KubeCon | CloudNativeCon

Europe 2022

WELCOME TO VALENCIA

KubeCon CloudNativeCon Europe 2022

Releasing Kubernetes Less Often and More Secure

SIG Release Update

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Carlos Panato (Chainguard)

Jeremy Rickard (Microsoft)

Sascha Grunert (Red Hat)

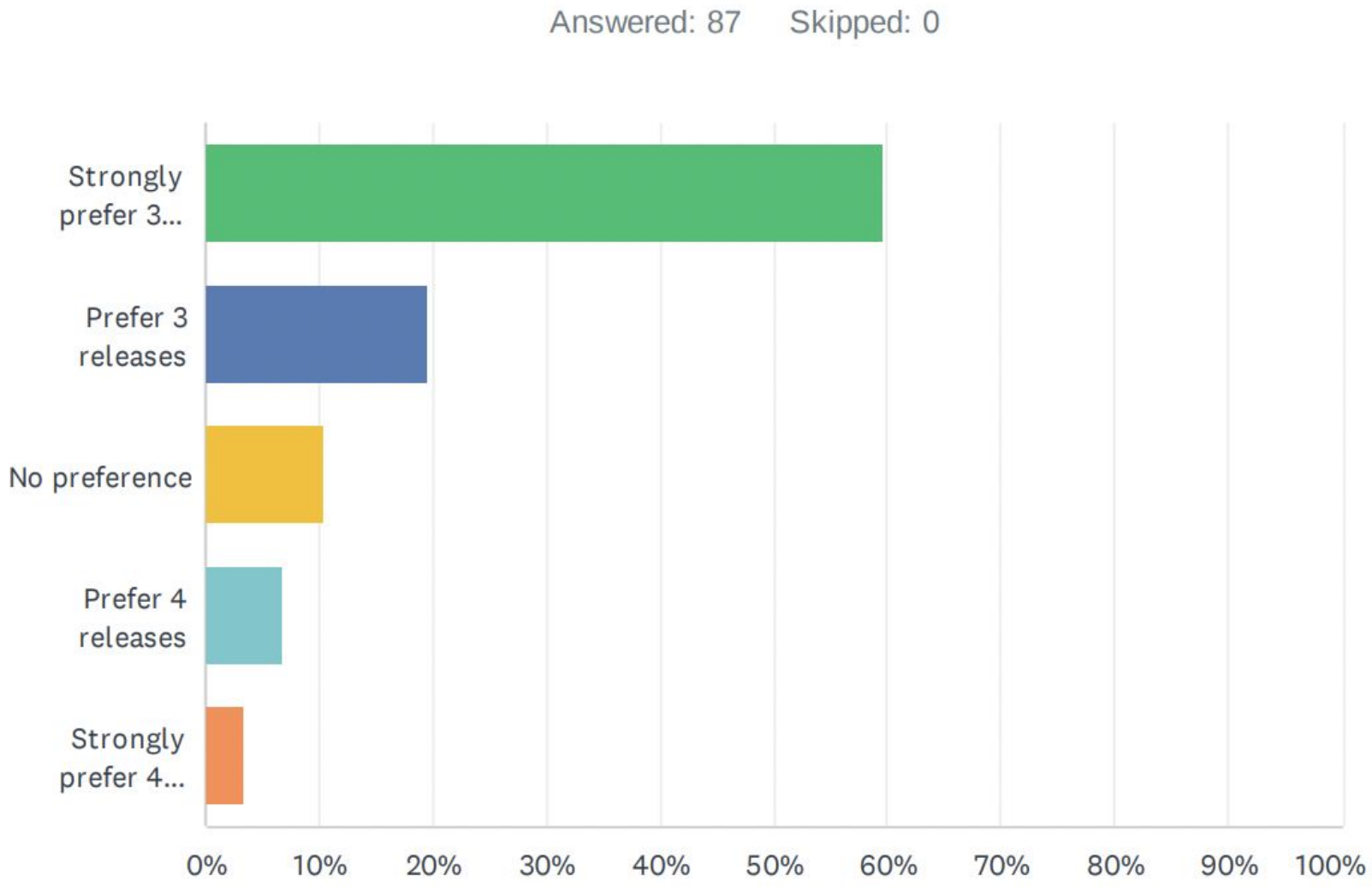
Stephen Augustus (Cisco)


kubernetes

Contents of this talk

1. Changes to the Kubernetes Release Cycle
2. Release Engineering updates
    - Automatic Branch fast forward
    - Container Image signing
    - Software Bill of Materials (SBOM) security enhancements
    - Supply chain Levels for Software Artifacts (SLSA) improvements
    - GitHub Kubernetes/kubernetes main repository branch rename
3. Maintaining a Roadmap and Vision for our future goals
4. Shoutouts to our community members

Changes to the Kubernetes Release Cycle



Automatic Branch Fast Forward in Code Freeze

Goal:

Continuous automated fast forwarding of the new release branch during code freeze to even it with `kubernetes/kubernetes:master`

Plan (issue 2386)

- Tested in ***mock*** mode during 1.24 release cycle
- Will run in production as ***nomock*** at the end of the 1.25 release cycle

Testgrid 📁 Documentation

Image Signing

Signing MVP is ready! 🎉🎉

- Initial Implementation of KEP-3031
- 55+ PRs and issues across 9 repositories and 2 orgs (Kubernetes + sigstore)
- Team of 10 contributors across 3 SIGs + support from the sigstore community 💕

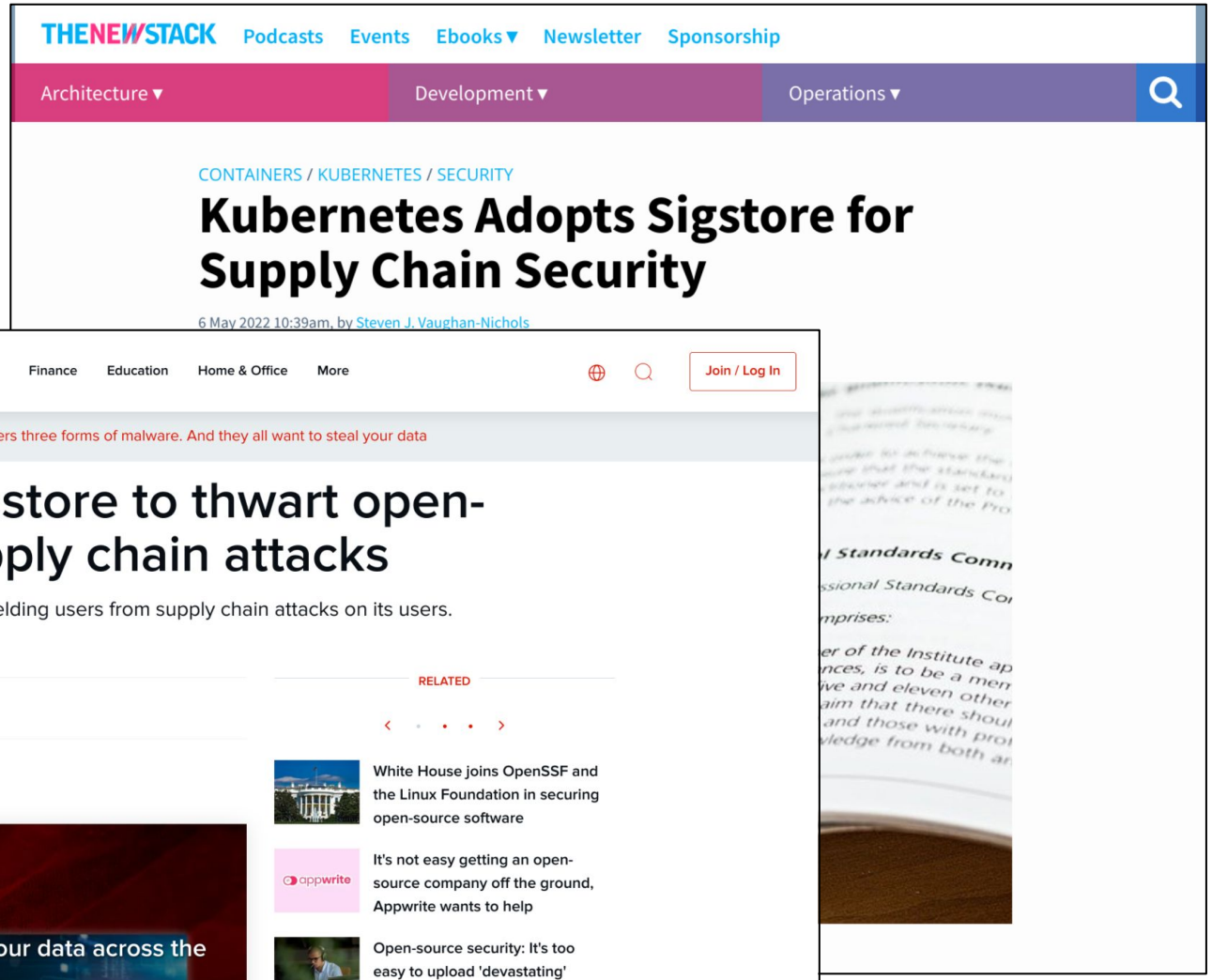
Challenges:

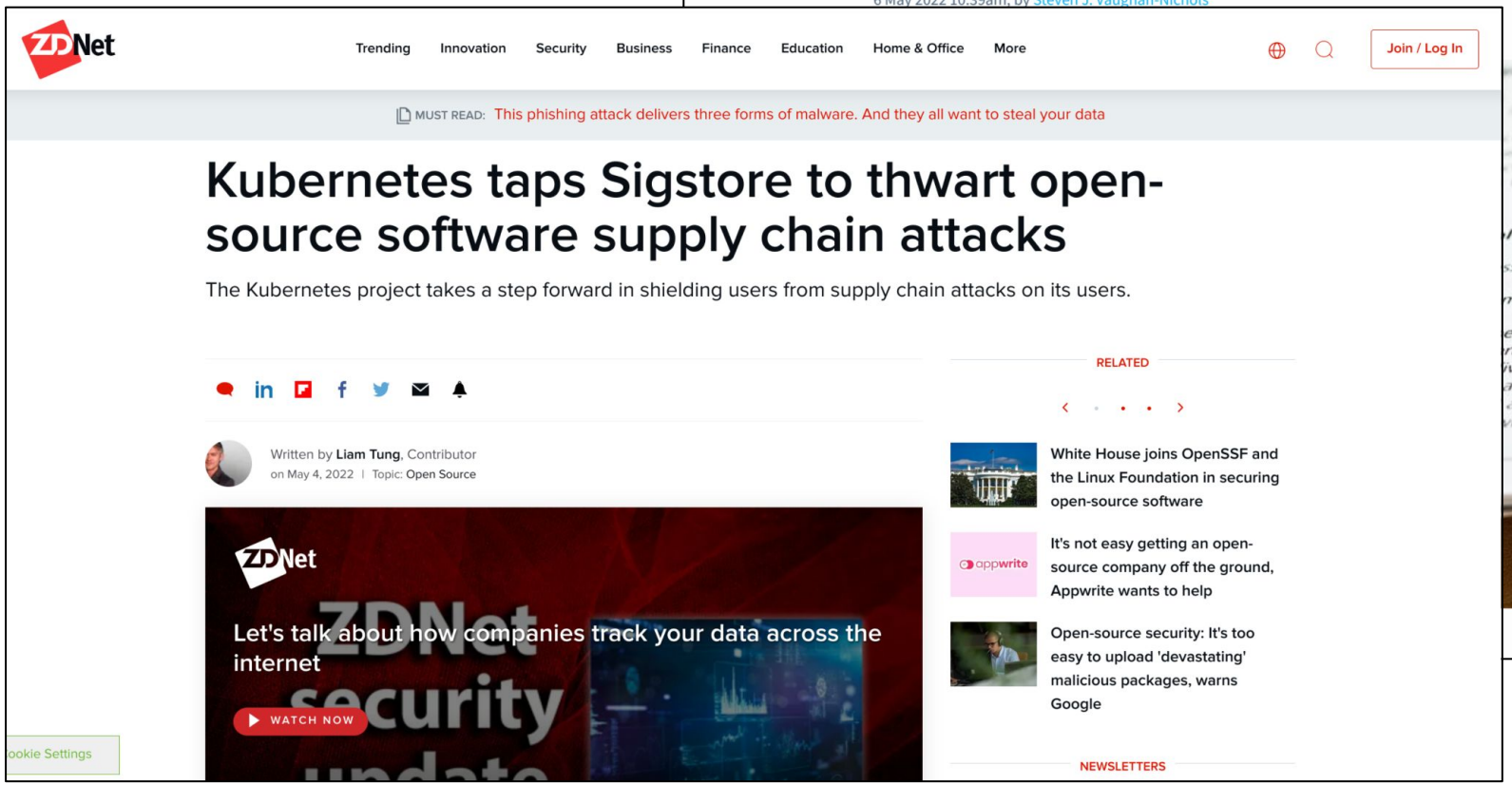
- Infrastructure
- Impersonation
- Promotion
- Adapting to current processes

Coming Up:

Sign SBOM + Sign Provenance = SLSA 2!

Image Signing in the News!



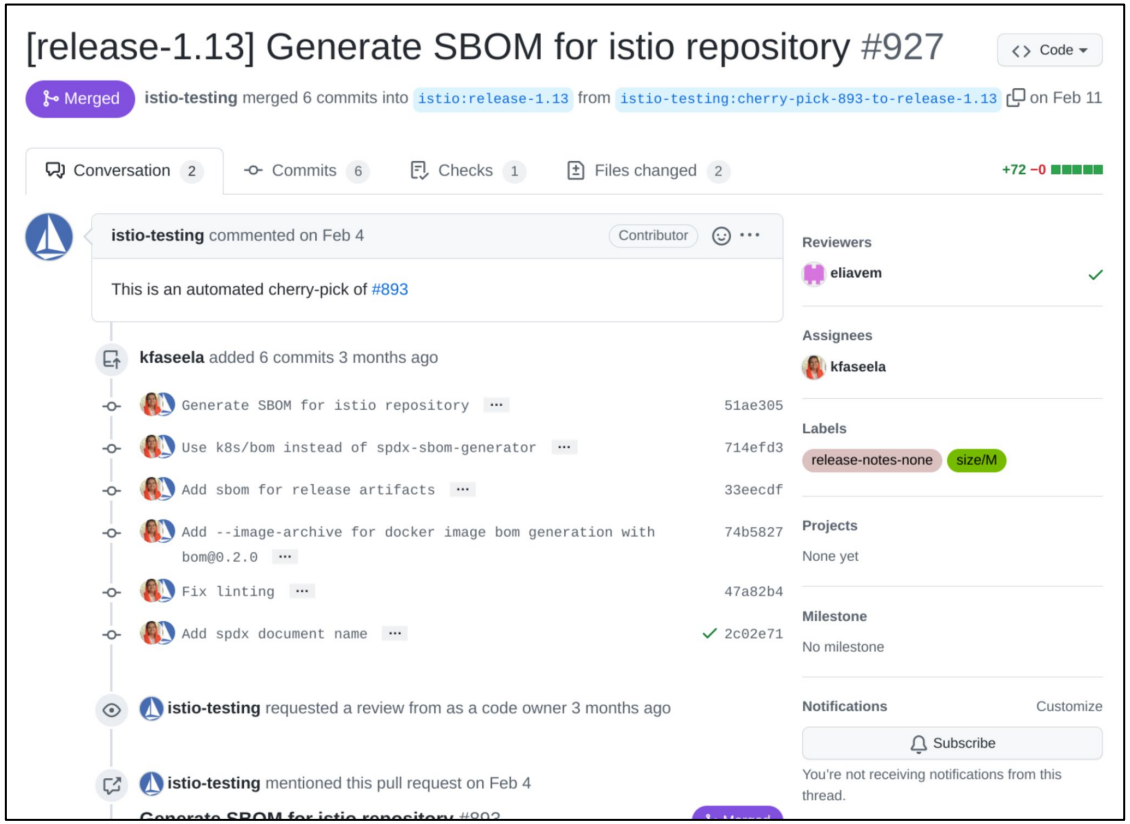


Software Bill of Materials

Kubernetes SBOM tool

- SPDX compliant SBOMS easy, for <u>any project</u>
- Incubating in the Linux Foundation's Automated Compliance Tooling TAC
- Gaining traction:
  - Adopted by other projects
  - 18 Contributors

Automating Compliance Tooling



SLSA Compliance

SLSA Level 3 Compliance in the Kubernetes Release Process #3027

Edit | New issue

Open **puerco** opened this issue on Oct 30, 2021 · 7 comments

puerco commented on Oct 30, 2021 • edited

Enhancement Description

- One-line enhancement description (can be used as a release note): SLSA compliance for the Kubernetes release process
- Kubernetes Enhancement Proposal:
- Discussion Link:
- Primary contact (assignee): @puerco
- Responsible SIGs: SIG Release
- Enhancement target (which milestone):
  - SLSA Level 1: 1.23
  - SLSA Level 2: 1.24
  - SLSA Level 3: 1.25

/sig release
/cc @kubernetes/sig-release-leads @kubernetes/release-managers

Assignees
No one—assign yourself

Labels
area/release-eng sig/release

Projects
None yet

Milestone
No milestone

Development
Create a branch
for this issue or link a pull request.

SLSA Compliance

Supply chain Levels for Software Artifacts

Pushing towards **SLSA 2** compliance!

Done Parts:

- Provenance attestations available which
  - Identifies the builder
  - Identifies the build point
  - Identifies the build instructions

Missing Parts:

- Provenance integrity MUST be verifiable (signed)
- Provenance should be generated from the build system

Branch Rename (master → main)

- KEP-2853 https://github.com/kubernetes/enhancements/pull/3053
- Survey is out: https://www.surveymonkey.com/r/k8s-branch-rename
  - Fill that if you/your company uses upstream for downstreams work
  - Survey closes end of May
- Results so far says that require small changes in CI and looks like the schedule is fine
- Plan is to implement the change after code freeze for 1.25

Maintaining a Roadmap and Vision for our future goals

https://github.com/kubernetes/sig-release/blob/master/roadmap.md

Thank you!

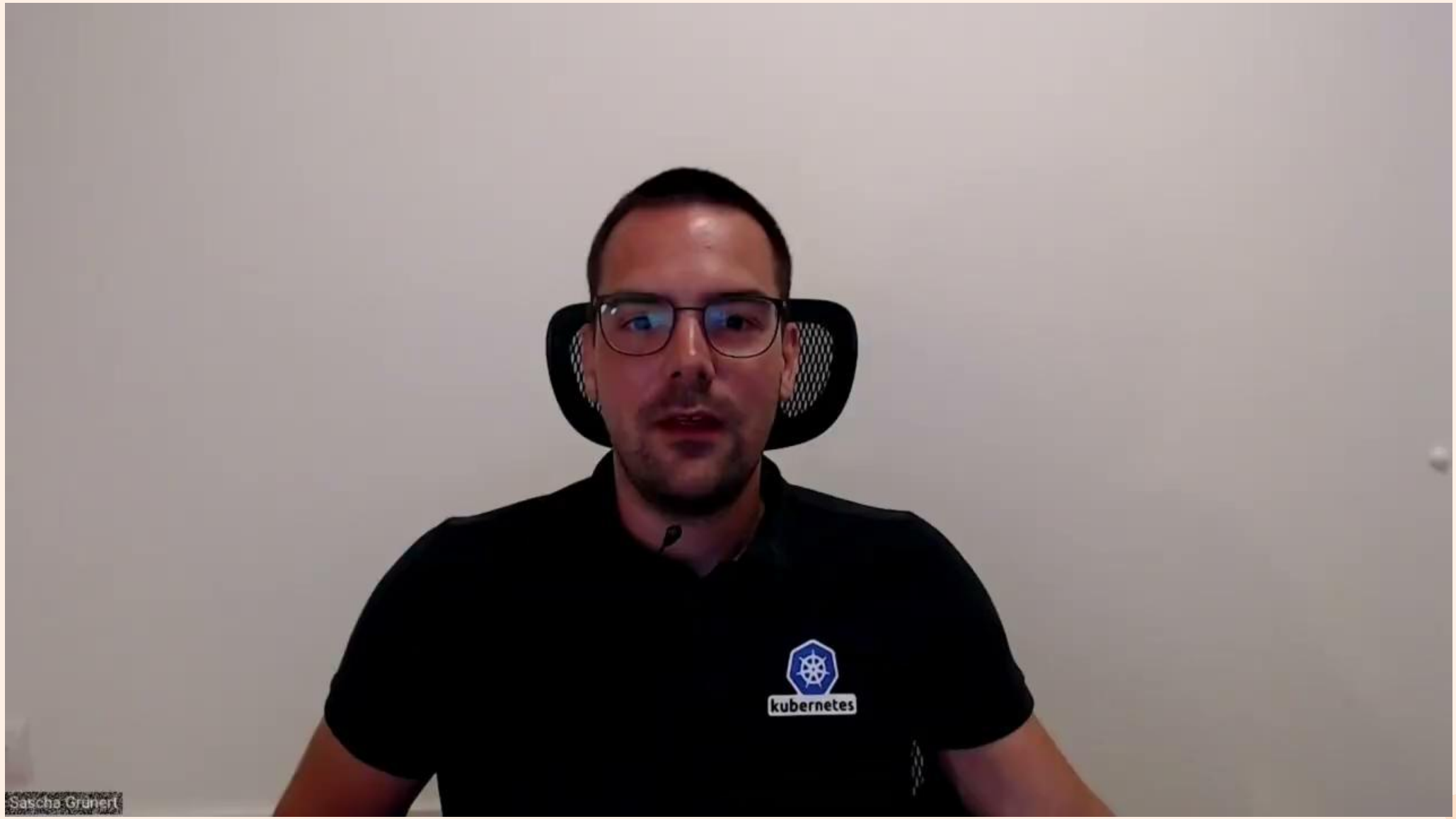

rinkiyakedad
jimangel
vinayakankugoyal
liggitt
wilsonehusin
mkorbi
onlydole
uablrek
jameslaverack
pmmalinov
annajung
parulsahoo
xmudrii
tylerferrara
sftim
justaugustus
dims
jrsapi
ameukam
leonardpahlke
puerco
saschagrunert
cpanato
lp-francois
damans
cici
listx
pluies
aurasinis
csantanapr
rikatz
pohly
bentheelder
palnabarun
amwat
neolit
jlbutler
sttts
reylejano
nikhita
verolop
jeremyrickard
spiffxp
gracenng
mnaser

Where to find us

- Chairs
  - Stephen Augustus, Cisco
  - Sascha Grunert, Red Hat

- Tech Leads
  - Adolfo García Veytia , Chainguard
  - Carlos Panato, Chainguard
  - Jeremy Rickard, Microsoft

- Home page: https://git.k8s.io/community/sig-release/README.md
- Slack channel: https://kubernetes.slack.com/messages/sig-release
- List: https://groups.google.com/forum/#!forum/kubernetes-sig-release


kubernetes
Sascha Grunert

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SIG Release Update

Thank you for listening to our talk!