ParticleOS

Can we make Lennart run an image-based distribution?

Dogfooding

"Eating your own dog food, or 'dogfooding', is **the practice of an organization using its own product internally**. It's a great opportunity to view your product from the perspective of customers or clients, and by extension, ensure your user experience is exactly as you want it to be."

State Of Dogfooding
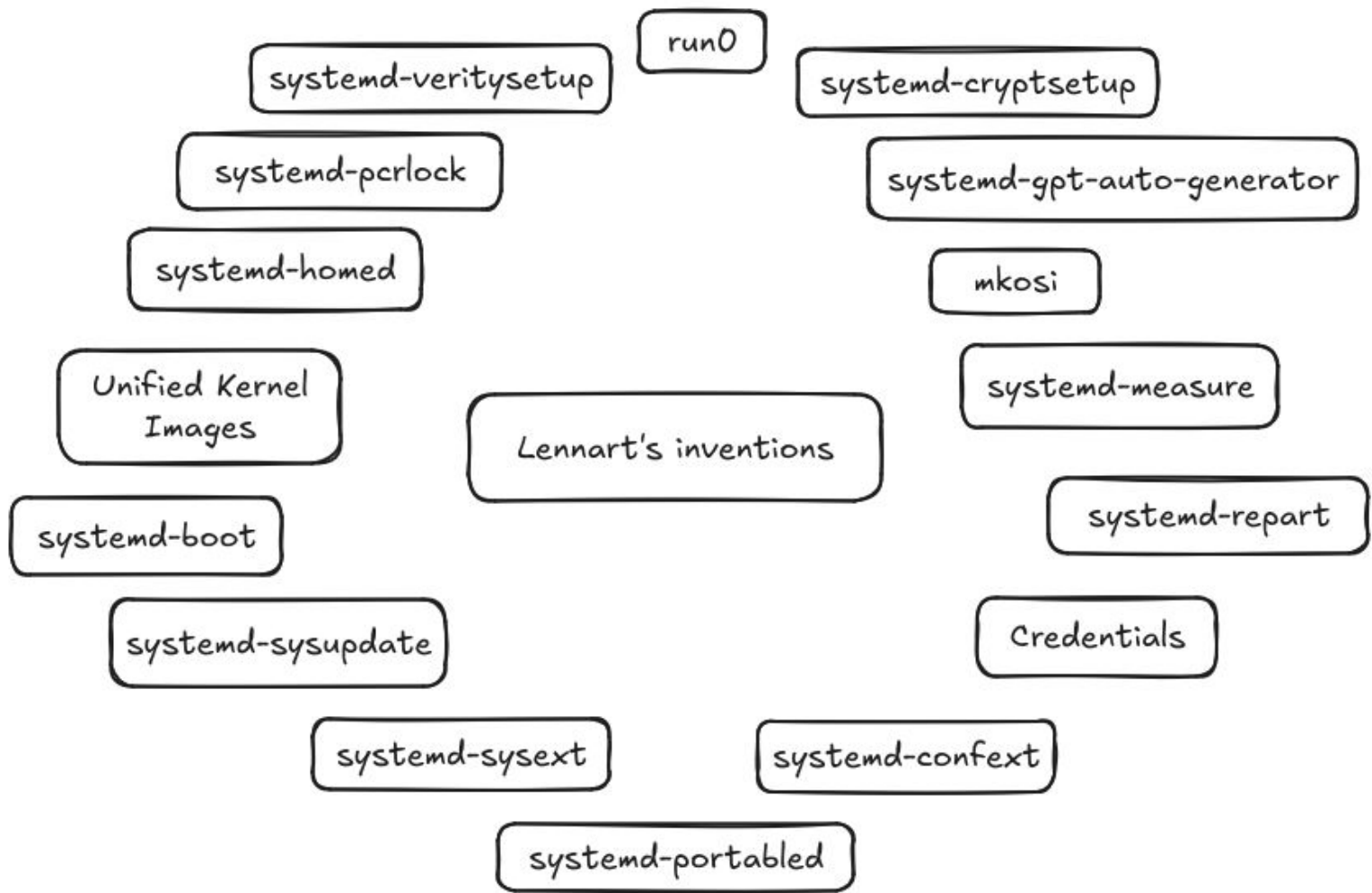
run0

systemd-veritysetup

systemd-cryptsetup

systemd-pcrlock

systemd-gpt-auto-generator

systemd-homed

mkosi

Unified Kernel Images

systemd-measure

Lennart's inventions

systemd-boot

systemd-repart

systemd-sysupdate
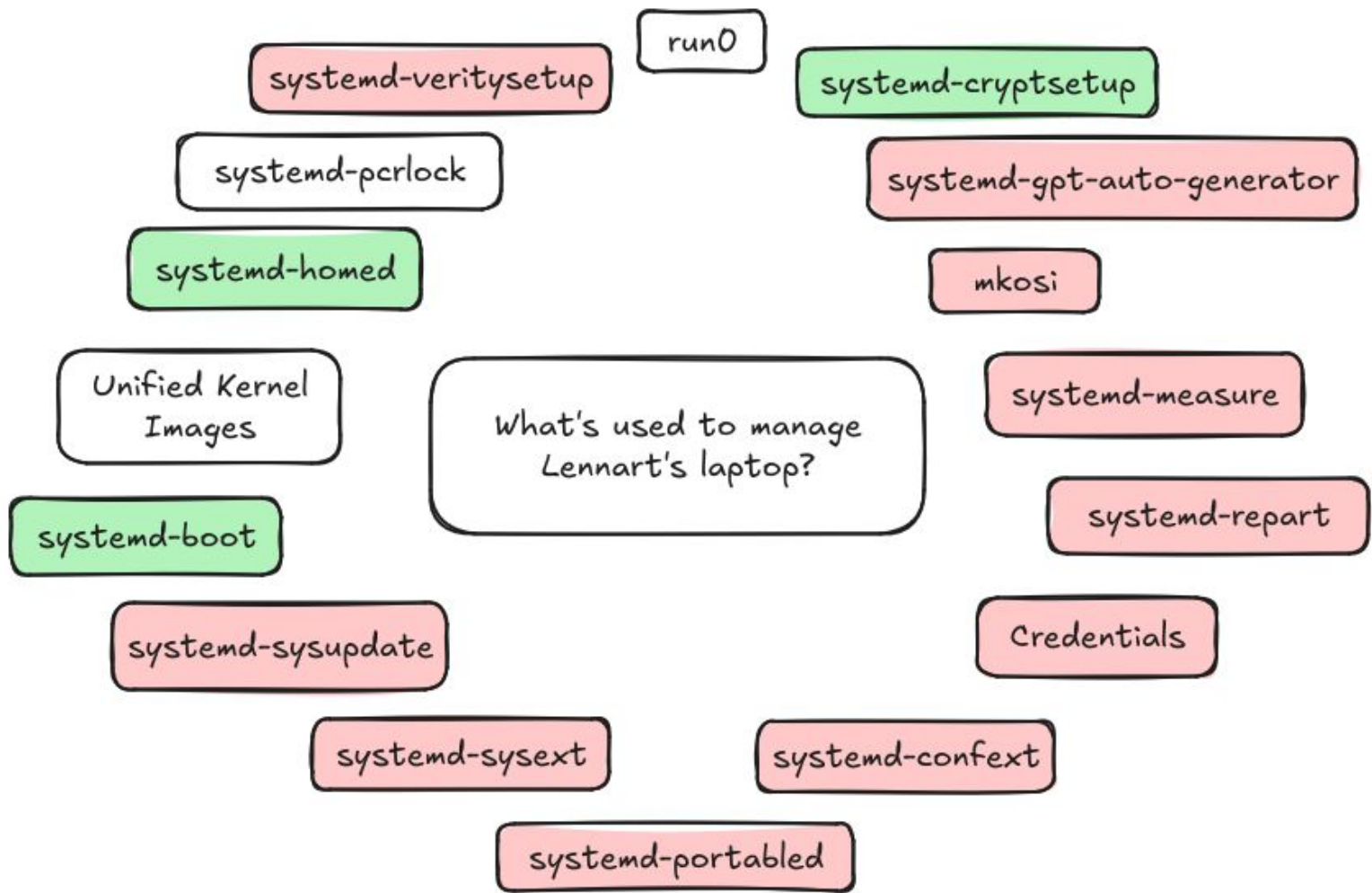
Credentials

systemd-sysext

systemd-confext

systemd-portabled
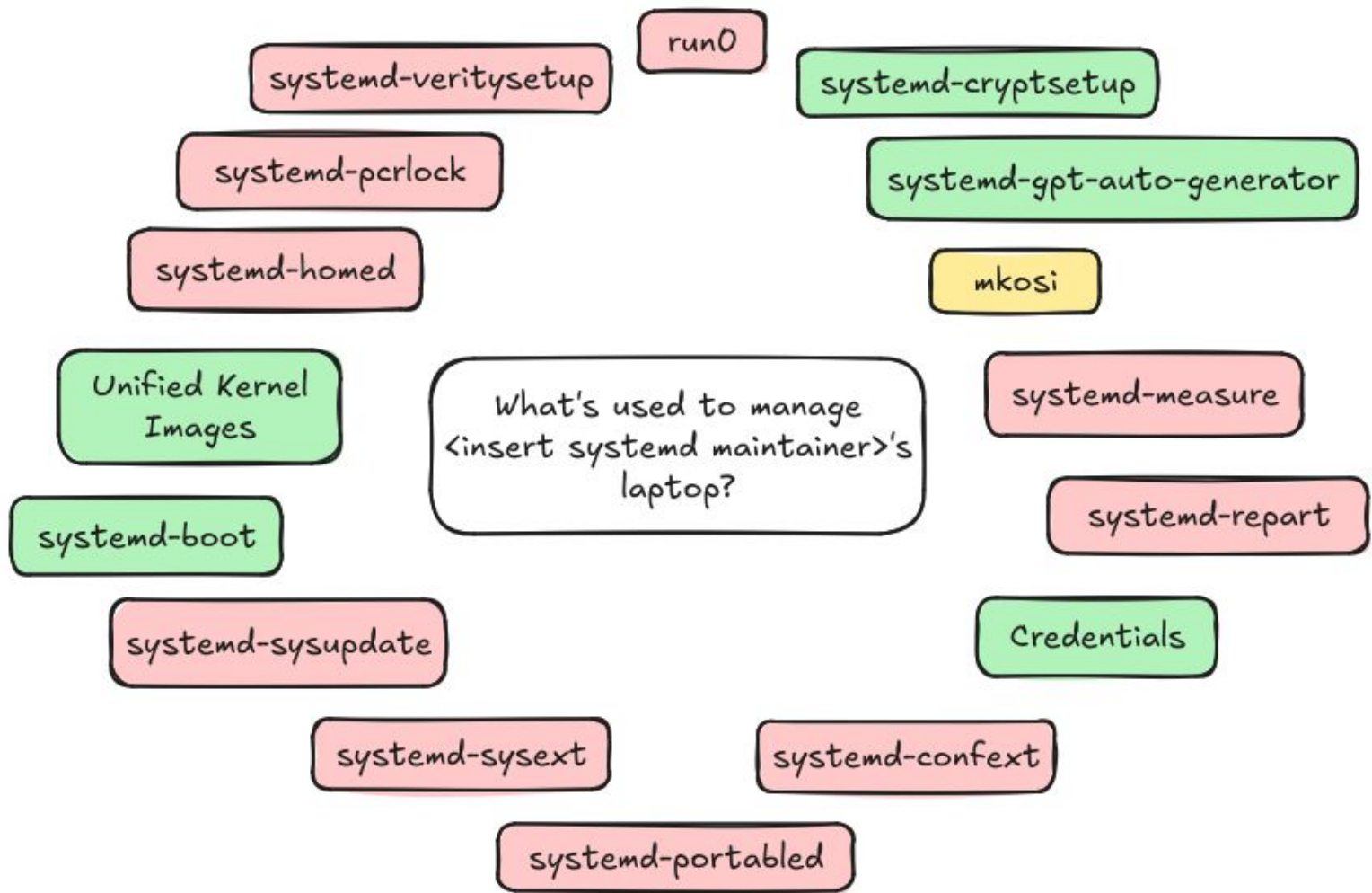
run0

systemd-veritysetup

systemd-cryptsetup

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Unified Kernel Images

What's used to manage Lennart's laptop?

systemd-measure

systemd-boot

systemd-repart

systemd-sysupdate

Credentials

systemd-sysext

systemd-confext

systemd-portabled

run0

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Unified Kernel Images

What's used to manage <insert systemd maintainer>'s laptop?

systemd-measure

systemd-boot

systemd-repart

systemd-sysupdate

Credentials

systemd-sysext

systemd-confext

systemd-portabled

Why is this a problem?

1. We merge lots of **public APIs** without an immediate consumer

2. These **public APIs** end up in a systemd stable release

3. …

4. Someone tries to use the interface

5. They find out the interface doesn't do exactly what they need

6. We have to figure out how to complete/fix the interface

Why is this actually a problem?

1. ~~We~~ Lennart merges lots of **public APIs** without an immediate consumer

2. These **public APIs** end up in a systemd stable release

3. …

4. ~~Someone~~ **I try** to use the interface

5. ~~They~~ **I** find out the interface doesn't do exactly what ~~they~~ **I** need

6. ~~We~~ **I** have to figure out how to complete/fix the interface

How do we make Lennart dogfood systemd?

How do we make Lennart his own consumer?

Create systemd's own distribution!

Requirements

- Don't reinvent the (entire) wheel

- Gnome

- Use as many systemd tools as possible

- Run systemd from git main

- Enable easy hacking on systemd and the distribution

- Customizable

- Secure + Measured Boot

ParticleOS

- Immutable image-based distribution

- mkosi

- Arch / Fedora

- KDE / Gnome

- Self-signed

- Build it yourself

- https://github.com/systemd/particleos

Pre deployment

git clone <particleos>

↓

$EDITOR
mkosi.local.conf

↓

mkosi build

↓

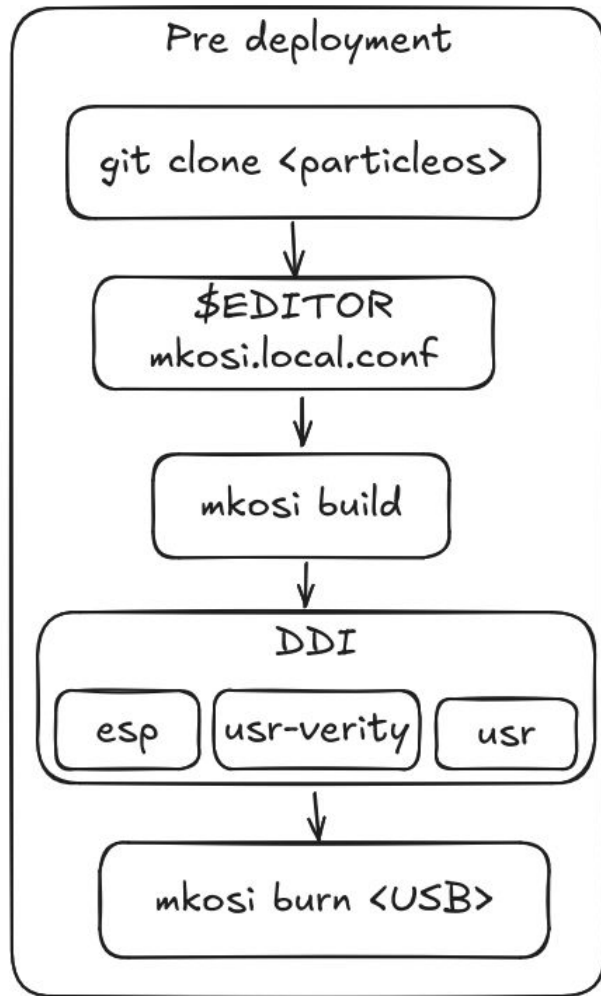DDI

esp   usr-verity   usr

↓

mkosi burn <USB>

Deployment

```
Set UEFI password
        │
        ▼
Secure Boot => Setup mode
        │
        ▼
   Boot from USB
        │
        ▼
Select "Enroll secure boot keys"
        │
        ▼
Select Installer UKI profile
        │
        ▼
systemd-repart --dry-run=no
--empty=force <DRIVE>
        │
        ▼
   systemctl reboot
```

First Boot

Select regular UKI profile

↓

systemd-firstboot

↓

homectl firstboot

↓

login

↓

Fix up homed

↓

systemctl enable --now gdm

run0

systemd-veritysetup

systemd-cryptsetup

systemd-pcrlock

systemd-gpt-auto-generator

systemd-homed

mkosi

Unified Kernel Images

What's used to manage Daan's laptop?

systemd-measure

systemd-boot

systemd-repart

systemd-sysupdate

Credentials

systemd-sysext

systemd-confext

systemd-portabled

It works!

run0 /usr/lib/systemd/systemd-pcrlock gets stuck in do_shovel() #35746

⊘ Closed   DaanDeMeyer opened this issue 2 weeks ago · 2 comments · Fixed by #35752

DaanDeMeyer commented 2 weeks ago   Member …

systemd version the issue has been seen with

main

Assignees
 yuwata

Labels

Timed out waiting for device dev-tty0.device. #36166

⊘ Closed   ⌥ #36171

DaanDeMeyer opened 2 days ago

systemd version the issue has been seen with

v258~devel

Kinda?

Add option for `systemctl preset[-all]` to preset units under `/usr/lib`
#33373

⊙ Open   septatrix opened this issue on Jun 17, 2024 · 2 comments

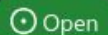Updates made with homectl update don't apply immediately or on logout/
login #34529

⊙ Open   DaanDeMeyer opened this issue on Sep 23, 2024 · 2 comments

Can't update home if systemd-homed can't resize home #34527

⊙ Open   DaanDeMeyer opened this issue on Sep 23, 2024 · 0 comments

Failure to resize home locks the user out of account #34526

⊙ Open   DaanDeMeyer opened this issue on Sep 23, 2024 · 1 comment

Call to ~~action~~ Lennart!

- Let's focus on building **end-to-end** solutions

- Let's always have an immediate **consumer** of any public APIs

    - Either ourselves or a user

- Let's **dogfood** systemd by switching to ParticleOS

What's missing?

- OpenSUSE Build System (OBS) => OBS Profile

    - Will force dogfooding of sysext, credentials, portable services, …

- systemd-pcrlock

- More distributions (OpenSUSE, Debian, Ubuntu, CentOS Stream)

- More desktop environments

- Dual boot?

- **Somehow get Lennart to adopt ParticleOS**

The End