



Flatcar Container Linux Monthly Community Meeting

11 January 2022

Fireworks image [Porto \(31612879447\).gif](#) originally posted to Flickr by sergei.gussev under [cc-by-2.0](#). “Flatcar” logo overlay added.

Agenda

News

Spotlights:

- 2021 recap

- Flatcar on RPi4

- Fleetlock

Release Planning

Q&A / Discussion



Happy new year 2022!
(If you're new to the call please say "hi")

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News & Announcements

The latest on Flatcar Linux



NEWS

New Flatcar Alpha-3115 coming this week

- Kernel upgraded to 5.15
- Minor / patch version bump for OS image packages (Docker/containerd, vim, etc.) and SDK tools / libraries (golang, gcc, python, glib, etc.)



Upcoming FOSDEM devroom talks

[FOSDEM 2022](#) is a free virtual conference and will commence on the 5.+6. Of February

- [Distributions:](#)
 - [All's well that tests well](#) - Mathieu
 - [Securing and Hardening a container host](#) - Sayan
 - [Modding the Immutable](#) - Thilo
- [Infrastructure](#)
 - (proposed) Immutable Infrastructure with Flatcar Container Linux - Kai
- [Containers](#)
 - [How I learned to stop worrying and love Flatcar's auto-update](#) - Thilo



Spotlights



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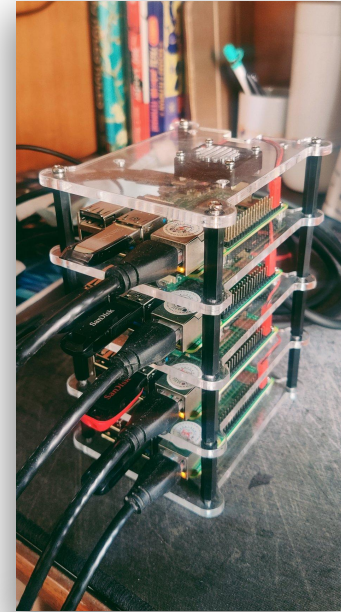
Spotlight: 2021 Recap

- Major component upgrades
 - kernel 5.10, Docker 20, systemd 249, glibc-2.33
- Subsystems modernised
 - Switch to cgroups v2, iptables-nftables
- ARM64 goes stable
 - Fix for polkit / switch to ducktape
- Ignition / Flatcar support in Cluster API v1.1.0-beta1
- Increased vendor coverage
 - Equinix Metal gen3 (both ARM64 and Intel)
 - AWS Graviton 2
 - Azure Gen2 VMs



Spotlight: Flatcar on Raspberry Pi 4

- Why?
 - ARM
 - Homelab
- What
 - Custom bootloader / upgraded EEPROM
 - Flatcar on SDcard/USB via flatcar-install
 - UEFI Firmware
- See [blog post](#) for detailed information & installation steps.
- Outlook
 - Publish OEM image with EFI firmware included on the boot partition
 - [Turing Pi 2?](#)



Spotlight: Fleetlock integration to Locksmith

- Locksmith:
 - Flatcar reboot manager
 - Relies on etcd to reboot a subset of a cluster of machines
- FleetLock:
 - request-response protocol
 - RecursiveLock, UnlockIfHeld
 - locks are **owned**: client created it can release it



Why switch to FleetLock ?

- Flexibility
- Remove etcd hard-dependency
- To ensure compatibility: airlock is the FleetLock server used in Fedora CoreOS
- We could even offer a public lock server (users would pick secret group names)
- Tracking issue: [flatcar-linux/Flatcar#510](https://github.com/flatcar-linux/Flatcar/issues/510)



FleetLock + Locksmith ([flatcar-linux/locksmith#14](https://github.com/flatcar-linux/locksmith#14))

- **Things I learnt:**

- Understand how the FleetLock protocol works.
- Understanding of HTTP client ([flatcar-linux/fleetlock](https://github.com/flatcar-linux/fleetlock)).
- How lock unlock happen behind the scene and how fleetlock helps.

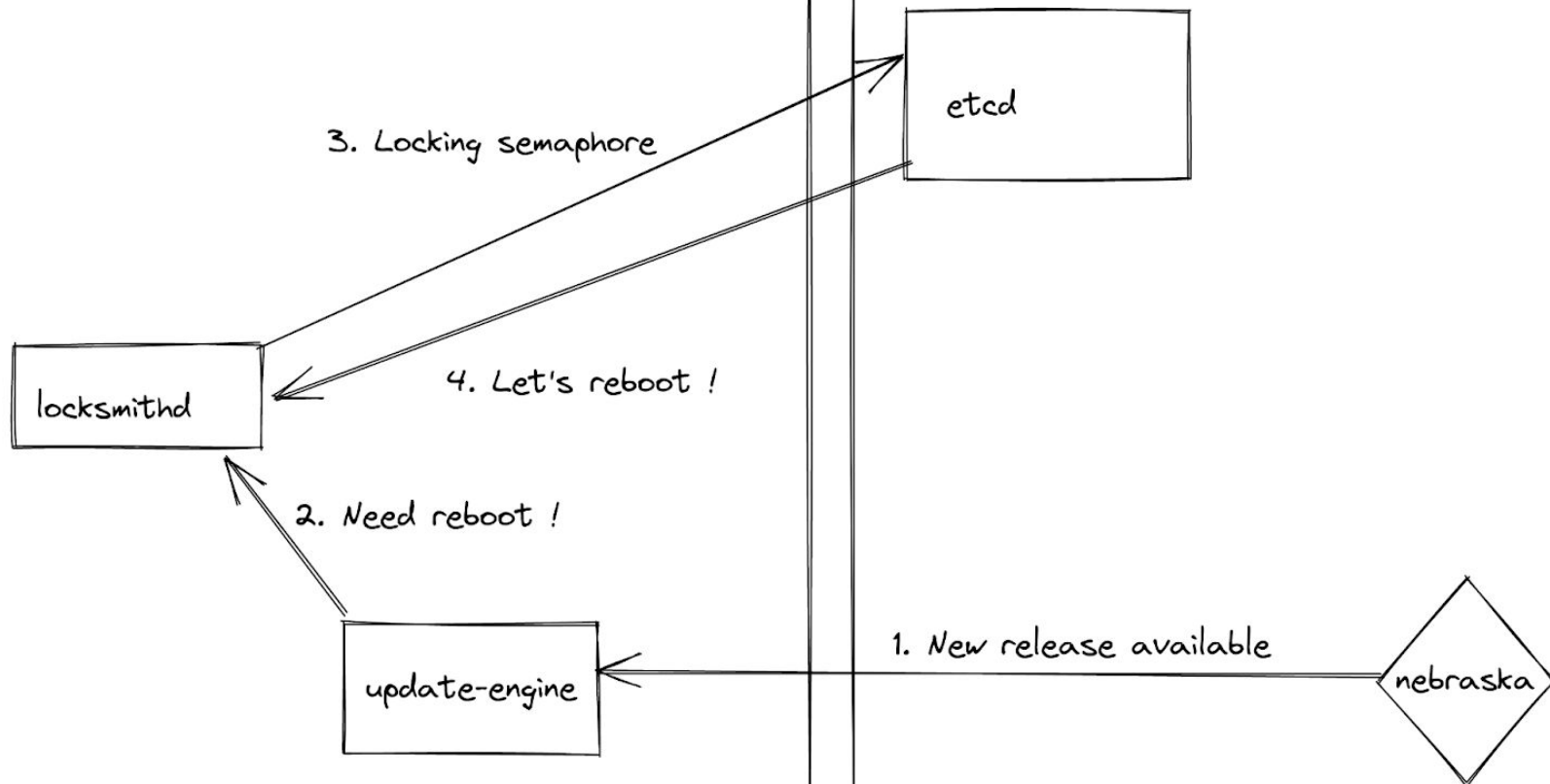
- **What I did -**

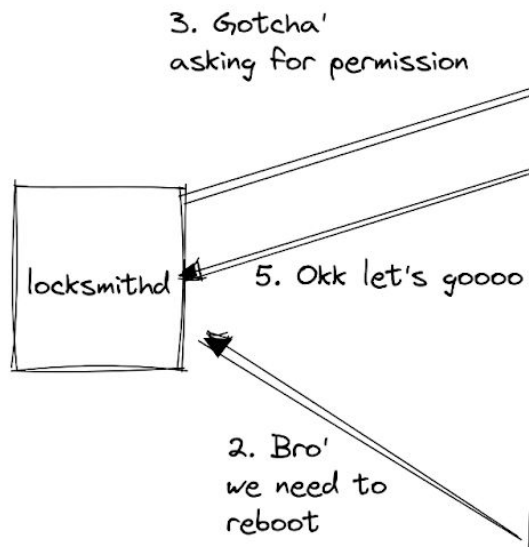
- A lot of refactoring.
- Removed etcd & semaphore dependencies.
- Added fleetlock functionality in replace.



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The outside





WHATEVER

as long it's FleetLock Compliant

1. New release available

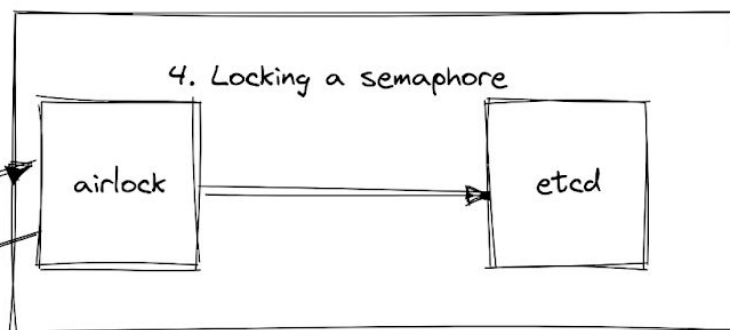
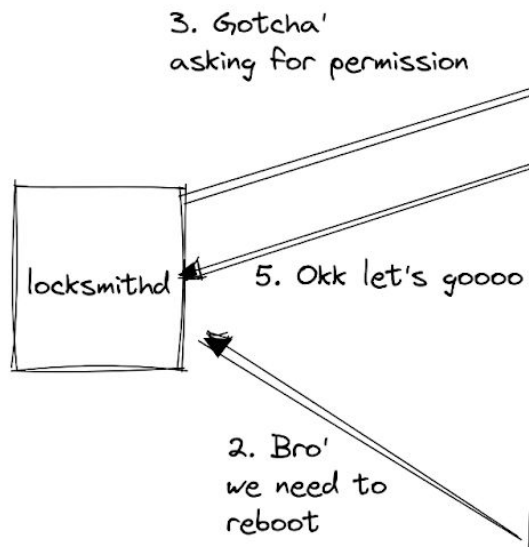
nebraska

```
graph LR; WHATEVER[WHATEVER]; nebraska{nebraska}; nebraska -- "1. New release available" --> update-engine[update-engine];
```

The diagram shows the "outside" environment. It contains a large rectangle labeled "WHATEVER" with the text "as long it's FleetLock Compliant" below it. A diamond shape labeled "nebraska" is connected to the `update-engine` component in the Flatcar environment by an arrow labeled "1. New release available".

Flatcar

The "outside"



1. New release available

nebraska



Demo

- <https://asciinema.org/a/YZkBq1Sikt3mm0PsYCTMaD7eT>
- CLC: <https://gist.github.com/tormath1/e23821514f790f2a330f8ffd90f77de8>





Release Planning

⇒ Planning Board



Jump aboard!

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Q&A / Discussion



Thank you!

Github: [flatcar-linux/flatcar](https://github.com/flatcar-linux/flatcar)

Twitter: [flatcar](https://twitter.com/flatcar)



Calls to Action

Spread the word

Become a contributor (github.com/flatcar-linux/Flatcar)

Join the community ([Matrix, email list](#))

Join us for the next community call

Share your feedback - how can we better support and grow the community? What should we cover in future community calls?

