



MINIMAL OS, MAXIMUM IMPACT

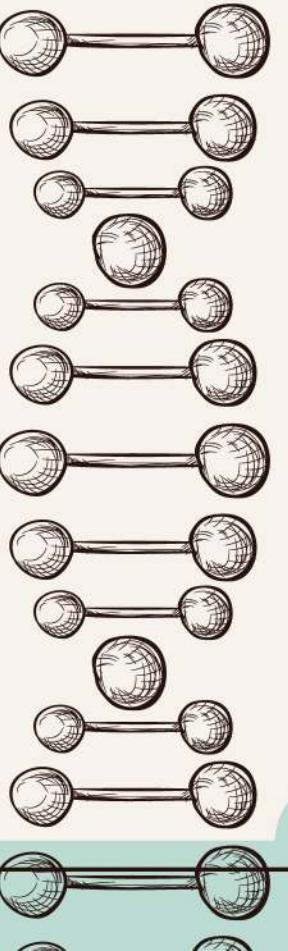
Journey to a Flatcar Maintainer

KubeCon + CloudNativeCon India 2025

/whoami

Sayan Chowdhury

Flatcar Container Linux Maintainer



Flatcar Container Linux

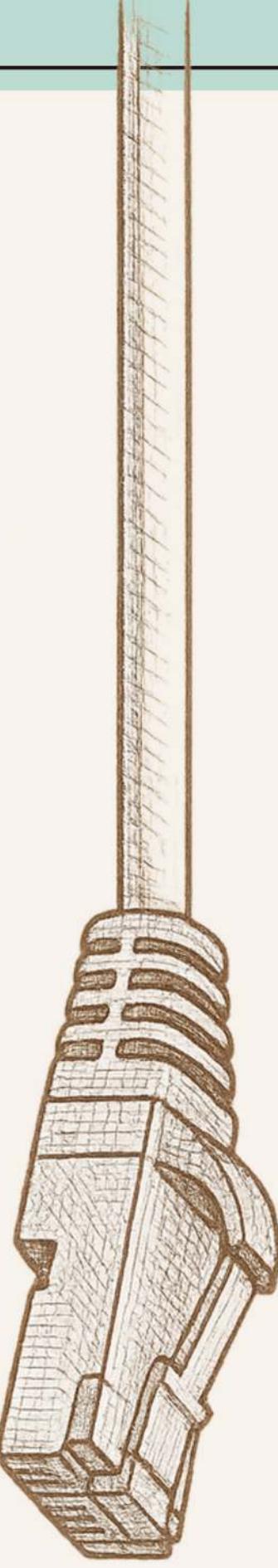
01 Container-optimised, minimal, immutable OS.

02 Core architectural features :

- Read-only, cryptographically validated `/usr` partition; stateful `/`.
- No package manager; upgrades delivered as atomic images, not packages.
- Focus on fleet-scale automation & Atomic rollbacks.
- Declarative configuration.

03 CNCF Incubating project (August 2024)

04 Growing community of users & contributors.

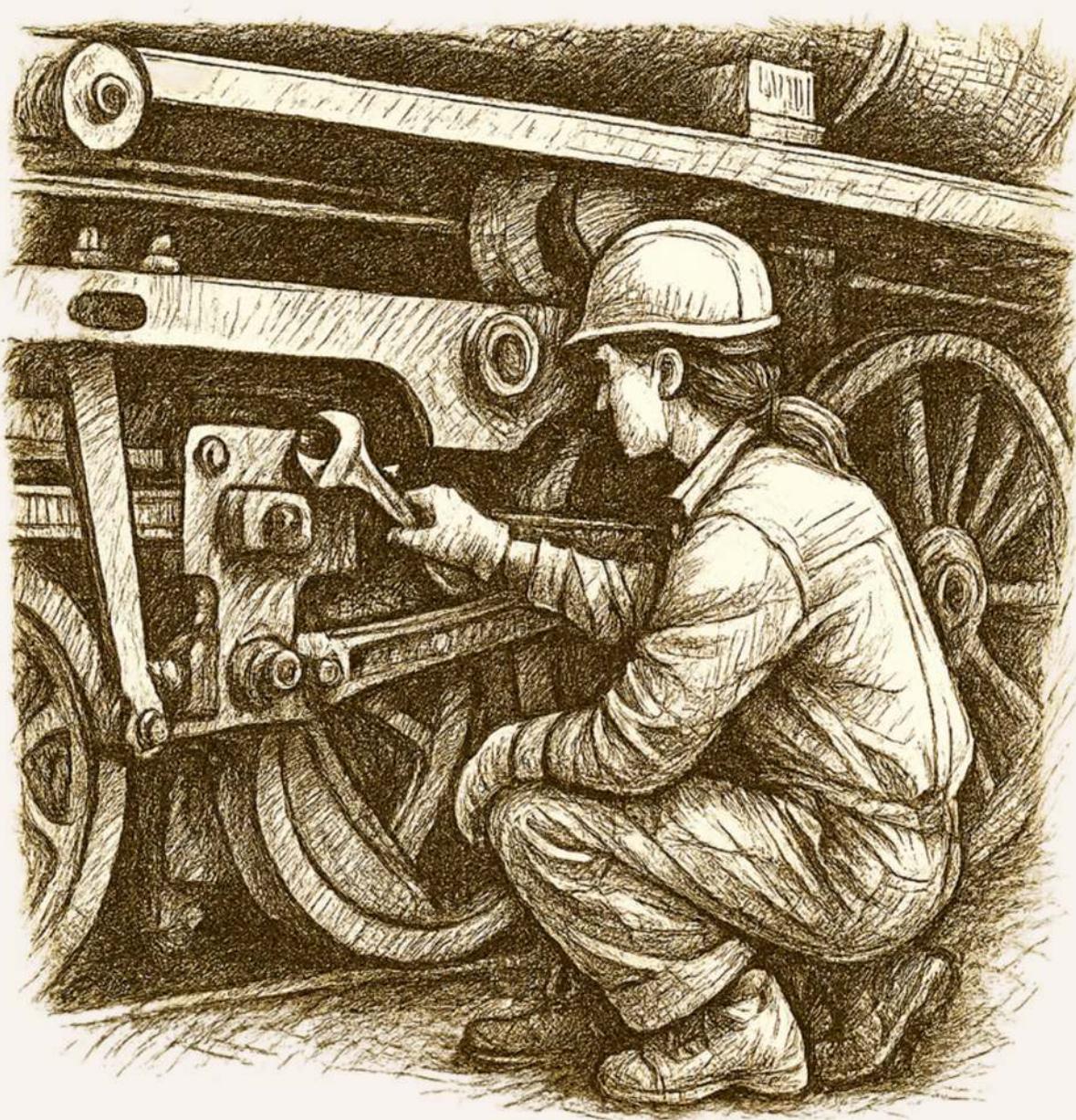


Why Contribute to Flatcar Container Linux ?



13
maintainers

The Vows



01

I vow to steward the project with humility, balancing innovation with stability, and welcoming ideas greater than my own.

02

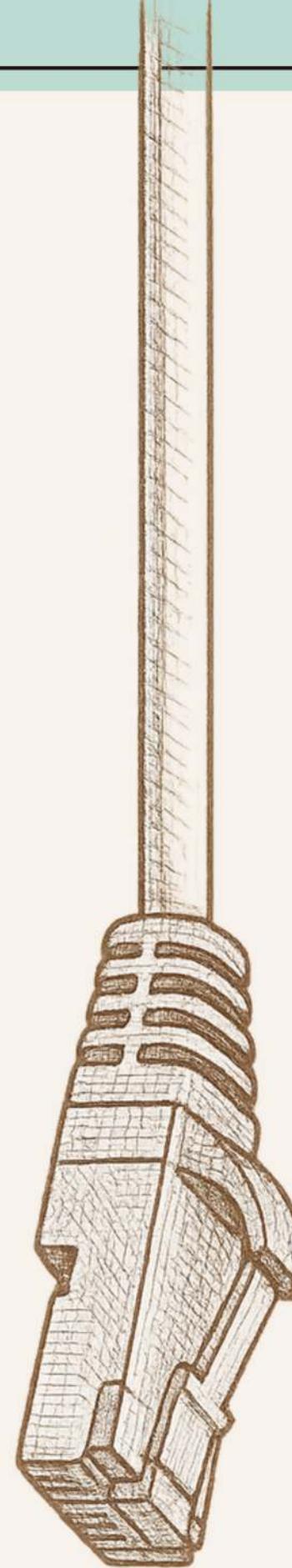
I vow to keep the system secure by default, reducing surface without reducing usability.

03

I vow to uphold trust – with users, contributors, and the machines themselves -- through disciplined changes, verified & tested builds, and the quiet promise that even alpha deserves to boot clean.

04

I vow to nurture the community not as a crowd, but as collaborators — listening before responding, mentoring when needed, and making space for voices quieter than mine.



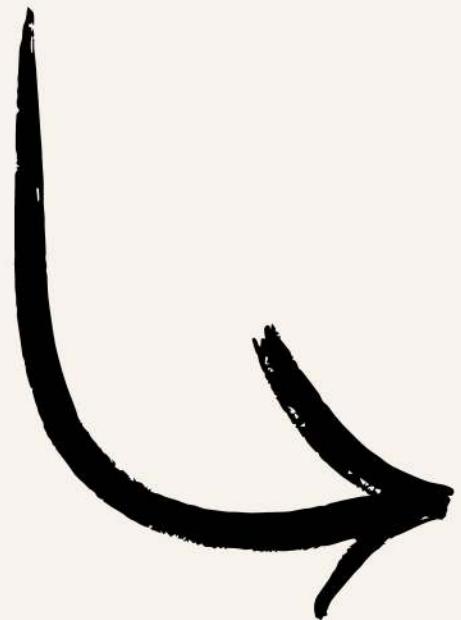
Innovation Upstream first Use case oriented

01

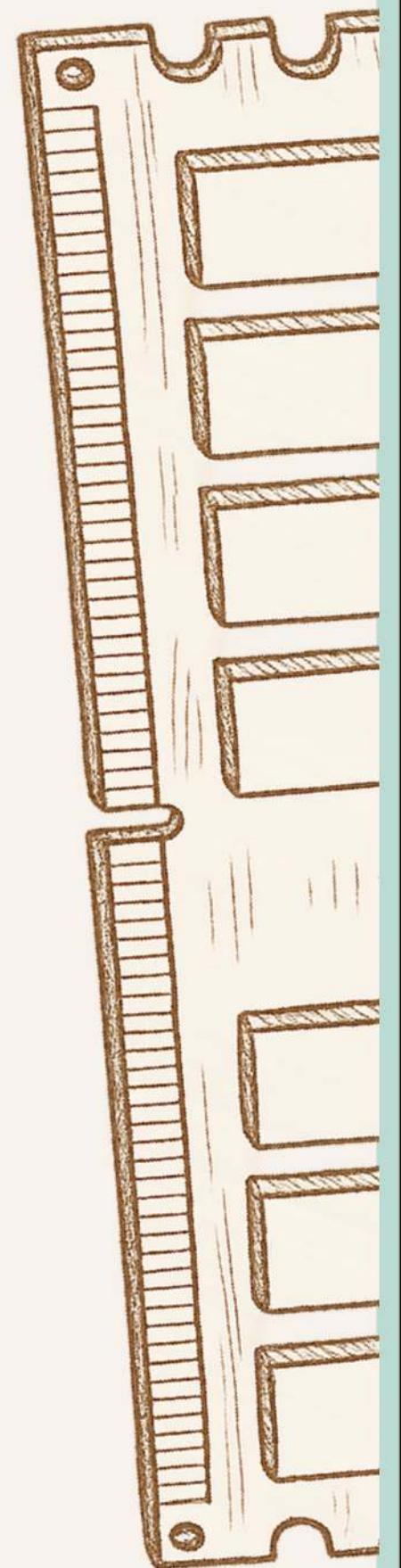
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Innovation

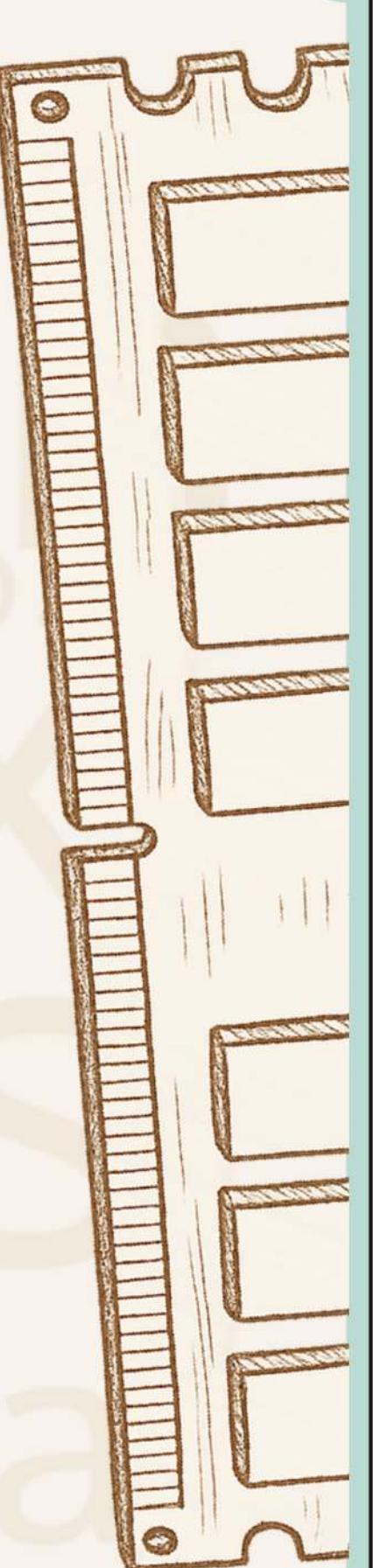
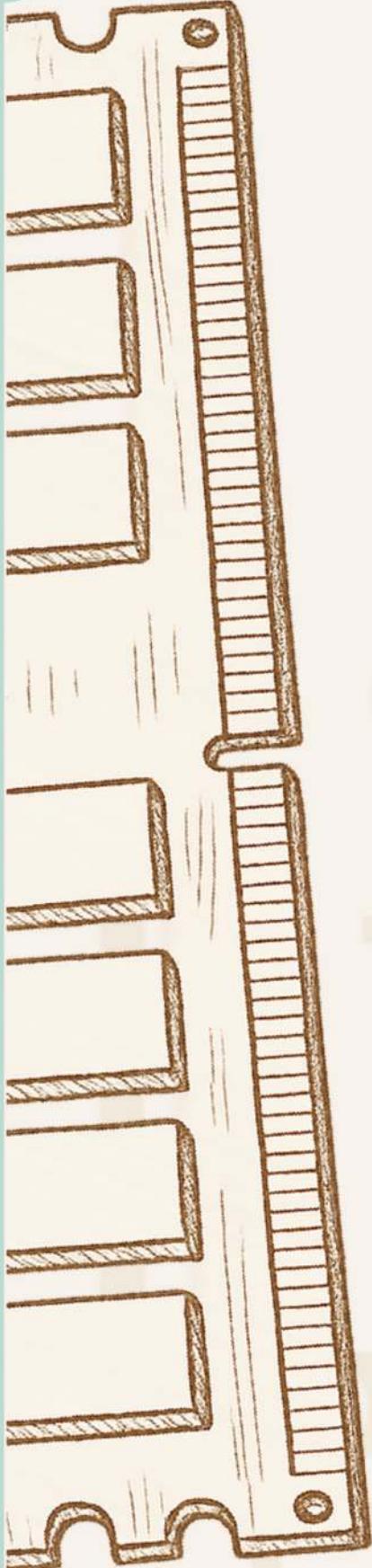
Open 144 Closed 211



- [RFE] Ensure CodeQL integration is enabled in Security tab for all repos using CodeQL rulesets (as part of PR and branch standardization) area/ci-automation area/CNCF kind/feature
Bug · #1790 · John15321 opened on Jun 27 · Updated 4 days ago
- [RFE] Standardize Pull Request, Merging workflow and branch protection rules 0 / 4 area/CNCF kind/feature
#1714 · John15321 opened on Apr 11 · Updated 2 weeks ago
- [RFE] STACKIT support area/tests component/mantle kind/feature platform/new-platform
#1769 · robinschneider opened on Jun 3 · Updated 3 weeks ago
- [RFE] longhorn v2 engine support (modules) kind/feature
#1526 · hwaastad opened on Aug 30, 2024 · Updated last month
- [RFE] Quiesce filesystem during VM snapshots kind/feature platform/VMWare
#1795 · web2wire opened on Jul 2 · Updated last month
- [RFE] nss-altfiles subid (subuid and subgid) kind/feature
#1796 · jcpunk opened on Jul 4 · Updated on Jul 5
- [RFE] Intel GPU (iGPU) support kind/feature
#1770 · tardich opened on Jun 5 · Updated on Jul 2
- [RFE] Repos: enforce PR reviews (2-person rule) for scripts and ebuild repos kind/feature
#815 · t-lo opened on Jul 27, 2022 · Updated on Jun 27
- [RFE] Add Support for lz4 and zstd Kernel Modules kind/feature
#1535 · nemezo opened on Sep 4, 2024 · Updated on Jun 27
- [RFE] Update flatcar-container.tar.gz to work with Incus kind/feature
#1752 · tormath1 opened on May 20 · Updated on Jun 27
- Boot Failure After Customizing Flatcar Image with LUKS-Encrypted Root Partition kind/feature
#1623 · Ghanshyam-Varun opened on Jan 28 · Updated on Jun 26
- [RFE] Azure: Report provisioning failures due to ignition kind/feature platform/Azure
#1783 · jepio opened on Jun 25 · Updated on Jun 26

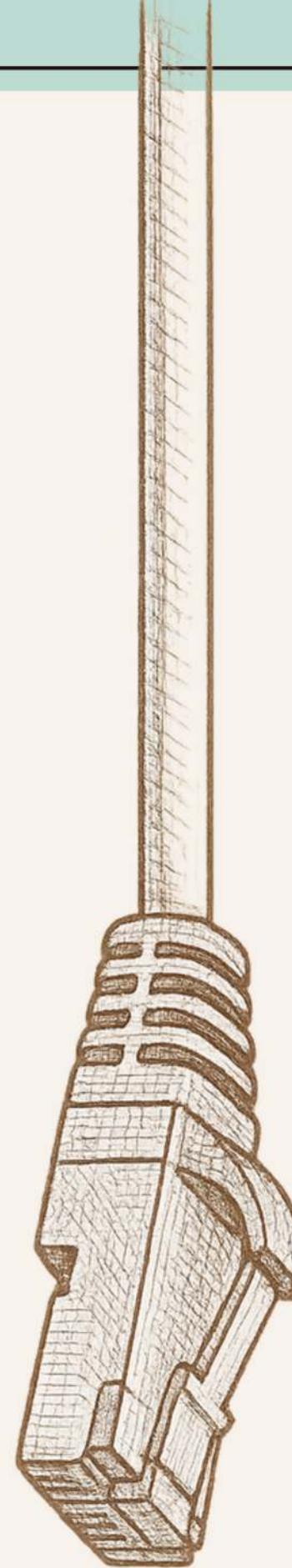


Upstream-first





Use-case oriented



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Secure by default

Security Tracking

Security Triage / Audit

02

I vow to keep the system secure by default, reducing surface without reducing usability.



Secure by default

Security Tracking

The screenshot shows a GitHub search results page for security-related issues. The search bar at the top has the query "update: golang.org/x/crypto". The results list several issues, all of which have been closed. The first issue, #1669, is highlighted.

update: golang.org/x/crypto #1669

Closed

dongsupark opened on Mar 3

Name: golang.org/x/crypto
CVEs: [CVE-2025-22869](#)
CVSSs: 7.5
Action Needed: update to >= 0.35.0

Summary: SSH servers which implement file transfer protocols are vulnerable to a denial of service attack from clients which complete the key exchange slowly, or not at all, causing pending content to be read into memory, but never transmitted.

See also [groups.google.com/g/golang-announce/c/qN_GDasRQSA](#).

refmap.gentoo: TBD

[Create sub-issue](#)

Assignees: No one - [Assign yourself](#)

Labels: [advisory](#) [cvss/HIGH](#) [security](#)

Type: No type

Projects: No projects

Milestone:

Open 4 Closed 47

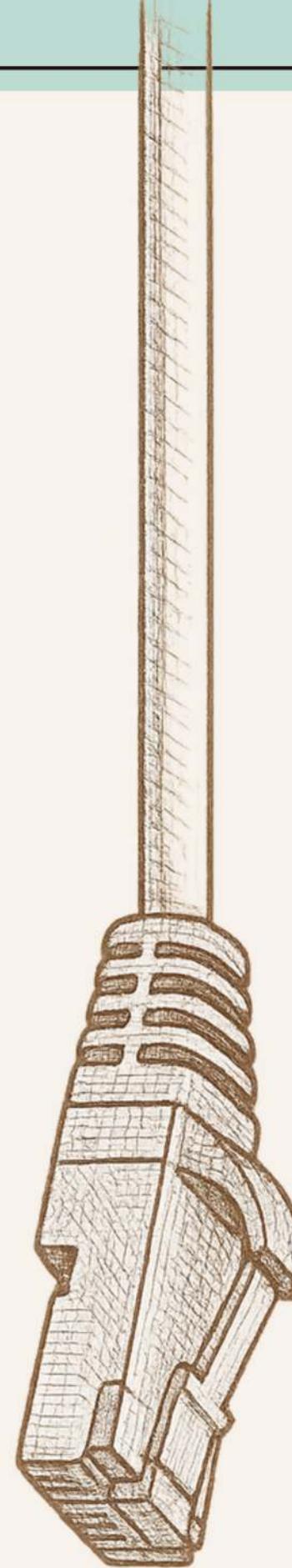
Open all Author Labels Projects Milestones Assignees Types Updated

Issues listed:

- OpenSSH regression (?) in LTS v4081.3.3 (#1773)
- update: iputils (#1766)
- update: golang.org/x/crypto (#1669)
- update: golang.org/x/net (#1703)
- update: crun (#1675)
- update: Go, golang.org/x/net (#1676)
- update: openssh (#1654)
- update: libcap (#1652)
- update: intel-microcode (#1650)
- update: dev-vcs/git (#1611)
- update: curl (#1578)
- update: net-misc/wget (#1582)

Security Triage / Audit





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Test Framework

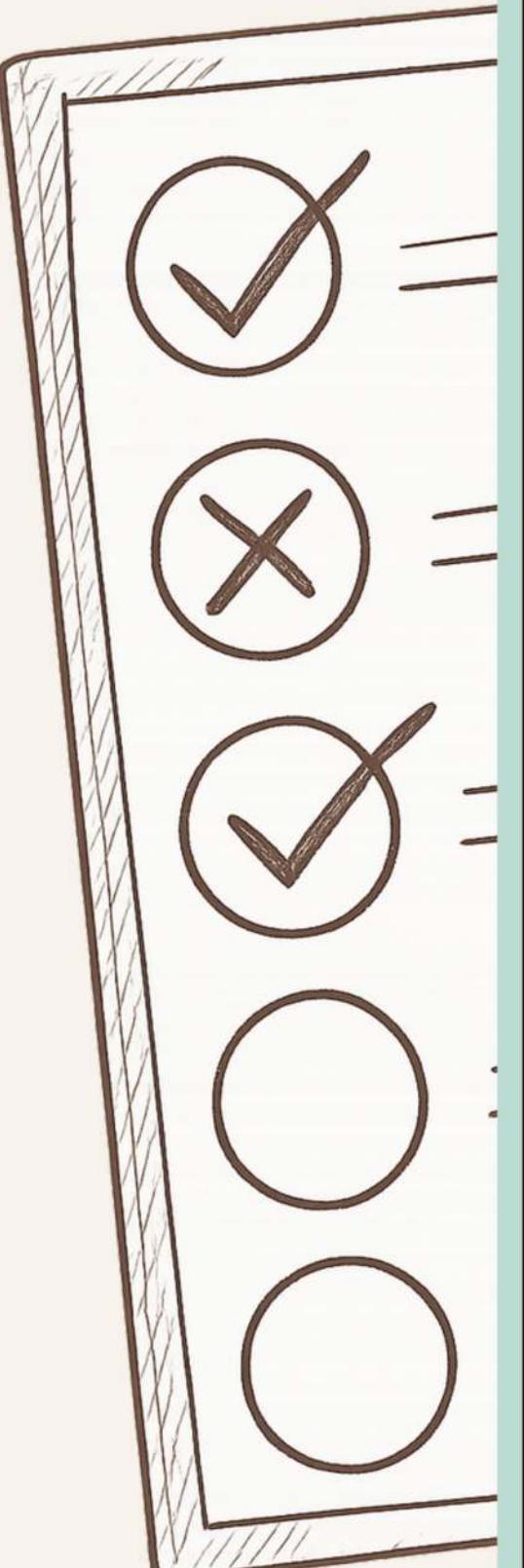
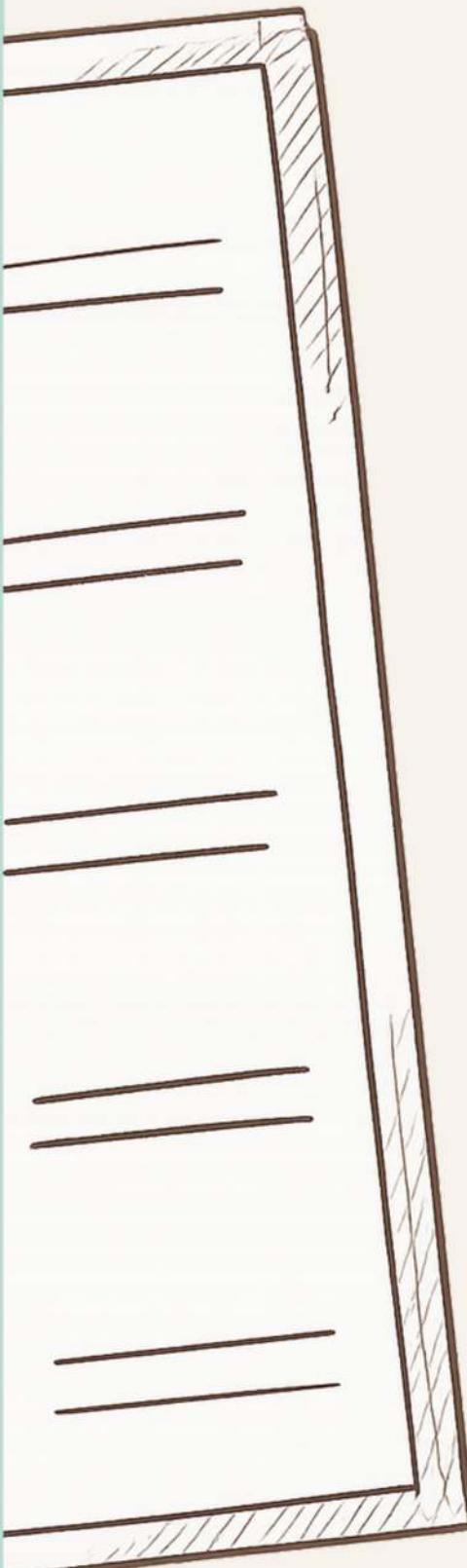
PR Reviews

Timely Releases

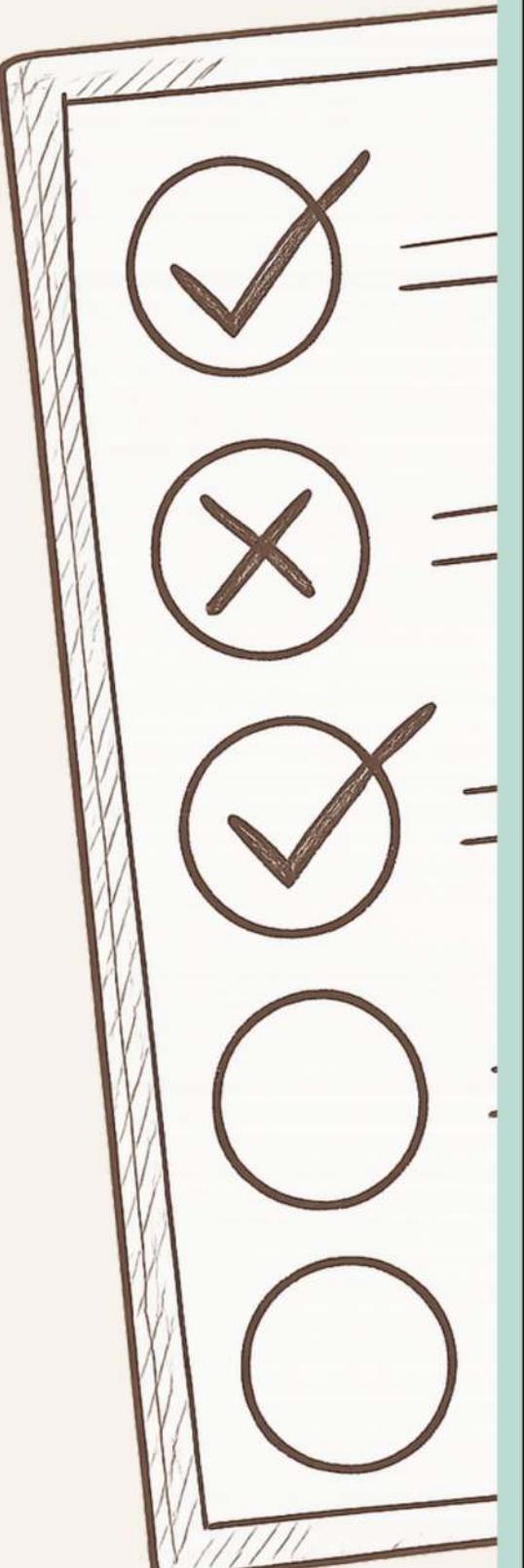
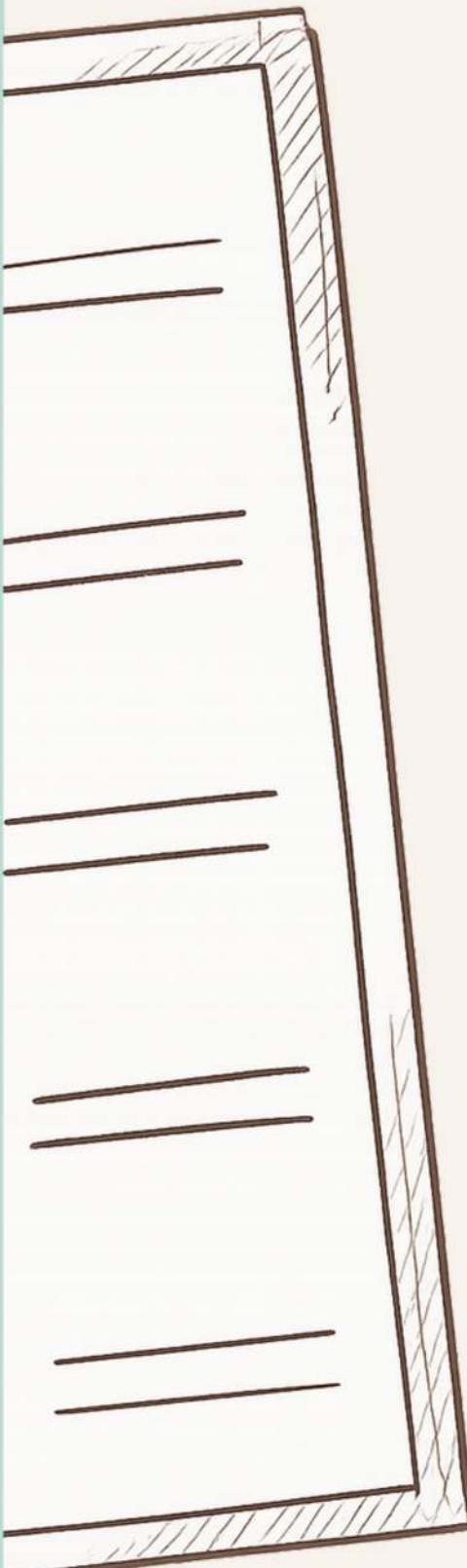
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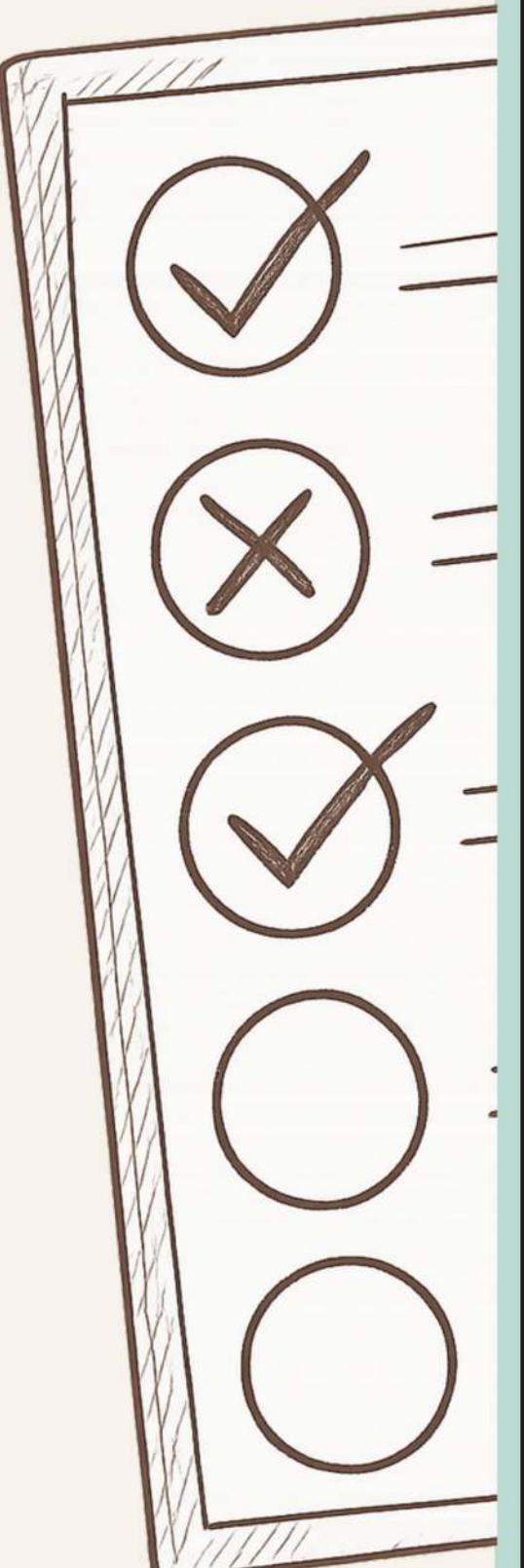
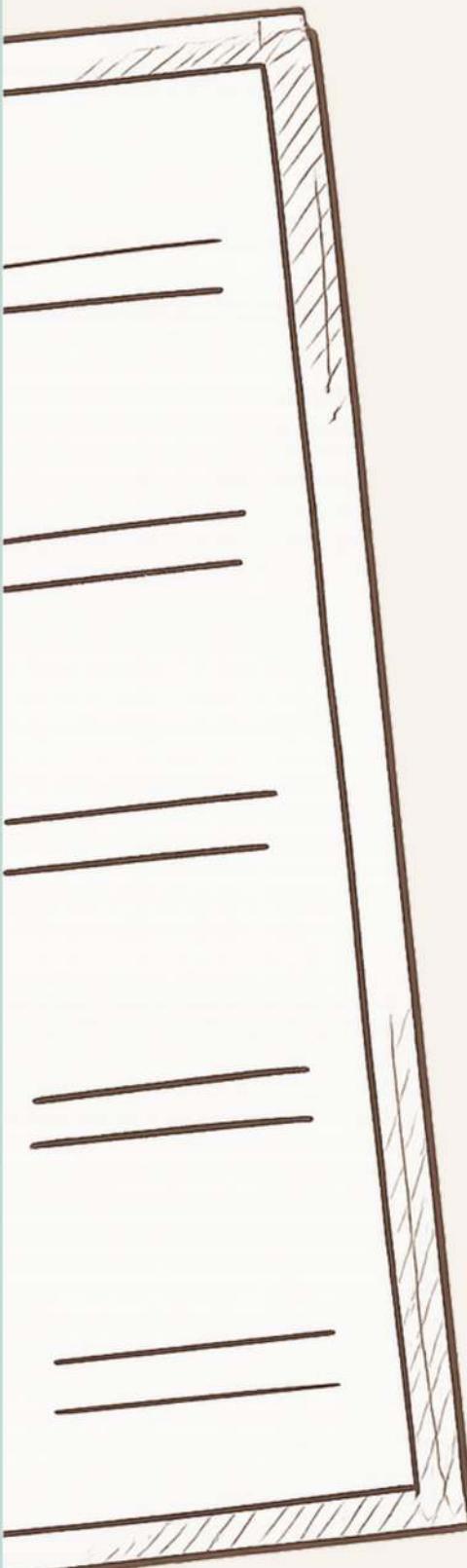
Test Framework

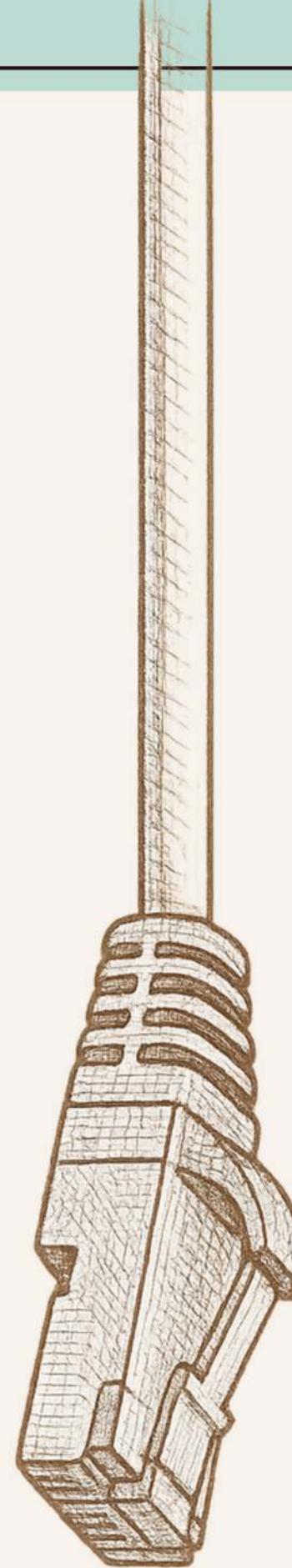


PR Reviews



Timely Releases





Community Office Hours

The Maintenance Mode

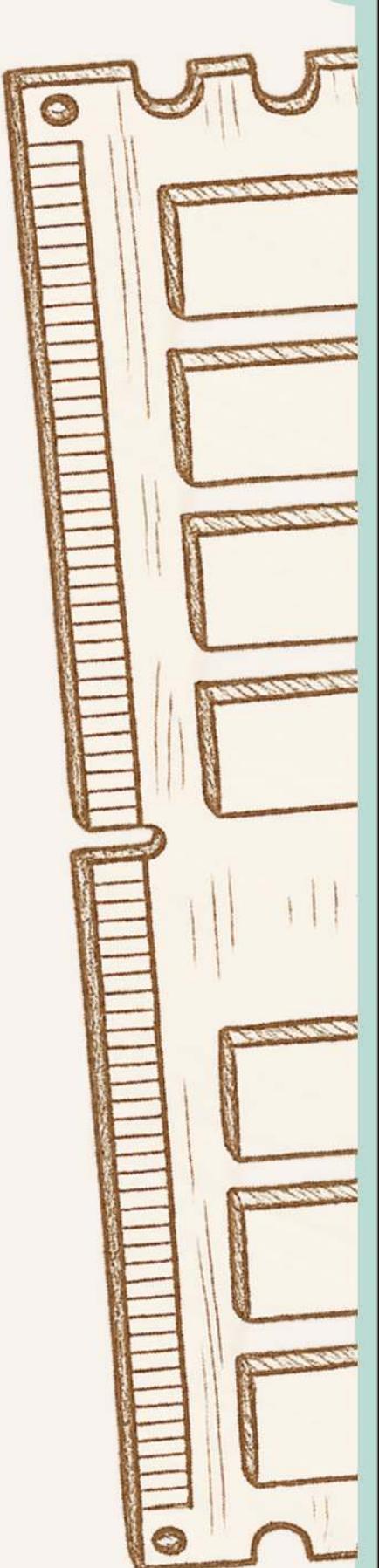
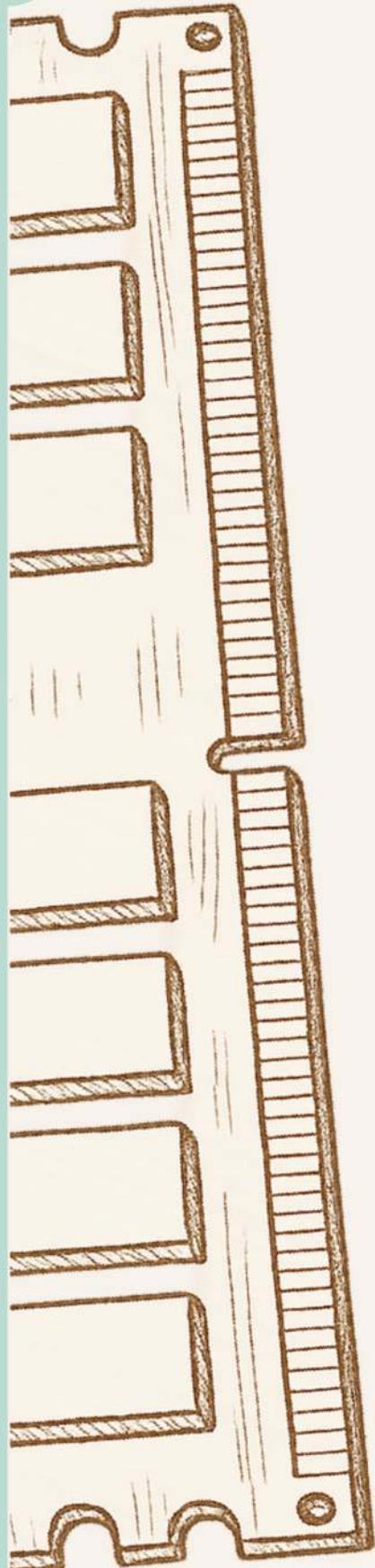
Flatcar Developer Sync

04

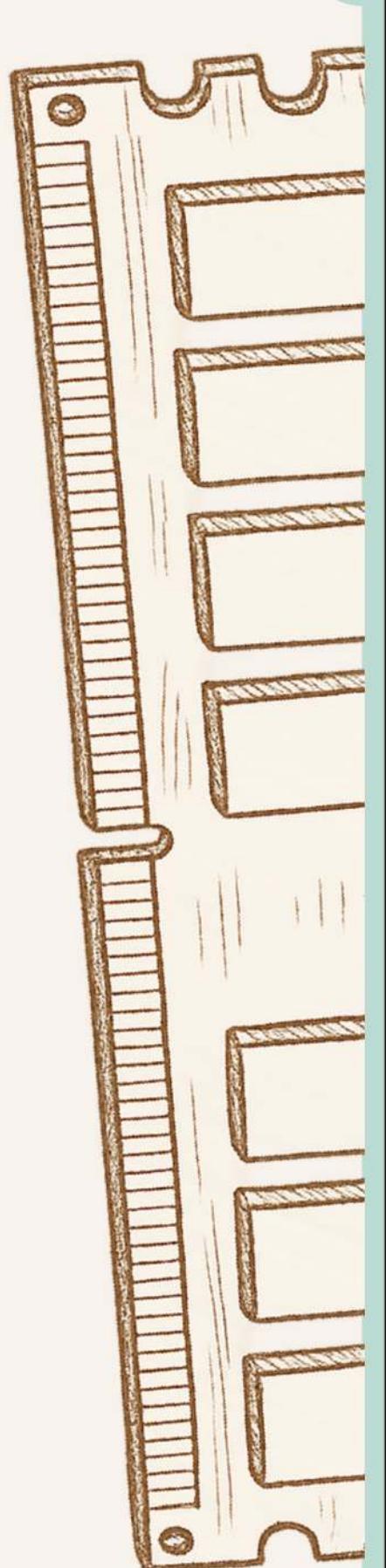
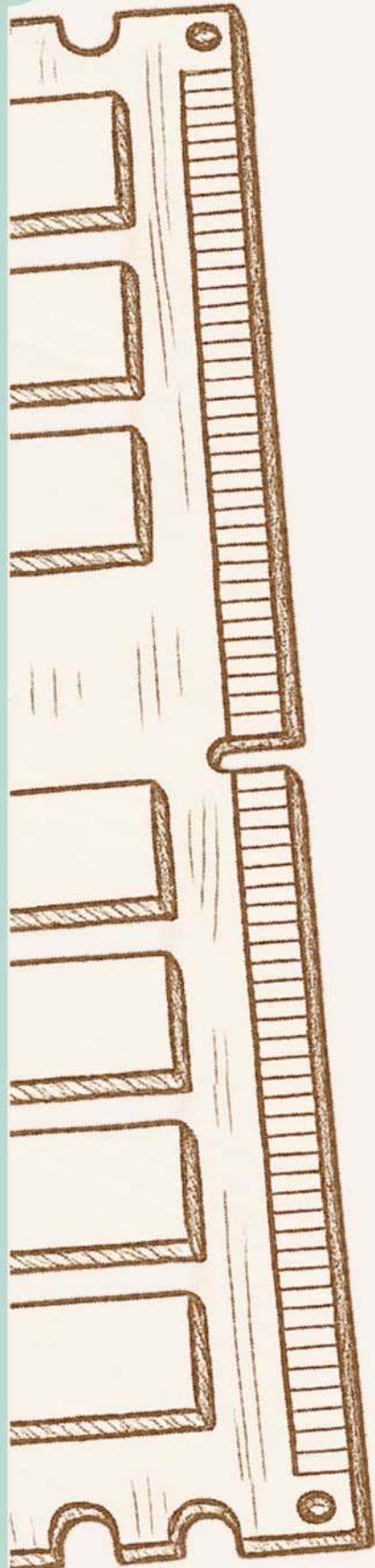
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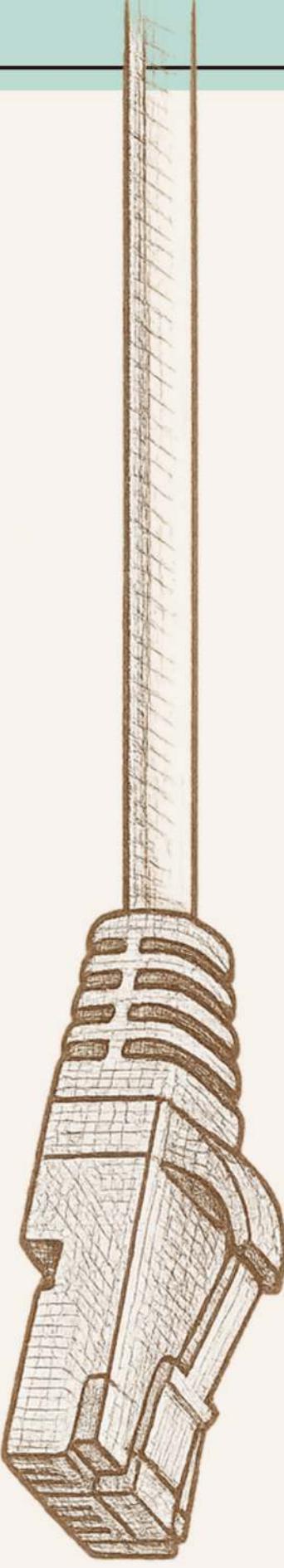
Community Office Hours

The Maintenance Mode

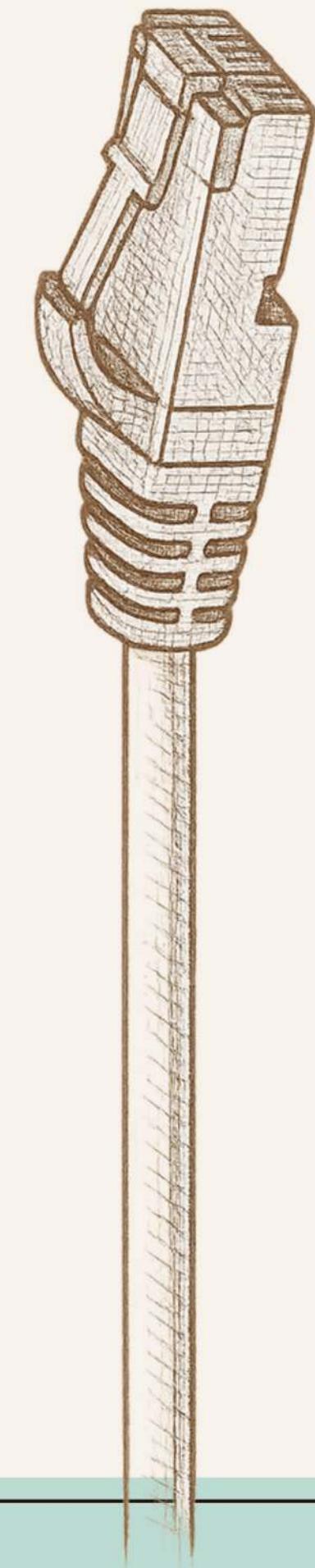


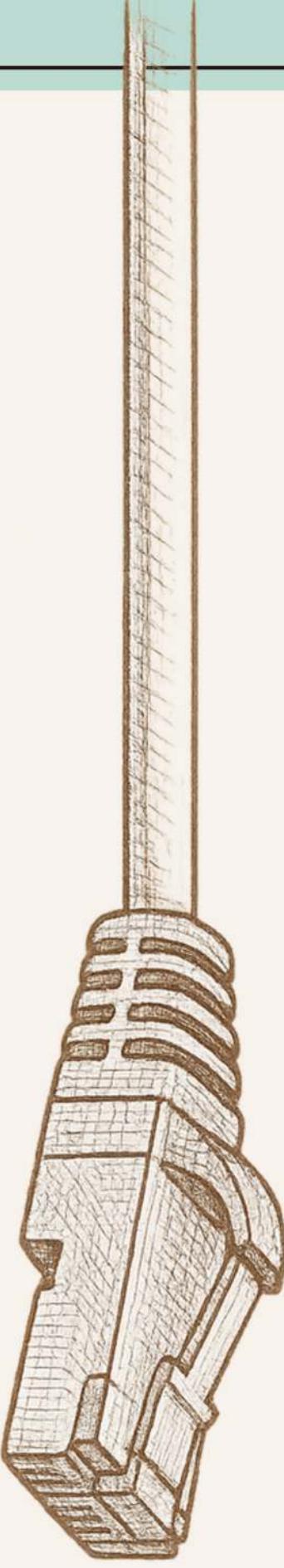
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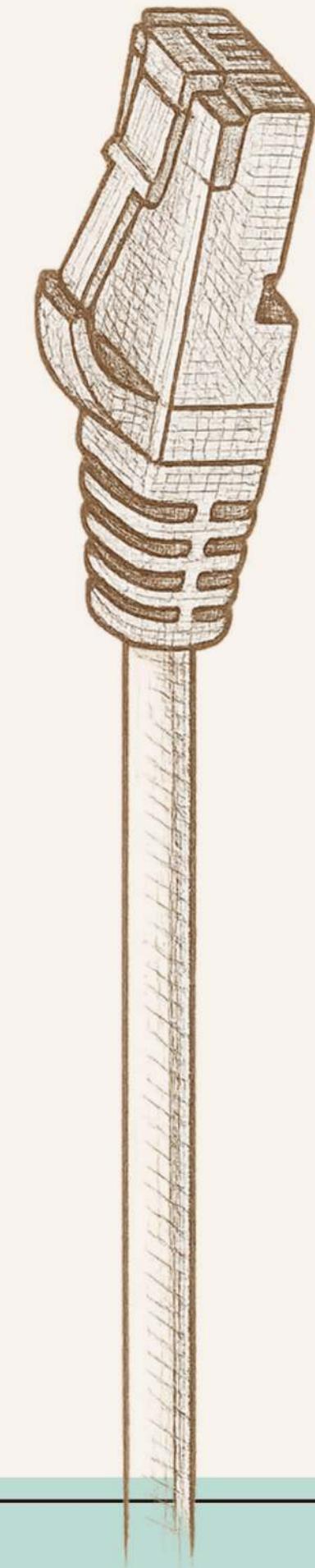


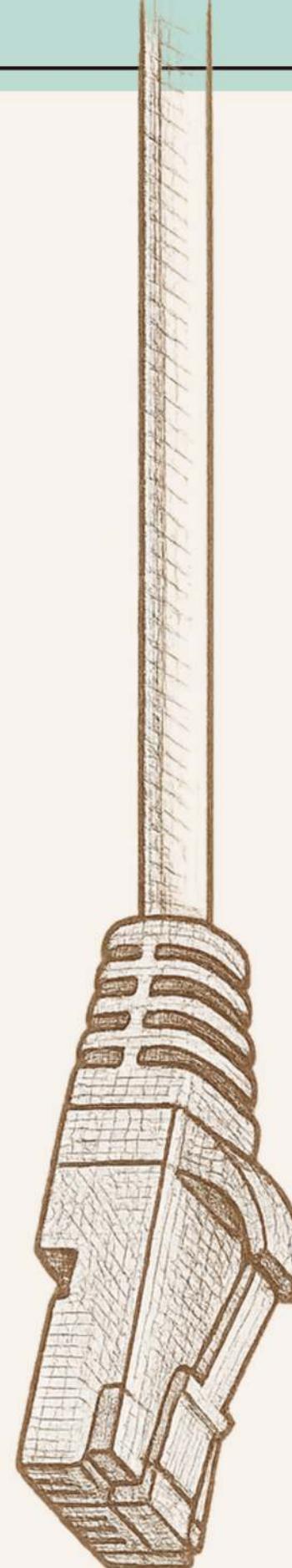
Demo





Questions?





Resources

Github Repo: <https://github.com/flatcar/Flatcar>

Chat: <https://app.element.io/#/room/#flatcar:matrix.org>

Docs: <https://www.flatcar.org/docs/latest>

Community Office Hours & Developer Sync meeting

(every 2nd & 4th Wednesday of the month)

<https://meet.flatcar.org/OfficeHours>

The Maintenance Mode meeting

(every last Friday of the month)

<https://meet.flatcar.org/TheMaintenanceMode>

Thank You!

