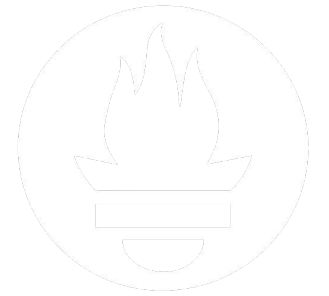
- **Container orchestration**

faasd, k3s, k8s

```
$ limactl start --name=default template://docker
```

v1.0 (November 2024)

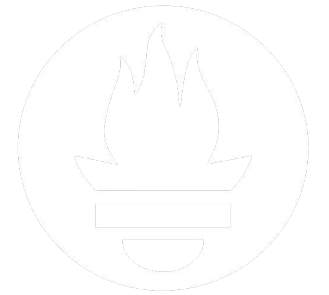
- Changed the default VM driver on macOS: QEMU → Virtualization.framework
- Support nested virtualization on Apple M3
- Support UDP port forwarding (not enabled by default)
- Added `limactl tunnel`: let the host join the guest network (via SOCKS)
- Bumped up containerd and nerdctl to v2



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v1.1 coming soon

- Inheritance of templates
 - Before: qcow2 URLs had to be copy-pasted to all YAMLS
 - After: `base: template://ubuntu-24.04`
- New port forwarder by default
 - Better throughput (3.38 Gbps → 3.80 Gbps)
 - UDP in addition to TCP
- DragonflyBSD hosts
- S390X guests

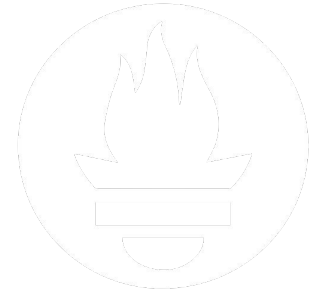


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Future ideas

- Virtio-GPU Venus
- Menu-based text user interface
- UX improvement for composing multiple VMs
- Plugin system for supporting other VM drivers



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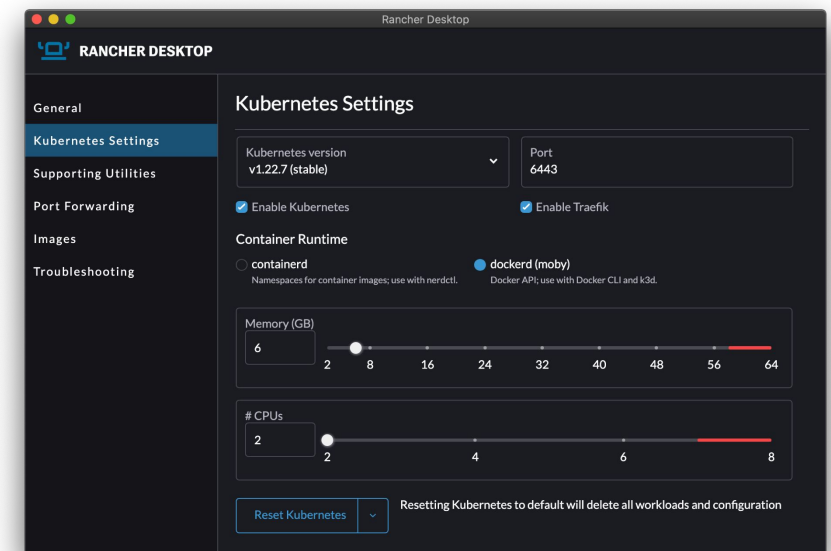
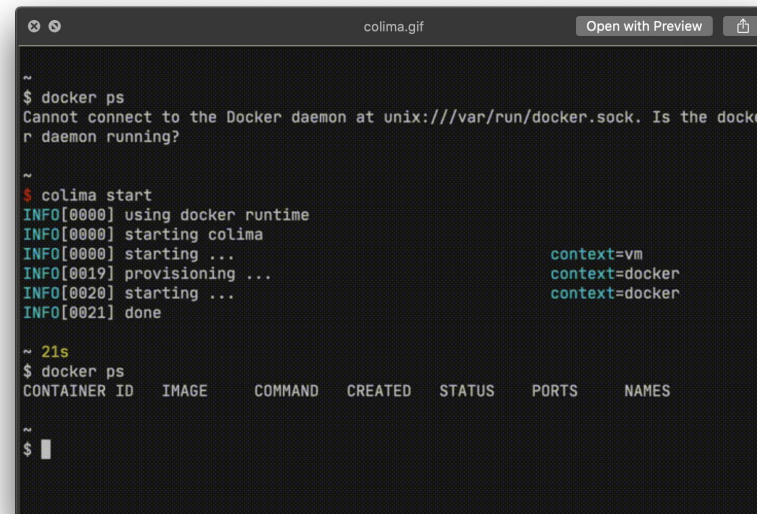
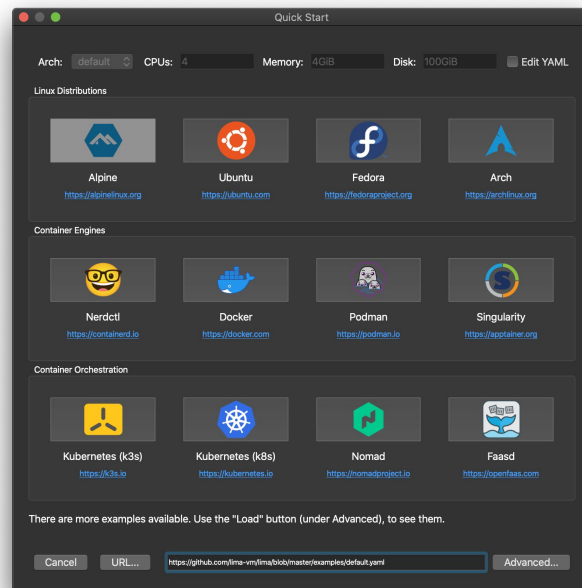
Third party FLOSS projects based on Lima



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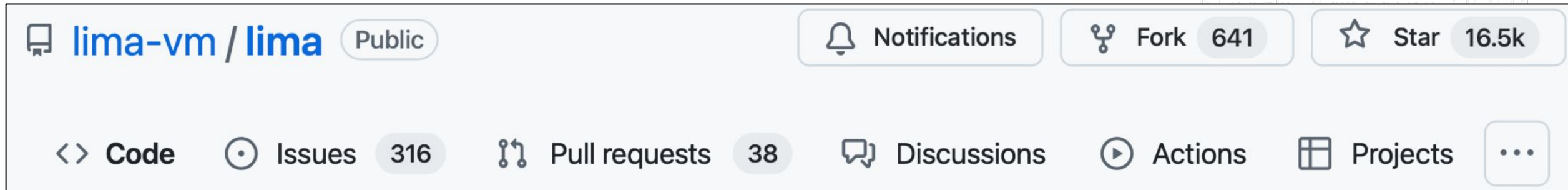
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Lima-GUI	https://github.com/afbjorklund/lima-gui
Colima	https://github.com/abiosoft/colima
Rancher Desktop	https://rancherdesktop.io/
Finch	https://github.com/runfinch/finch



Join the community!

- **GitHub:** <https://github.com/lima-vm/lima/>



- **Slack:** <https://slack.cncf.io/> (Channel: #lima)