



KubeCon

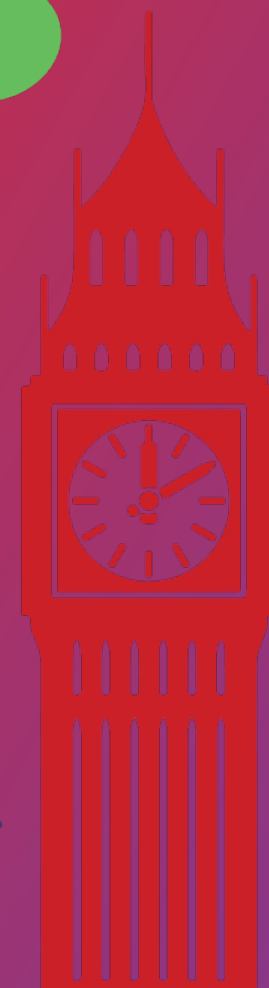


CloudNativeCon



Europe 2025

MAINTAINER SUMMIT





KubeCon



CloudNativeCon

Europe 2025

MAINTAINER SUMMIT

Maintaining the maintainers

Phil Estes

CNCF Ambassador

Containerd project maintainer

OCI Technical Oversight Board

Principal Engineer, AWS

My background



KubeCon

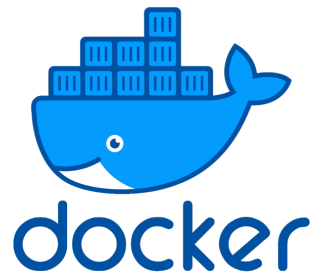


CloudNativeCon

Europe 2025

MAINTAINER SUMMIT

- 10 years in **proprietary software** development
- 10 years in **Linux distro packaging** (OSS adjacent work)
- Almost 12 years of **direct open-source contribution**/maintainership



manifest-tool

Public

Command line tool to create and query container image manifest list/indexes

Go 785 97

bucketbench

Public

Go-based framework for running benchmarks against Docker, containerd, runc, or any CRI-compliant runtime

Go 147 37

mquery

Public

Multi-platform (manifest list/OCI index) registry image query utility

Go 85 5

elastistack

Public

Import Golang stack trace data into Elasticsearch

Go 27 2

What's the problem?



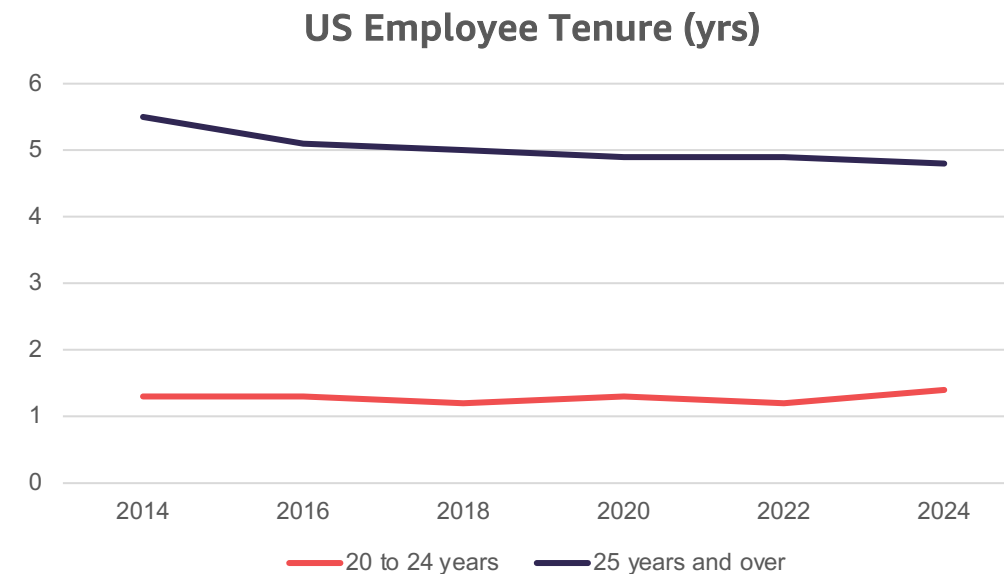
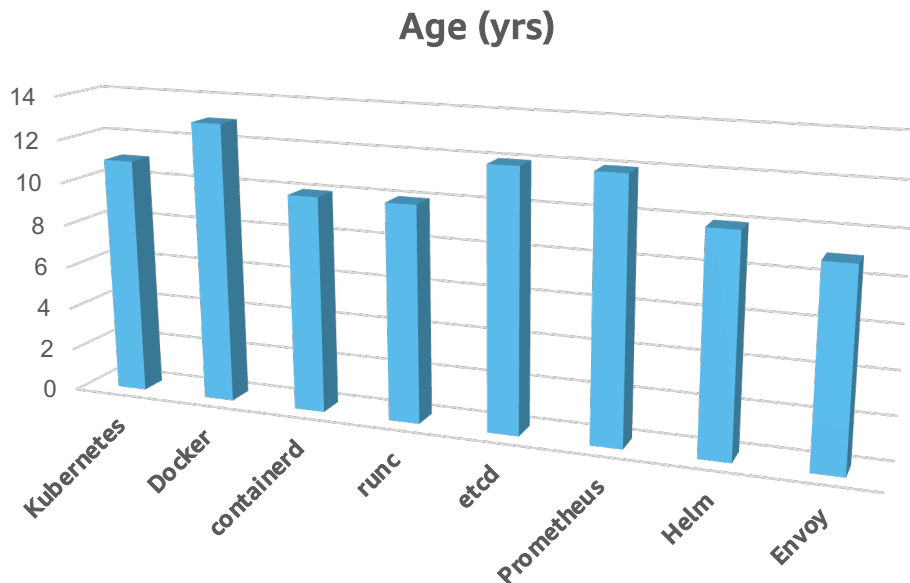
KubeCon



CloudNativeCon

Europe 2025

MAINTAINER SUMMIT



In the last 5 years...

- **21 more** CNCF incubating projects
- **23 more** CNCF graduated projects

- > Each of them is, **on average, 5 years old**
- > Many of them are **much older** since project inception

What's the problem?

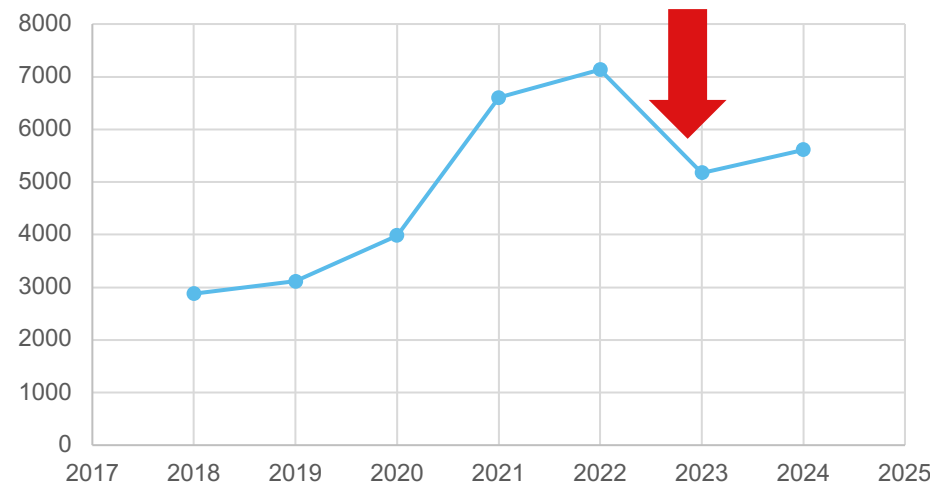
(New) project growth **is not slowing**

Some percentage of new projects **will grow into healthy and mature projects**

Over time some original project **founders and maintainers will move on** from a mature project

For sustainability, projects **must have a healthy pipeline** of new contributors who become maintainers

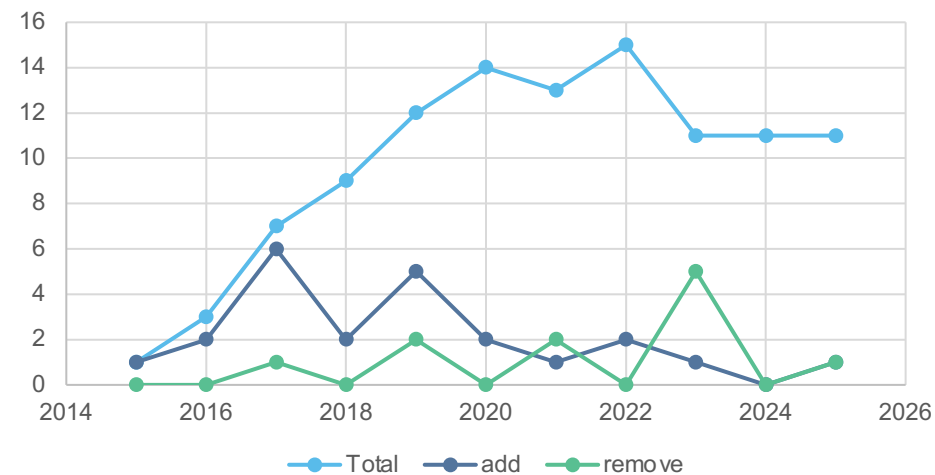
Top 5 Enterprises: # of OSS Contributors



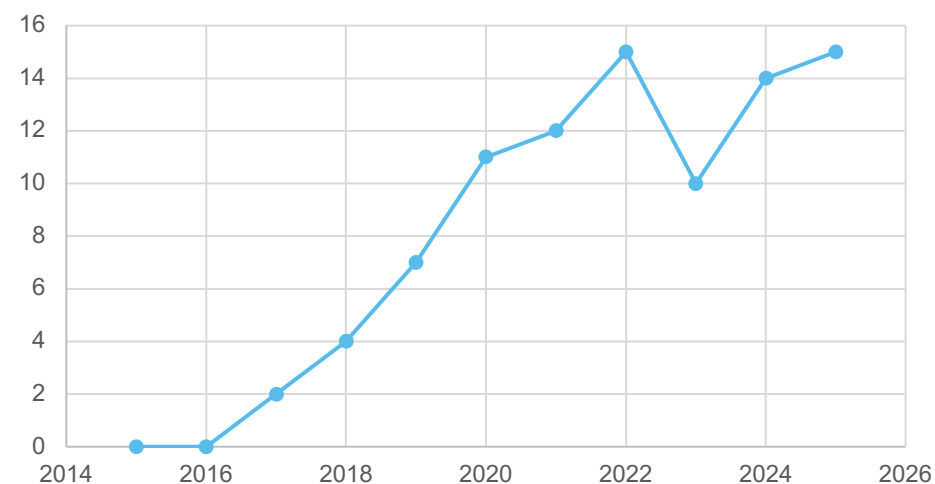
Case Study: containerd

- Started with a **single maintainer** in 2015
- **Donated to CNCF** in March 2017
- Added concept of **reviewer** role later in 2017
- Introduced **security advisor** role in 2020 to provide another avenue for contribution – 11 security advisors today
- Introduced **maintainer emeritus** role in GOVERNANCE.md in 2022

Committers History 2015-2025



Reviewers History 2017-2025



- **New Roles == New Avenues to Participate**
 - Allows for **more community involvement** more quickly
- **More levels == Time to Coalesce**
 - Is a contributor **aligned with community tenets/vision** for the project?
 - Does not require **an "all in" decision** direct to committer
- **Emeritus provided a relief valve for:**
 - Preventing voting impact by **absenteeism**
 - Assumption that there is no room for **maintainer growth**

- **Bug management re: project newbies**
 - Ex: **triaging bugs into “good first issue”** labeling/easy path for beginners
- **Documentation **generation/maintenance****
 - Including documentation infrastructure (website vs. repo)
- **Maintainer time!**
 - Recent poll among active maintainers: no one has freedom to spend >30-50% time on upstream OSS
 - This impacts responsiveness, communication with contributors, and general project oversight

1) As much as possible, foster **real community** with your existing maintainer group

- Have a place to hang out (Slack maintainers channel?)
- Have a regular community call - make it organized (notes, agenda)
- Meet in-person at events when possible! (like here @ KubeCon)

2) Organize your project for (async) **efficiency**

- Use GitHub tools (planning/milestones/project boards) for keeping your maintainers involved in release planning, decisions, upcoming work
- Trade and/or rotate roles (release leads/managers) so maintainers feel invested in the project's outcomes/successes

1) Make contribution the **least painful process** you can make it

- we hurt our chances to have a **broad pool of new contributors** when our projects are confusing or have hard to follow onboarding/development guides, unclear rules and/or guidance, etc.

2) Have a **clear path to influence** in the community

- Yes, this is that proverbial contributor ladder, but include paths that are not just code contribution—ex: security roles, documentation roles, triage roles

<https://contribute.cncf.io/maintainers/community/contributor-growth-framework/>

 **CLOUD NATIVE**
— CONTRIBUTORS —

Contributors

Maintainers

Resources

Accessibility

Q Search this site

Contributor Growth ^

Motivation

PR Workflow

Engagement

Incentivizing Contributors

Non-Code Contributors

Long-term Contributors

How To Moderate An Open Source Meeting

Roadmaps as a way to encourage

Contributor Growth

A framework to help open source projects develop workflows, processes, and habits that incentivize users to become long-term, active, and engaged members of your community.

The goal of this framework is to help open source projects develop workflows, processes, and habits that incentivize users to become long-term, active, and engaged members of your community.

The first version of this document summarizes the experience different project maintainers have gathered over the past years (chronologically ordered by interview):

- **Paris Pittman** (Kubernetes maintainer, Apple)
- **Carlisia Thompson** (Velero maintainer, VMware)
- **Aaron Schlesinger** (KEDA-HTTP maintainer, Microsoft)
- **Stephen Augustus** (Kubernetes maintainer, Cisco)
- **Charles Pretzer** (Linkerd maintainer, Buoyant)
- **Phil Estes** (containerd maintainer, AWS)

NOTE: We want this to be a living document where projects keep updat-

Thank You!



KubeCon



CloudNativeCon



Europe 2025

MAINTAINER SUMMIT

