



# Kubernetes Upstream Training

# その前に



# TODO - 1

事前課題として以下のページを参照いただくよう連絡があつたと思ひます。  
実施されてない人は以下を参照して実施しておいてください。

<https://github.com/kubernetes-sigs/contributor-playground/blob/master/cndt-2020/docs/attendee-prerequisites.md>

以下を使えるようにしておいてください

- git

CLAのサインをしておいてください

- <https://github.com/kubernetes/community/blob/master/CLA.md>



# TODO - 2

## Kubernetes Slackへの参加

- #jp-mentoring , #jp-dev チャンネル

## Fork and Clone kubernetes-sigs/contributor-playground

- Fork the repo into your github account
- Clone your account repo into your laptop PC



# はじめに





# New Contributor Workshop

※本資料は、Kubernetes Contributor Summit San Diego 2019のNew Contributor Workshopの資料をベースに構成を変更したものです。

# Welcome on board!



# Workshop Facilitators

## Beginner/Intermediate Workshop



**Akihito Inoh, NEC Solution Innovators**

- sig-cluster-lifecycle
- k/dashboard i18n ja

**Kohei Toyoda, NEC Solution Innovators**

- sig-testing



**Shu Muto, NEC Solution Innovators**

- sig-ui
- Approver of k/dashboard

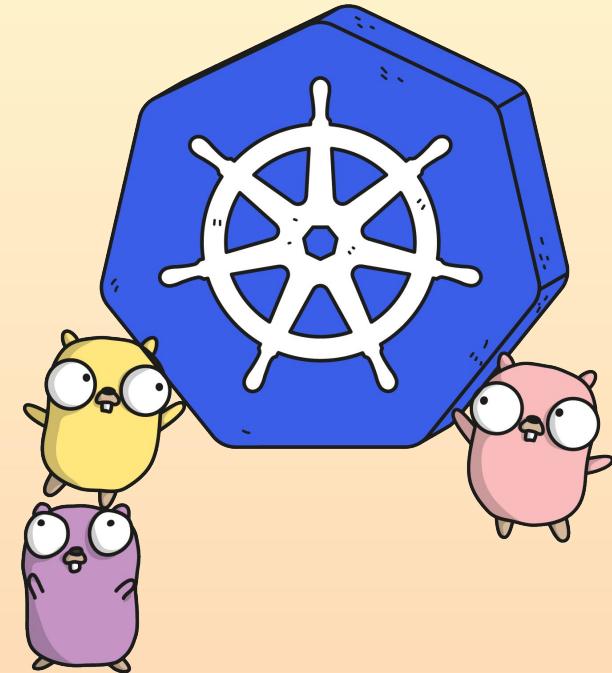
**Shingo Ito, NEC Solution Innovators**

- sig-testing

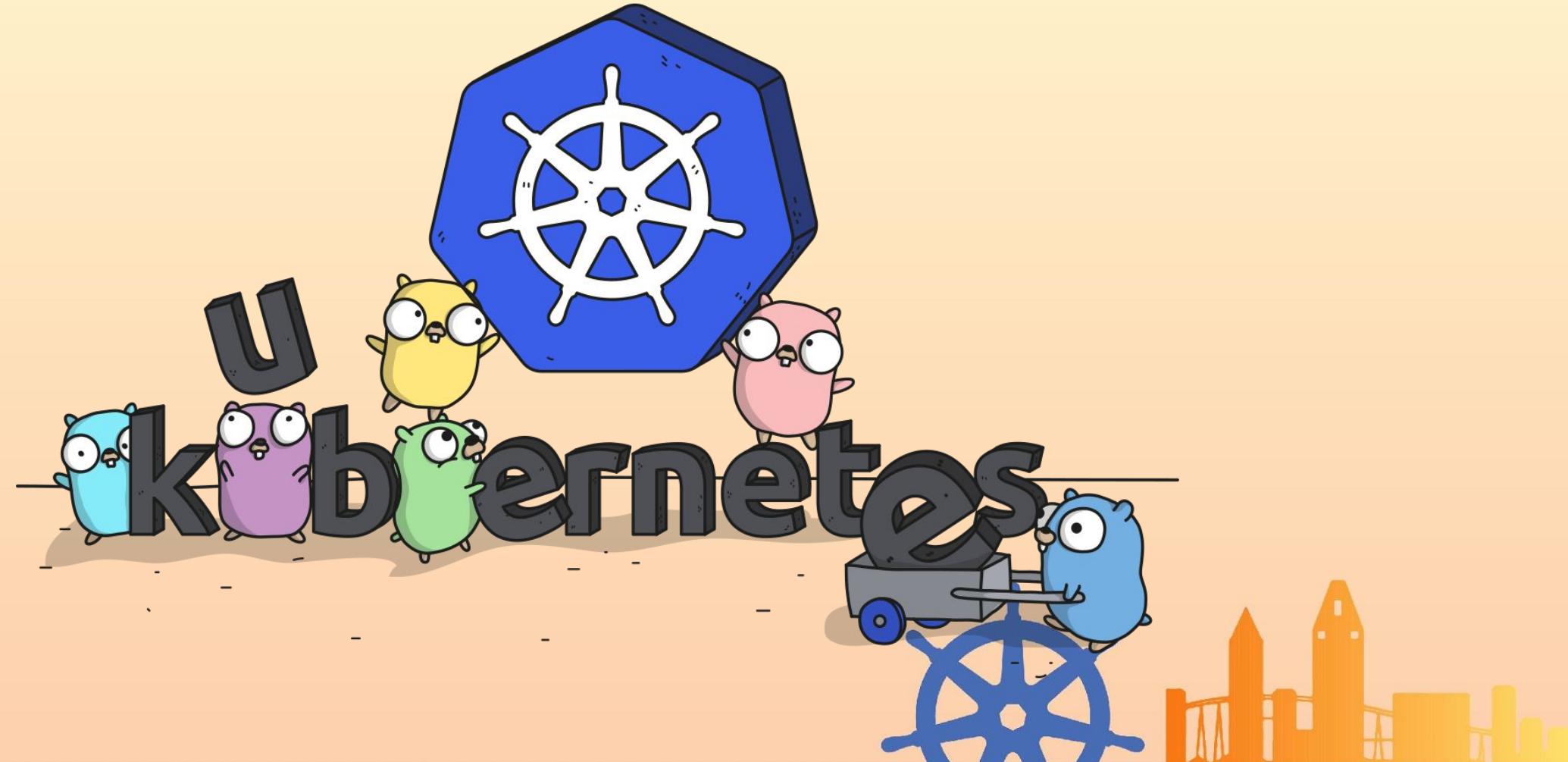
# Schedule

- 13:00-14:00(60m) - Kubernetes コミュニティ
  - Break(10m)
- 14:10-14:50(40m) - Kubernetes 開発環境
  - Break(15m)
- 15:05-15:45(40m) - コントリビューション実践
  - Break(10m)
- 15:55-17:15(1h20m) - ハンズオン
- 17:15-17:30(15m) - クロージング

Total:4h30m



# Who can contribute to Kubernetes?



Credit Ashley McNamara and [github.com/ashleymcnamara/gophers](https://github.com/ashleymcnamara/gophers) for Kubernetes Gophers image.  
Credit Renee French for the original gopher concept and design.

# Why contribute to Kubernetes?



**The Kubernetes Contributor Patch**

**\$1,000<sup>00</sup>**

Quantity

-	1	+
---	---	---

Add to Cart

---

This is an exclusive item only recognized contributors can earn. You must be awarded a purchase code to get this badge of honor.

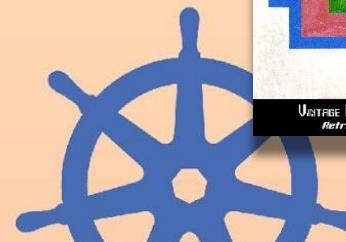
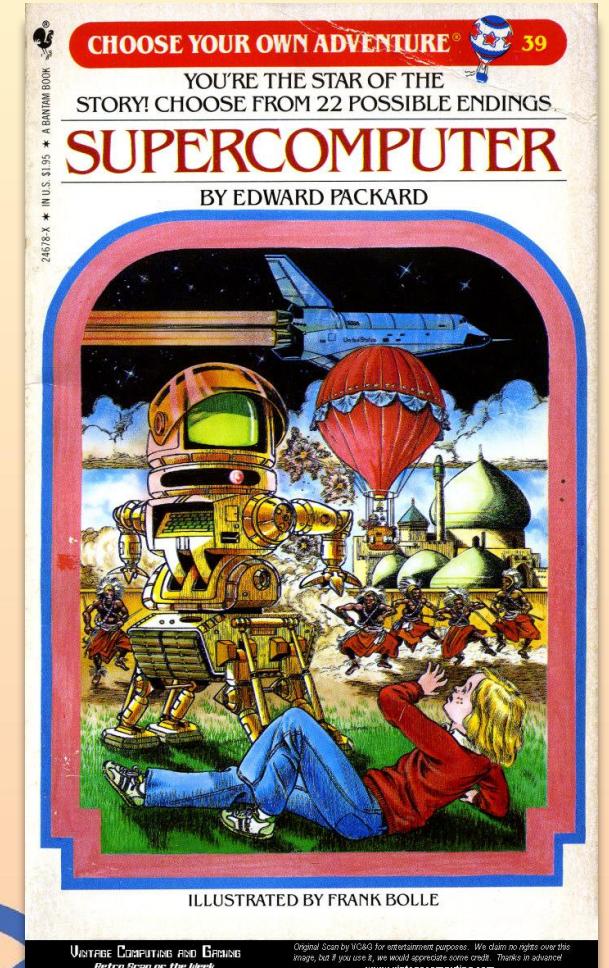
<https://store.cncf.io/products/copy-of-kubernetes-decal>

# Fitting Contributions Into Your Job



# Choose Your Own Adventure

Figuring out  
where  
to contribute



kubernetes

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# Kubernetes コミュニティ

# Community Values

Distribution is better than centralization

Automation over process

Community over product or company

Inclusive is better than exclusive

Evolution is better than stagnation

*"Culture eats strategy for breakfast."*  
-- Peter Drucker



# コミュニティ構成

# Community Group Types

## Special Interest Groups (SIGs)

Persistent open groups that focus on a part of the project.

## Working Groups (WGs)

Temporary groups that are formed to address issues that cross SIG boundaries.

## User Groups (UGs)

Groups for facilitating communication and discovery of information

## Committees

Sets of people that are chartered to take on sensitive topics.



# Community Governance

- Special Interest Groups (SIGs)
  - Primary organizational unit
  - Topic specific (Networking, Doc, etc.)
- Subprojects
  - Work in SIGs divided into one or more subprojects
  - Every part of Kubernetes must be owned by subproject
- Working Groups (WGs)
  - Short-lived rallying point
  - Work spanning multiple SIGs



# Community Governance

- User Groups
  - Facilitate communication between users and contributors
  - Topics include usage of, extension of, and integration with Kubernetes and Kubernetes subprojects
  - Examples:
    - Big Data
    - Cloud Providers
    - Machine Learning

# Community Governance

- Committees
  - Don't have open membership
  - Don't always operate in the open (Security or Code of Conduct)
  - Formed by Steering Committee
  - Committees:
    - Steering
    - Product Security
    - Code of Conduct

# Special Interest Group

Kubernetes is a big project

2000 contributors in one  
pool would be too noisy

A SIG is a sub-community;  
these are you K8s people



# Special Interest Group

## Charter:

- Code ownership
  - Scope/area
  - Binaries
- Governing processes
- Subprojects
- Working Groups

## Mailing List:

- Communications with SIG members

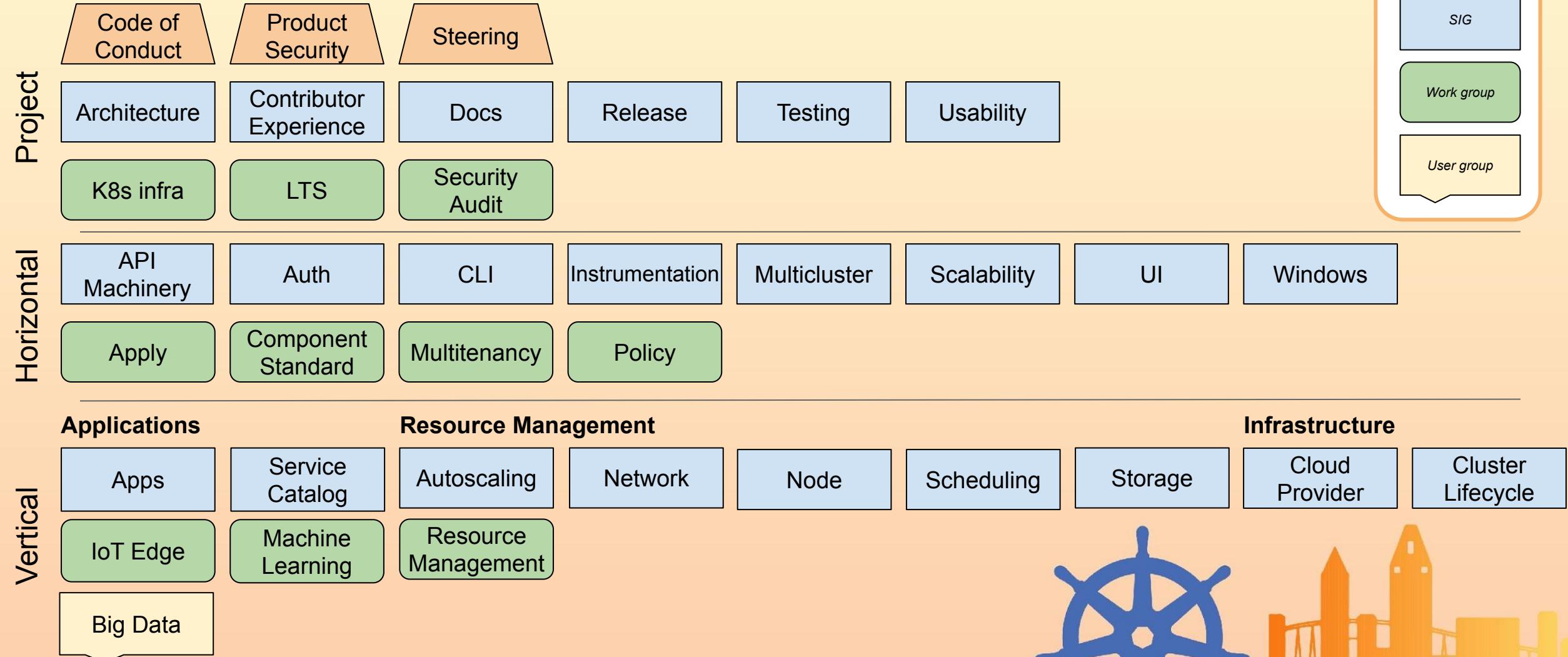


# Types of SIGs

- Project
- Horizontal
- Vertical
  - Applications
  - Resource Management
  - Infrastructure



# Community Groups Overview



# Project SIGs

sig-architecture

sig-contribex

sig-docs

sig-release

sig-testing

sig-usability

# Horizontal SIGs

sig-api-machinery

sig-auth

sig-cli

sig-instrumentation

sig-multicloud

sig-scalability

sig-ui

sig-windows

# Vertical SIGs: Applications

sig-apps

sig-service-catalog



# Vertical SIGs: Resource Management

sig-autoscaling

sig-network

sig-node

sig-scheduling

sig-storage



# Vertical SIGs: Infrastructure

sig-cloud-provider

sig-cluster-lifecycle



# Subprojects

- Focus areas for SIGS
- Own Code, Issues

kubernetes / sig-release

Code Issues 48 Pull requests 4 Actions Projects 0 Security Insights

Branch: master sig-release / release-team / Create new file Upload files Find file History

[hasheddan] ci signal handbook: update failing and flaky test issue naming strategy ... ✓ Latest commit ca76cd3 12 days ago

[..]

[role-handbooks] ci signal handbook: update failing and flaky test issue naming strategy 12 days ago

[OWNERS] Update OWNERS 8 months ago

[README.md] update release-team documentation 5 months ago

[release-team-onboarding.md] Remove references to the milestone burndown Google Group 7 months ago

[release-team-selection.md] Merge pull request #652 from clarence/master 5 months ago

[shadows.md] Incorporated Claire's feedback on the text. 2 months ago

README.md

## Kubernetes Release Team

- Overview
- Specific responsibilities
- Kubernetes Release Team roles
- Other activities of the Release Team
- Release Team Selection
- Milestone Maintainers

# Working Groups

Working Groups: Inter-SIG efforts

For specific:

- Goals (ex. Code Cleanup)
- Areas (ex. multi tenancy)



# Project Working Groups

wg-security-audit

wg-k8s-infra

wg-LTS



# Horizontal Working Groups

wg-apply

wg-component-standard

wg-multitenancy

wg-policy



# Vertical Working Groups

## Applications

wg-machine-learning

wg-io-edge

## Resource Management

wg-resource-management



# Picking the right community group

Find a specific project/area  
to work on



# Picking the right community group

Find out which SIG (or working group) owns your topic

- a. Look on the [SIG list](#) to find SIG info and charters
- b. Ask on #sig-contribex
- c. Attend the SIG Meet-and-Greet later today
- d. Go to the SIG intros at this conference
  - [NA 2019 Youtube Videos](#), [EU 2020 Youtube Videos](#)
  - Slide:
    - Search with “Intro” at [Here](#) or [Here](#), and click session.
    - Download a slide from session page



# How Do I Join A Community Group?

1. Join the specific mailing list.  
(This is open to anyone.)
2. That's it! You've joined!  
You will get a calendar invite to the meeting.



# Quick reference

Governance reference

*git.k8s.io/community/governance.md*

Project Group List

*git.k8s.io/community/sig-list.md*



# Tour of Repositories



# Core Repository

[kubernetes/kubernetes](https://github.com/kubernetes/kubernetes)

Most SIGs are stakeholders in the monolith.

Areas of SIG ownership can be found in

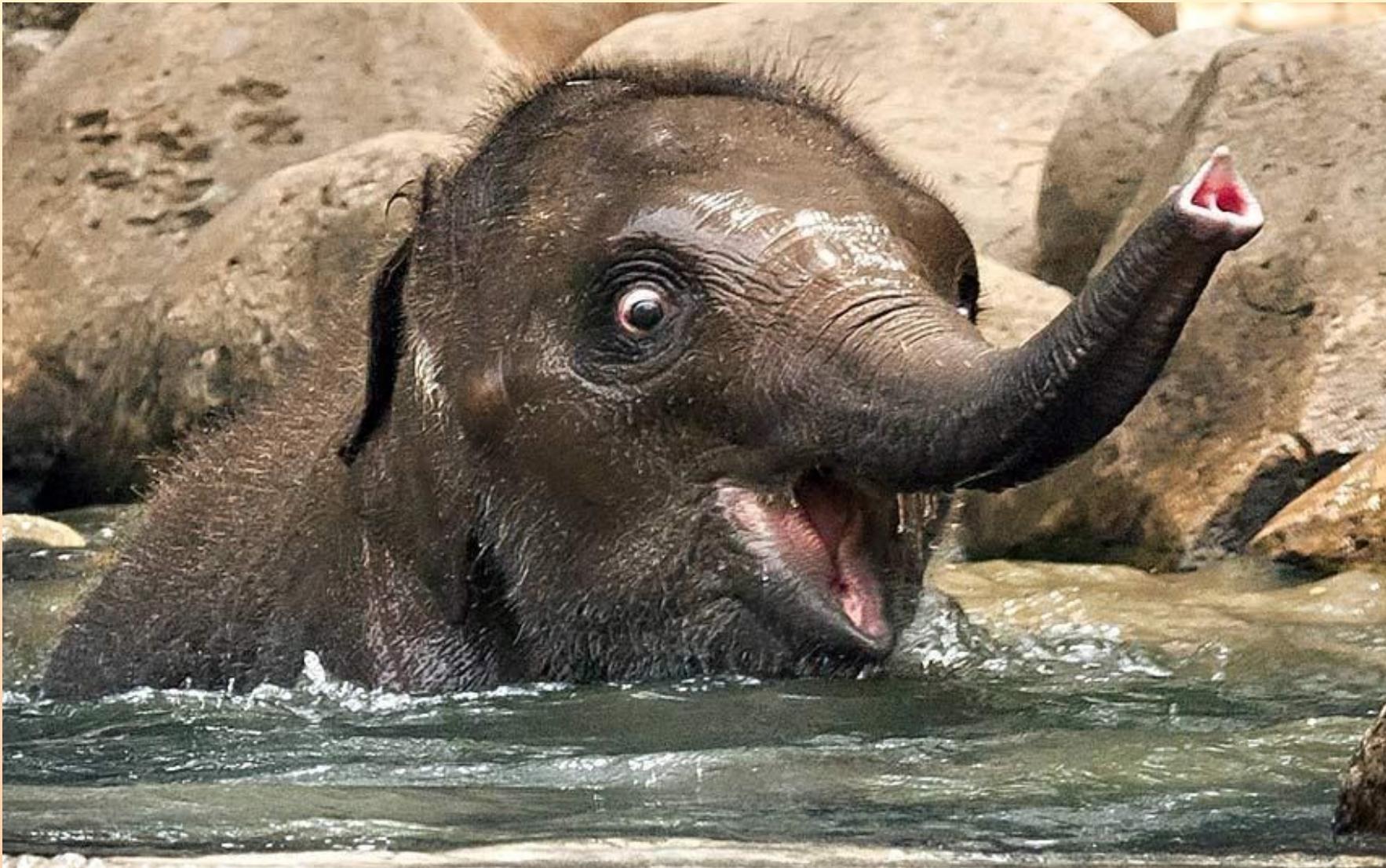
<https://git.k8s.io/community/sigs.yaml>

# My repository, my rules

Repos can have different:

- Ownership
- Approval workflows
- Merge workflows
- Release cycles

# Ready to jump right in?



# Reference links, again

- [kubernetes.io/community](https://kubernetes.io/community)
- [discuss.kubernetes.io](https://discuss.kubernetes.io)
- [slack.k8s.io](https://slack.k8s.io)
- [groups.google.com/forum/#!forum/kubernetes-dev](https://groups.google.com/forum/#!forum/kubernetes-dev)
- [git.k8s.io/community/events/community-meeting.md](https://git.k8s.io/community/events/community-meeting.md)
- [git.k8s.io/community/events/office-hours.md](https://git.k8s.io/community/events/office-hours.md)
- [git.k8s.io/community/mentoring/programs/meet-our-contributors.md](https://git.k8s.io/community/mentoring/programs/meet-our-contributors.md)

# Engaging Community

# SIGs, Areas, Issues: Engaging

What's next for you?



# SIGs, Areas, Issues: Engaging

## Community Contributions

- Filing Issues
- Answering Questions on StackOverflow
- Github Repo Management
- Blogging, Evangelism, and Promotion
- Event Management and Volunteering
- Visual Communication
- User Experience Feedback and Surveys
- Helping Manage Youtube Recordings
- ...and more!

# SIGs, Areas, Issues: Engaging

## Mentoring Opportunities

- Meet-Our-Contributors
- Group Mentoring
- Release Team Shadow
- 1-on-1 ad-hoc mentoring
- GSOC/Outreachy/KubeCon Speed Mentoring

# SIGs, Areas, Issues: Engaging

## Kubernetes Tutorials

- As an operator
- As an app developer
- As a kubernetes developer

<https://kubernetes.io/docs/tutorials/>

# SIGs, Areas, Issues: Engaging

## Mentoring Links

<https://git.k8s.io/community/mentoring/programs/meet-our-contributors.md>

<https://git.k8s.io/community/mentoring/programs/google-summer-of-code.md>

<https://git.k8s.io/community/mentoring/programs/outreachy.md>

<https://git.k8s.io/community/mentoring/>

## Technical Help and Tutorials

<https://git.k8s.io/community/events/office-hours.md>

<https://kubernetes.io/docs/tutorials/>

## Contributor Guide

<https://git.k8s.io/community/contributors/guide/README.md>

## Developer Guide

<https://git.k8s.io/community/contributors-devel/README.md>



# SIGs, Areas, Issues: Engaging

## at KubeCon!

- Sessions
- SIG Intros
- SIG Deep Dives
- Hallway Track

## KubeCon

### North America 2019 videos

<https://www.youtube.com/playlist?list=PLj6h78yzYM2NDs-iu8WU5fMxINxHXlien>



### Europe 2020 Virtual videos

<https://www.youtube.com/playlist?list=PLj6h78yzYM2O1wlsMMa-RYhfT5LKq0XC>



# Contributor Ladder

# Contributor Ladder

Subproject  
Owner

Set priorities and approve proposals for subproject  
Responsibility and leadership for entire  
repository/directory

Approver

Approve contributions for acceptance  
Highly experienced reviewer and contributor in  
subproject

Reviewer

History of reviewing; reviews frequently  
Authorship in subproject

Member

Active contributor to the project  
Sponsored by two Reviewers

Non-member Contributors



kubernetes

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# Contributor Ladder: Membership

A screenshot of a GitHub pull request comment. The comment is from a bot named "k8s-ci-robot" and was posted on December 14, 2017. The comment text reads:

Hi @guineveresaenger. Thanks for your PR.

I'm waiting for a [kubernetes](#) member to verify that this patch is reasonable to test. If it is, they should reply with `/ok-to-test` on its own line. Until that is done, I will not automatically test new commits in this PR, but the usual testing commands by org members will still work. Regular contributors should [join the org](#) to skip this step.

I understand the commands that are listed [here](#).

▶ Details

Below the comment, there is a note indicating that the "needs-ok-to-test" label was added by the bot on December 14, 2017.



# Contributor Ladder: Membership

<http://git.k8s.io/community/community-membership.md>



# Contributor Ladder

Role	Responsibilities	Requirements	Defined by
member	active contributor in the community	sponsored by 2 reviewers. multiple contributions to the project.	Kubernetes GitHub org member.
reviewer	review contributions from other members	history of review and authorship in a subproject	<a href="#">OWNERS</a> file reviewer entry.
approver	approve accepting contributions	highly experienced and active reviewer + contributor to a subproject	<a href="#">OWNERS</a> file approver entry
subproject owner	set direction and priorities for a subproject	demonstrated responsibility and excellent technical judgement for the subproject	<a href="#">sigs.yaml</a> subproject <a href="#">OWNERS</a> file owners entry

# OWNERS

YAML files sprinkled all through the repos, eg:

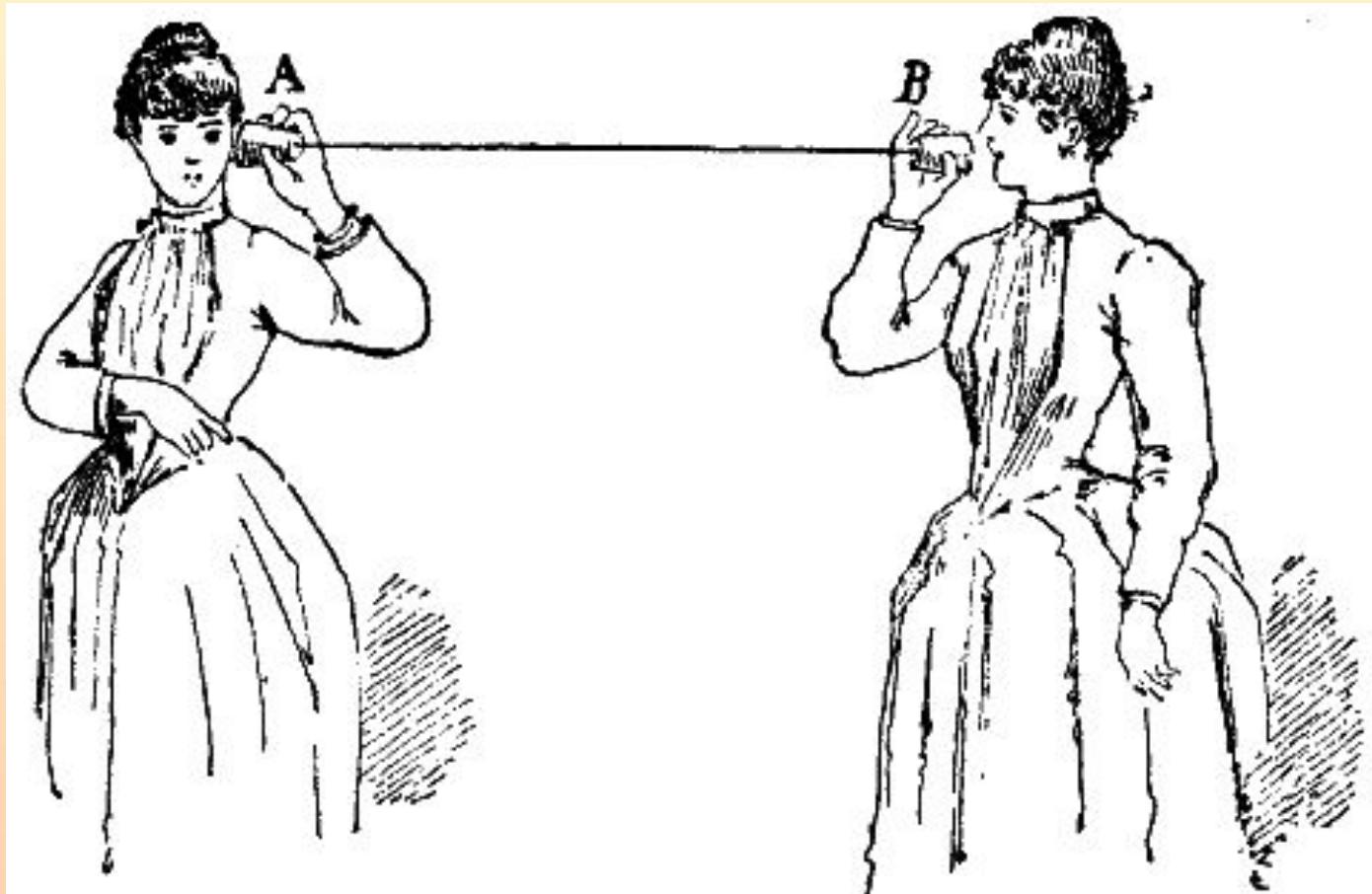
<http://git.k8s.io/community/contributors/guide/owners.md>

[Kubernetes Core OWNERS file](#)



# コミュニケーション

# Let's Talk



## Communication in the Kubernetes Community





**When you're chill with everyone**

# Standards of Communication

aka: Why is everyone so nice?

We believe that mutual respect is a prerequisite for healthy collaboration.

[git.k8s.io/community/code-of-conduct.md](https://git.k8s.io/community/code-of-conduct.md)

# Where to ask Technical Questions

Register here: [slack.k8s.io](https://slack.k8s.io)



## User Focused

- [#kubernetes-users](#)
- [#kubernetes-novice](#)
- [#office-hours](#)

## Contributor Focused

- [#kubernetes-dev](#)
- [#meet-our-contributors](#)
- [#pr-reviews](#)
- [#sig-contribex](#)
- [#jp-dev](#)

## 日本人向け

- [#jp-dev](#)
- [#jp-mentoring](#)
- [#jp-users](#)
- [#jp-users-novice](#)
- [#jp-events](#)
- [#kubernetes-docs-ja](#)

# Discuss

 **kubernetes**

Do you want live notifications when people reply to your posts? [Enable Notifications.](#)

This site is governed by the [CNCF Code of Conduct](#). Check out our [quick tutorial video](#) on how to effectively subscribe to topics.

[all categories](#) [Categories](#) [Latest](#) [New \(10\)](#) [Top](#) [+ New Topic](#)

Category	Topics
<b>Announcements</b> Announcements from around the Kubernetes community. Posts here must be Kubernetes related, commercial products and services are also welcome, please keep it classy.	5 / week 3 new
<b>General Discussions</b> Got something to say about Kubernetes? Hop in here. Links to interesting cloud-native blog posts encouraged. Technical support questions are better off <a href="#">posted on StackOverflow</a> .	14 / week 7 new
<b>Regional Discussions</b> The Regional Discussions Category is intended for those users that belong to a specific region or share a common language to openly interact and connect with each other in their native language. If you are interested in establishing a new regional board, please reach out to one of the <a href="#">admins</a> .	1 / week
<a href="#">Chinese</a> <a href="#">Ukrainian</a> <a href="#">Italian</a> <a href="#">German</a>	
<b>Contributors</b>	6 / week

**Latest**

-  [Welcome to Discuss Kubernetes](#) 0 Aug 21
-  [Service discovery in eks cluster](#) • [General Discussions](#) 1 1h
-  [Boomi in kubernetes](#) • [General Discussions](#) 0 4h  
development
-  [One year of Weave Flux](#) • [General Discussions](#) 0 6h  
gitops
-  [\[Book\] Getting Started with Kubernetes - Third Edition](#) • [Announcements](#) 0 7h

Want more long-form discussions?

Head over to:  
[discuss.kubernetes.io](https://discuss.kubernetes.io)



# Planning and Discussion

# Mailing lists

- One per SIG/WG
  - Some have more for large subprojects.
- Run on Google Groups
- You need to join:
  - [kubernetes-dev](#)
  - Required for Org Membership!



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# Issues Features Pull requests



Break up and Refactor test/e2e/framework/utils.go #77095

[Open](#) andrewsykim opened this issue 4 days ago · 21 comments

andrewsykim commented 4 days ago • edited

What would you like to be added:  
There are a lot of methods in `test/e2e/framework/util.go` that can be cleaned up or moved into its own package for easier consumption/discovery. In #76206 there were some discussions for how to break up this file. The proposed package structure was:

`test/e2e/framework/`

- `kubectl/ (@alejandrox1)`
  - `builder.go`
  - `runner.go`
- `log/ (@WanLinghao)`
  - `logger.go`
- `pod/ (@alejandrox1)`
  - `wait.go`
  - `resource.go`
- `node/ (@alejandrox1)`
  - `wait.go`
  - `resource.go`
- `service/ (@draveness)`
  - `resource.go`
- `endpoints/ (@draveness)`
  - `resource.go`
- `resource/ (@draveness)`
  - `runtime.go`
- `lifecycle/ (@WanLinghao)`
  - `versions.go`
  - `state.go`
  - `restart`
- `wrappers.go (@MorrisLaw)`
- `providers.go (@MorrisLaw)`

I think each package & top level file can be it's own task. Pick a package above, go through each method in `test/e2e/framework/util.go` and move it to that package/file if it makes sense. The above is just a guideline, feel free to introduce new packages/files where it makes sense.

Why is this needed:  
This is a part of #76206 & #75601

Assignees  
No one assigned

Labels  
`area/e2e-test-framework`  
`kind/feature`  
`sig/testing`

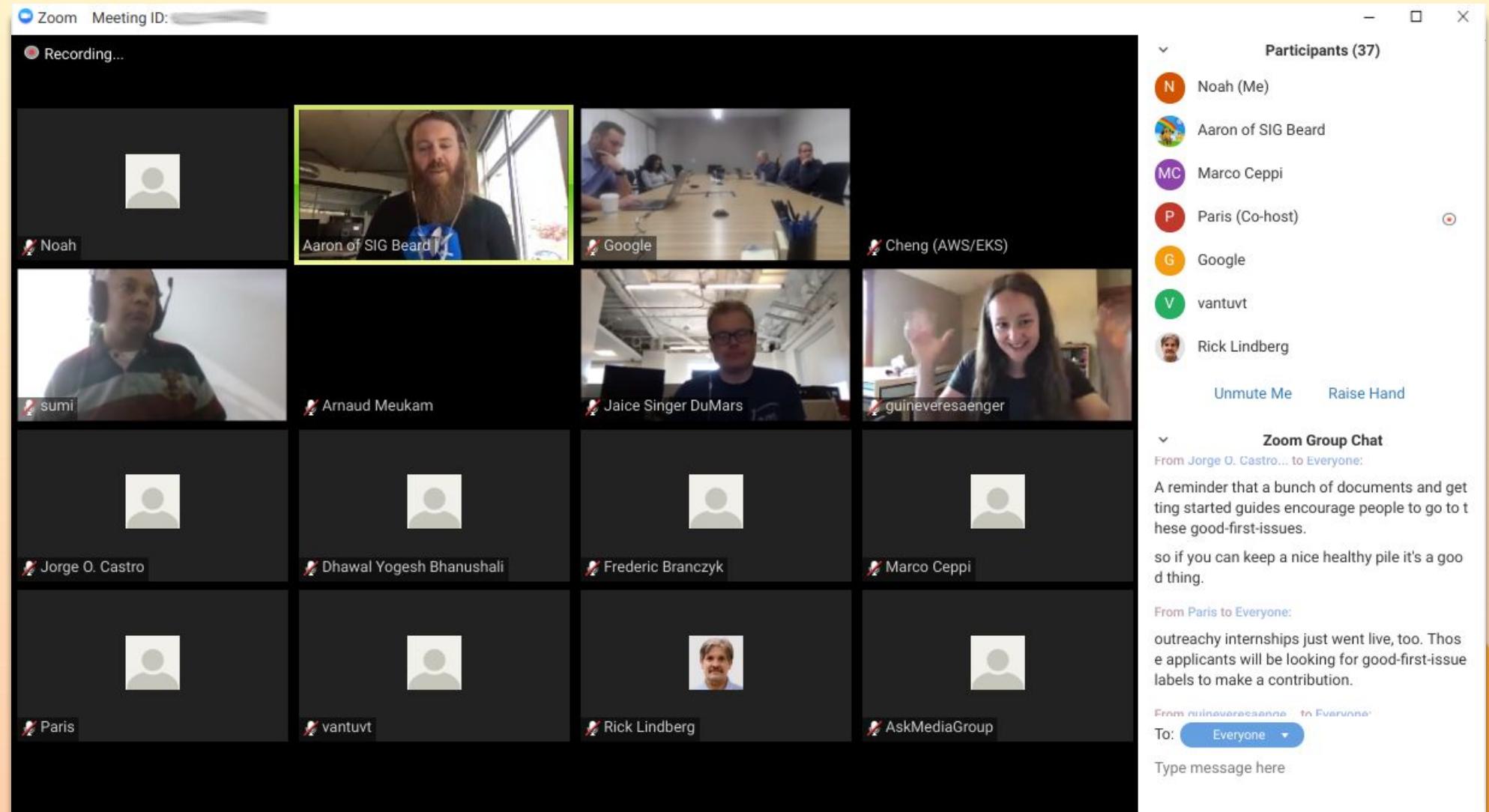
Projects  
None yet

Milestone  
No milestone

Notifications  
[Subscribe](#)  
You're not receiving notifications from this thread.

8 participants

# Zoom Meetings



# Zoom Meetings

Schedule is on the [community calendar](#)

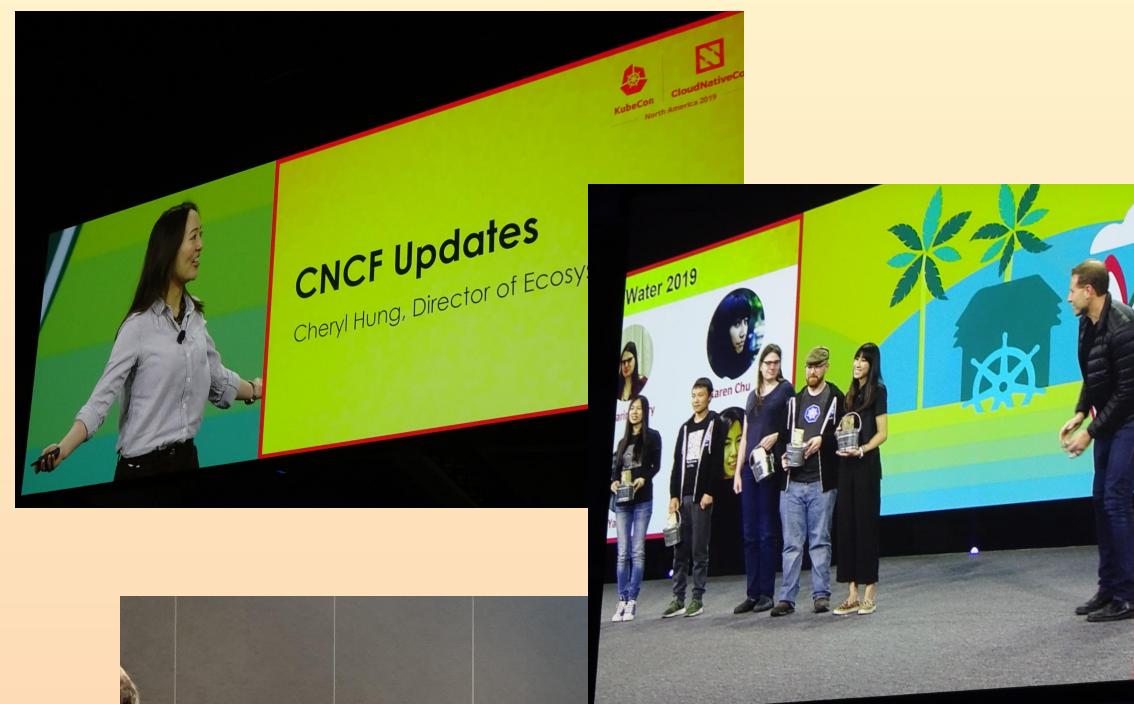
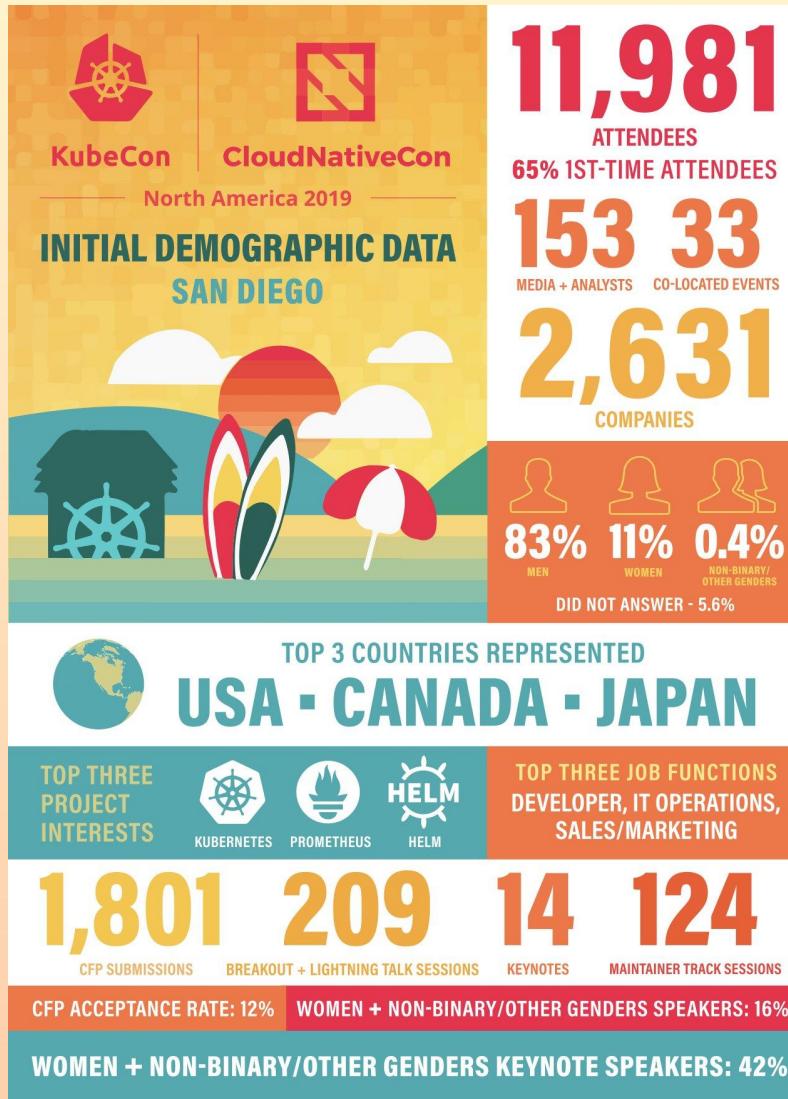
- SIG Meetings
- [Kubernetes Weekly Community Meeting](#)
  - Overview of community activities, release info, and governance updates.
- Special meetings
- Code of Conduct always applies

# Other Communications

- [kubernetes.io/community](https://kubernetes.io/community)
  - Links to everything community related can be found here
- [Meet Our Contributors](#)
  - Monthly live video discussion with contributors
- [Office Hours](#)
  - Monthly live video panel to ask technical questions
- KubeCon + CloudNativeCon
- Face-to-Face SIG meetings
- [Meetups](#)

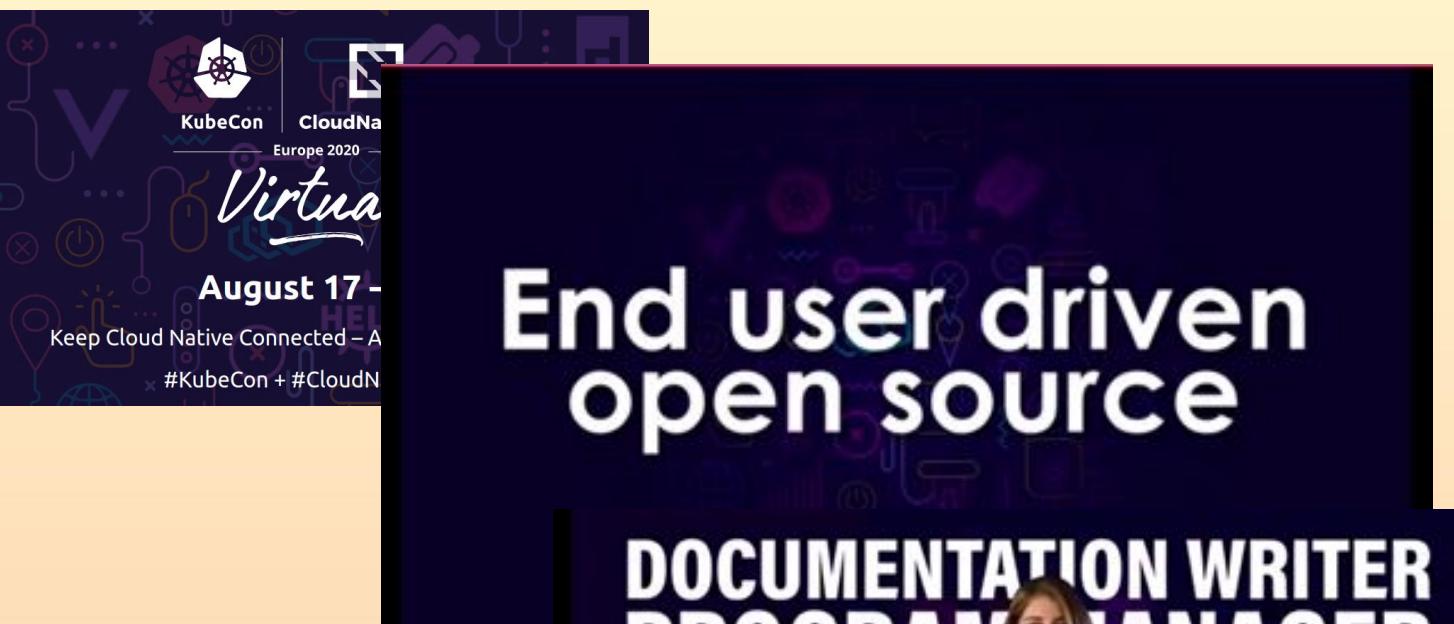


# KubeCon + CloudNativeCon NA 2019について



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# KubeCon + CloudNativeCon EU 2020 Virtual について



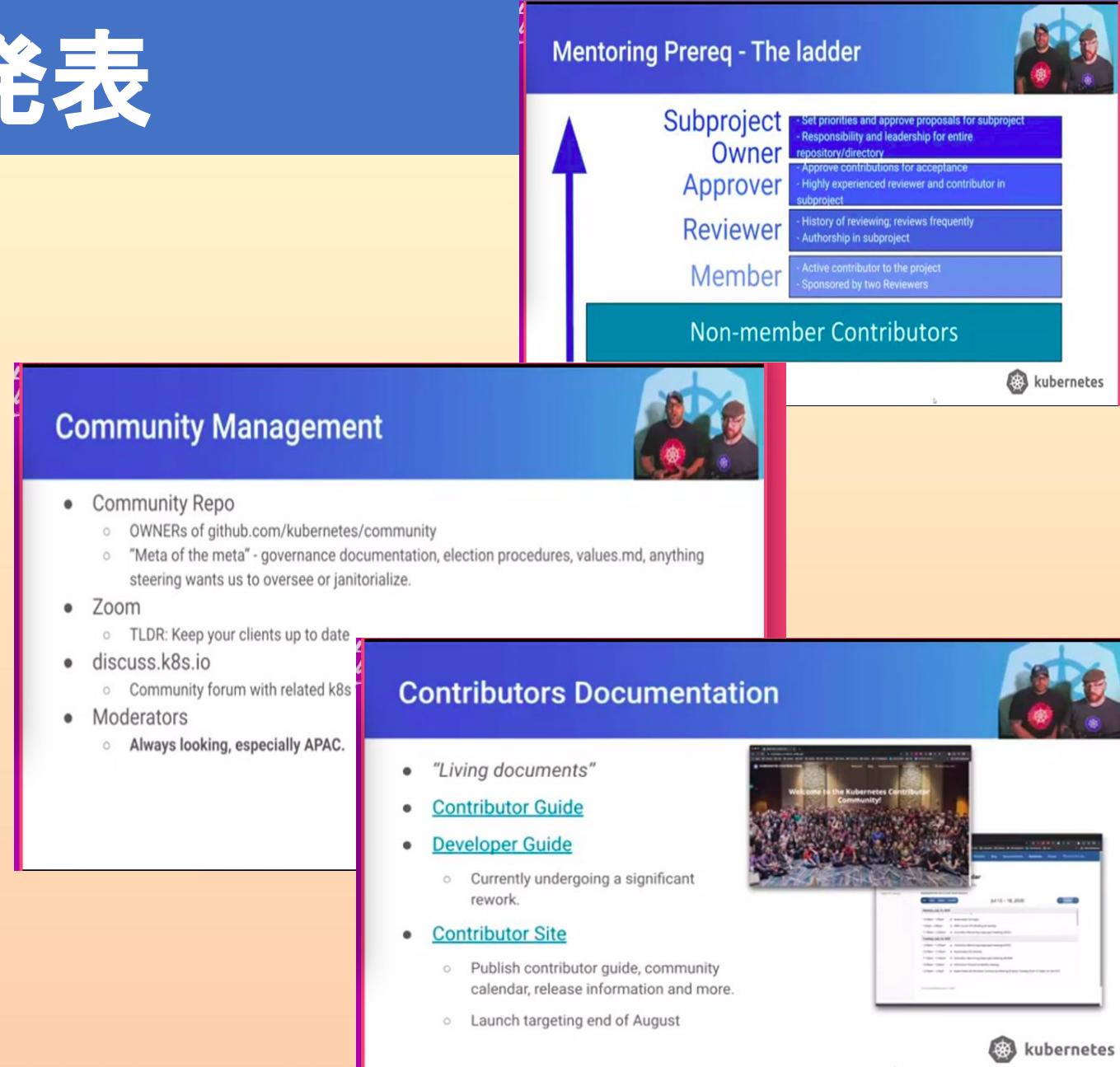
The collage includes:

- A video player showing a speaker with the title "New Mesh Use-Cases".
- A slide titled "Chaos of code" with a list of bullet points about complex and fragile code.
- A screenshot of a Slack channel for #2-kubecon-keynotes with many messages and yellow stars.
- A video player showing two women with their dogs, with the title "VIDEO".
- A screenshot of a Zoom meeting titled "ZBMM-03M Japanese — 日本語" with a background image of many tools.
- A banner for the "CONTRIBUTOR SUMMIT SAN DIEGO 2019".

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SAN DIEGO 2019

# SIG-ContribExの発表

- [Intro: Contributor Experience SIG](#)
- K8Sコミュニティ開発者の貢献に関する体制や方針、ドキュメント等の整備についての報告
- ドキュメント体系の整理に加えて、Virtual開催が今後増えることを考慮してオンライン化を推進
- APAC向けコンテンツの作成予定もあり、協力者を募りたい等発表がありました



# Attend a Meetup



# Attend a Meetup

- Kubernetes Meetup Tokyo
  - <https://k8sjp.connpass.com/>
- CloudNative Meetup Tokyo
  - <https://cloudnative.connpass.com/>



# Attend a Meetup

コミュニティ活動をしていると人との接点が多くなります。  
こういった経験もOSSの活動ならではだと思います。

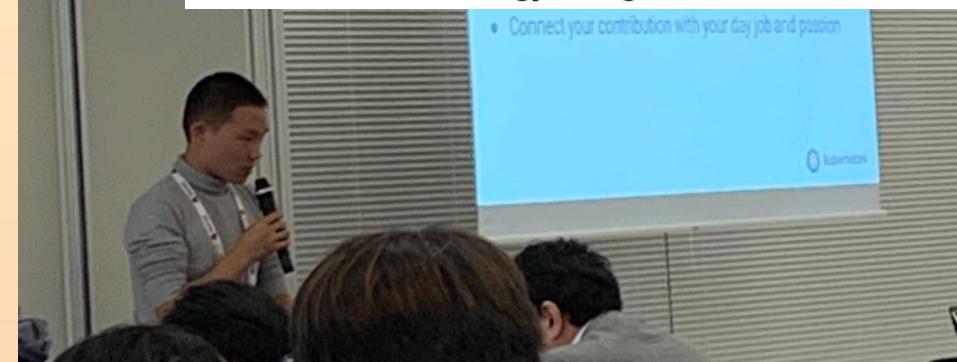


2019/11 Kubernetes Contributor Summit にて  
我々の発表セッションのファシリテーションをしてくれた Yang Li さん

## Low Barrier To Entry



@guinodes @LachlanEvenson



2019/12 Kubernetes Meetup Tokyo #26にて  
日本のMeetupにて発表している Yang Li さん

# Collected links

- [kubernetes.io/community](https://kubernetes.io/community)
- [discuss.kubernetes.io](https://discuss.kubernetes.io)
- [slack.k8s.io](https://slack.k8s.io)
- [groups.google.com/forum/#!forum/kubernetes-dev](https://groups.google.com/forum/#!forum/kubernetes-dev)
- [git.k8s.io/community/events/community-meeting.md](https://git.k8s.io/community/events/community-meeting.md)
- [git.k8s.io/community/events/office-hours.md](https://git.k8s.io/community/events/office-hours.md)
- [git.k8s.io/community/mentoring/programs/meet-our-contributors.md](https://git.k8s.io/community/mentoring/programs/meet-our-contributors.md)



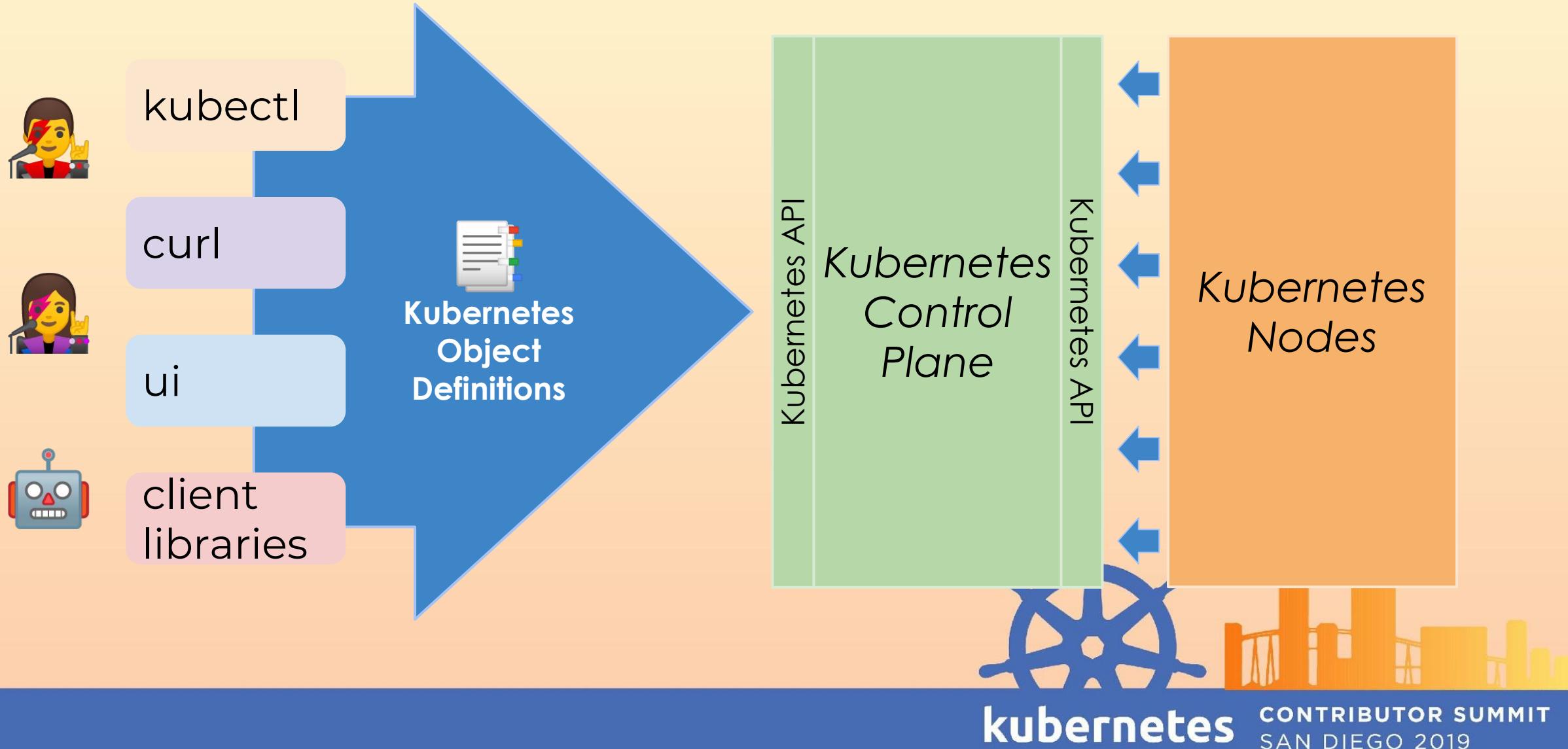
# Break - 10 minutes



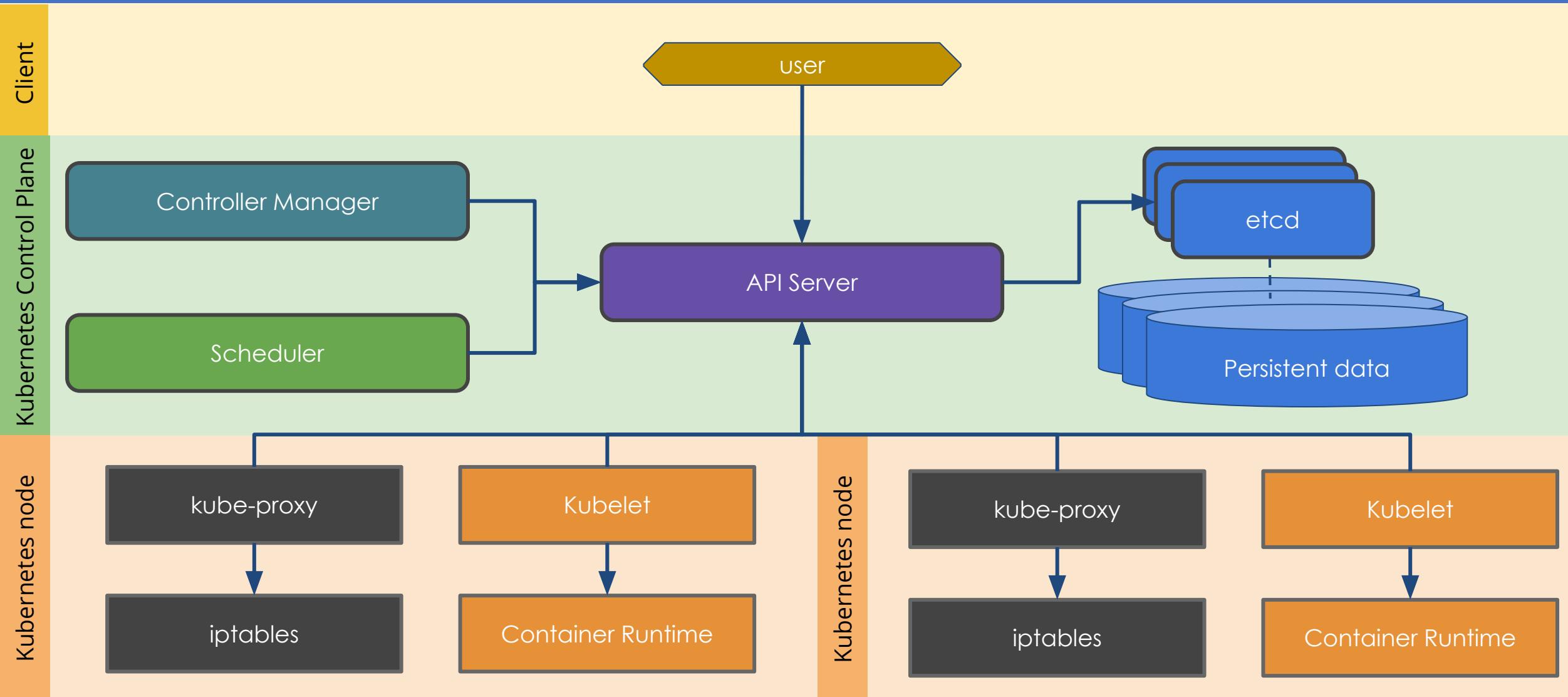
# Kubernetes 開発環境

# Kubernetes 概要

# Kubernetes Architecture Overview



# Kubernetes Primitives



# Basic Repo/Code Tour

kubernetes / kubernetes

Watch 3.1k Unstar 59.4k Fork 20.9k

Code Issues 2,278 Pull requests 1,076 Actions Projects 9 Security Insights

Production-Grade Container Scheduling and Management <https://kubernetes.io>

kubernetes go cncf containers

84,806 commits 40 branches 0 packages 576 releases 2,339 contributors Apache-2.0

Branch: master New pull request Create new file Upload files Find file Clone or download

Commit	Message	Time
	k8s-ci-robot Merge pull request #84553 from ahg-g/ahg-nodeinfo ...	Latest commit b6bf0d6 1 hour ago
	.github Fix incorrect whitespaces plural	6 days ago
	Godeps Pin dependencies and update vendors	6 days ago
	api Kubernetes version v1.18.0-alpha.0 openapi-spec file updates	yesterday
	build Merge pull request #84329 from jingyih/update_etcd_server_to_3.4	7 hours ago
	cluster Merge pull request #84329 from jingyih/update_etcd_server_to_3.4	7 hours ago
	cmd Merge pull request #84329 from jingyih/update_etcd_server_to_3.4	7 hours ago

kubernetes

CONTRIBUTOR SUMMIT  
SAN DIEGO 2019

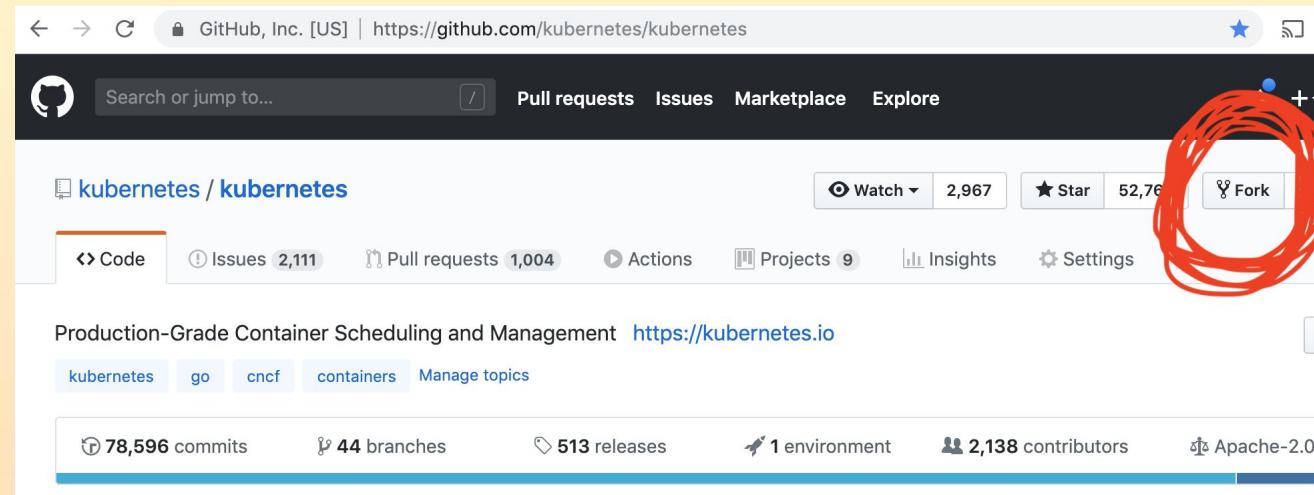
# Dev Environment: Pre-Requisites

- Lots of RAM/Disk/CPU
- Linux, Mac, Windows basic dev tools
- Docker (for Mac/Win dedicate **6GB RAM**)
- Golang 1.14 latest and \$GOPATH set
- GitHub:
  - Account and SSH key configured
  - Fork [github.com/kubernetes/kubernetes](https://github.com/kubernetes/kubernetes)

<https://www.flickr.com/photos/vestman/3900877043/>  
By Vestman (vestman) [CC BY 2.0], via flickr



# Dev Environment: Initialization



- mkdir -p \$GOPATH/src/k8s.io/ && cd \$GOPATH/src/k8s.io/
- git clone [git@github.com:\\$YOUR\\_USER/kubernetes.git](git@github.com:$YOUR_USER/kubernetes.git) && cd kubernetes
- git remote add upstream <https://github.com/kubernetes/kubernetes.git>
- git remote set-url --push upstream no\_push
- git fetch upstream
- git checkout master

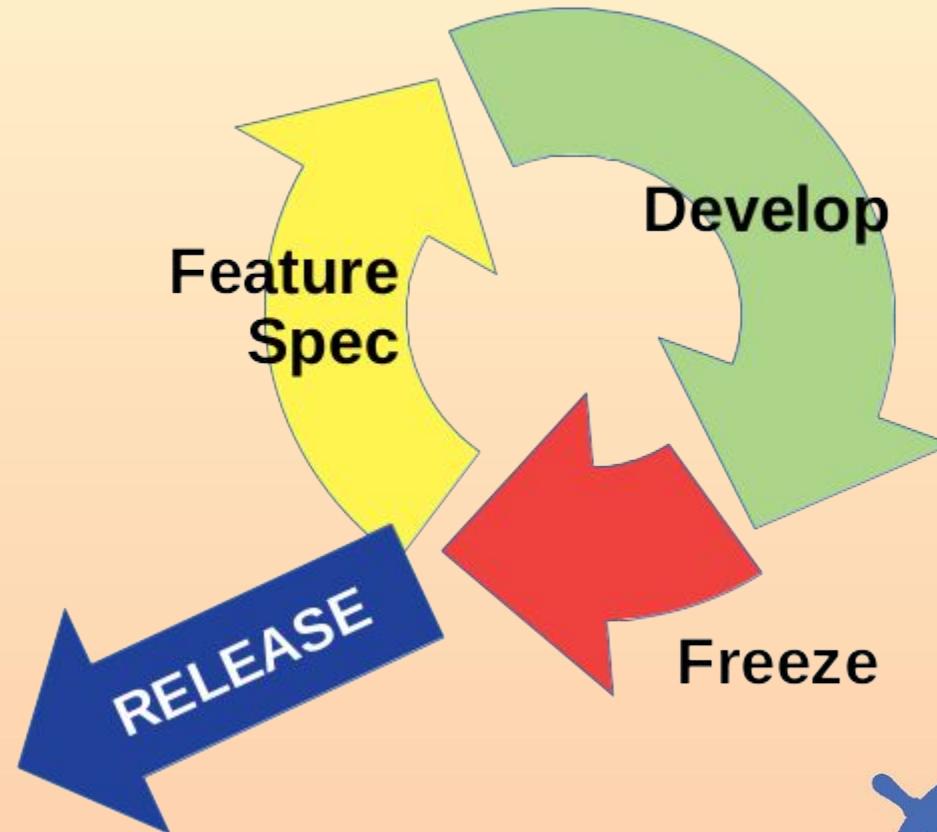


kubernetes

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# リリースサイクル

# The 3-month Release Cycle



# Release Process

Enhancements Discussion (per SIG): ongoing

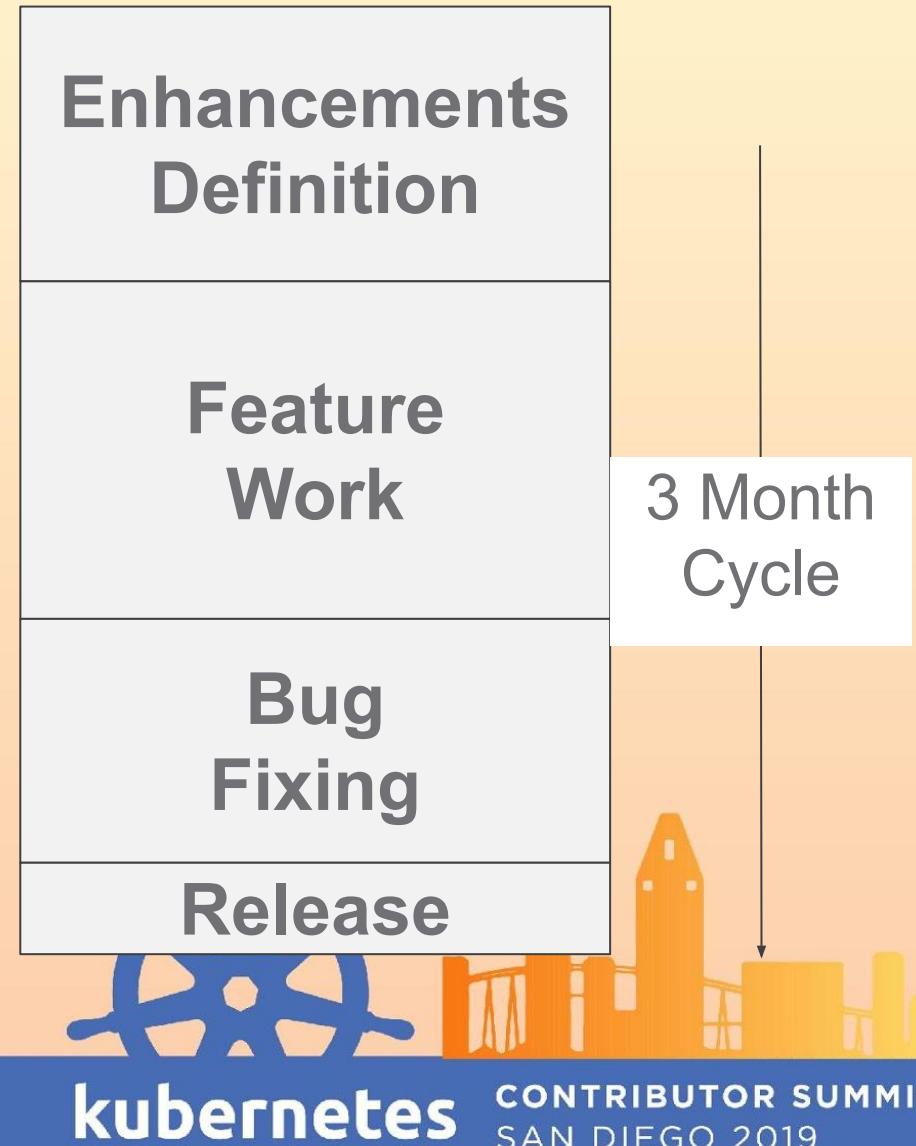
Enhancements Freeze: week ~4

Release Branch Creation: week ~7

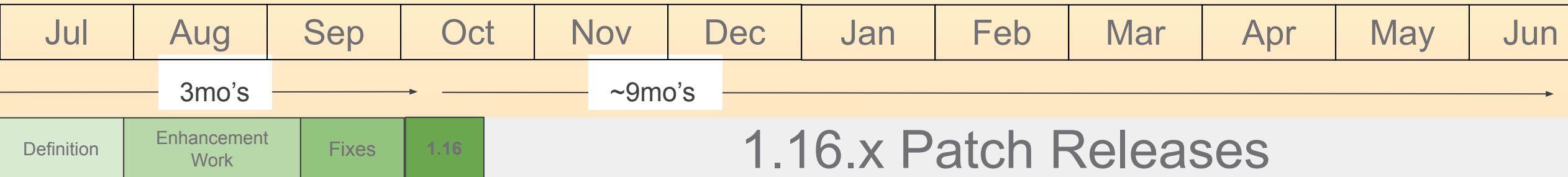
Code Freeze: week ~8  
...bugs, testing, bugs, fixing, bugs, ...iterating

End Code Freeze: week ~12

Release: week ~13



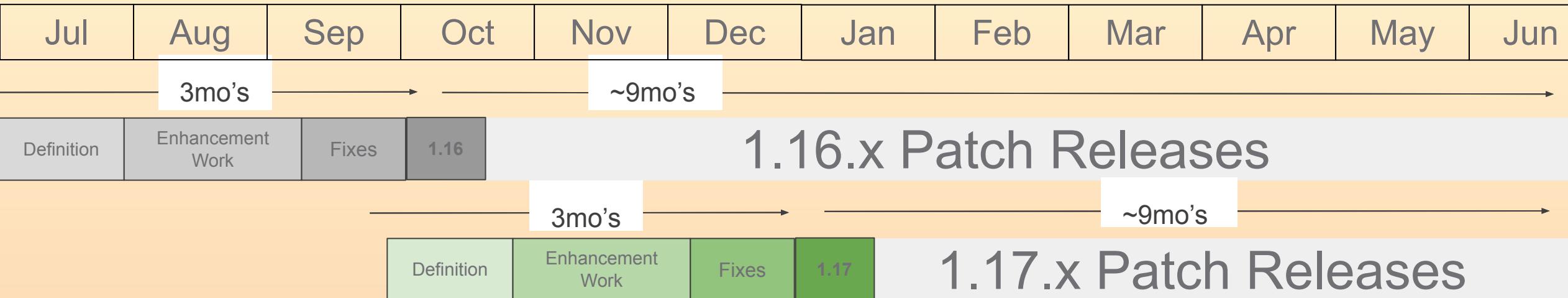
# Release Lifecycle



K8s  
Releases



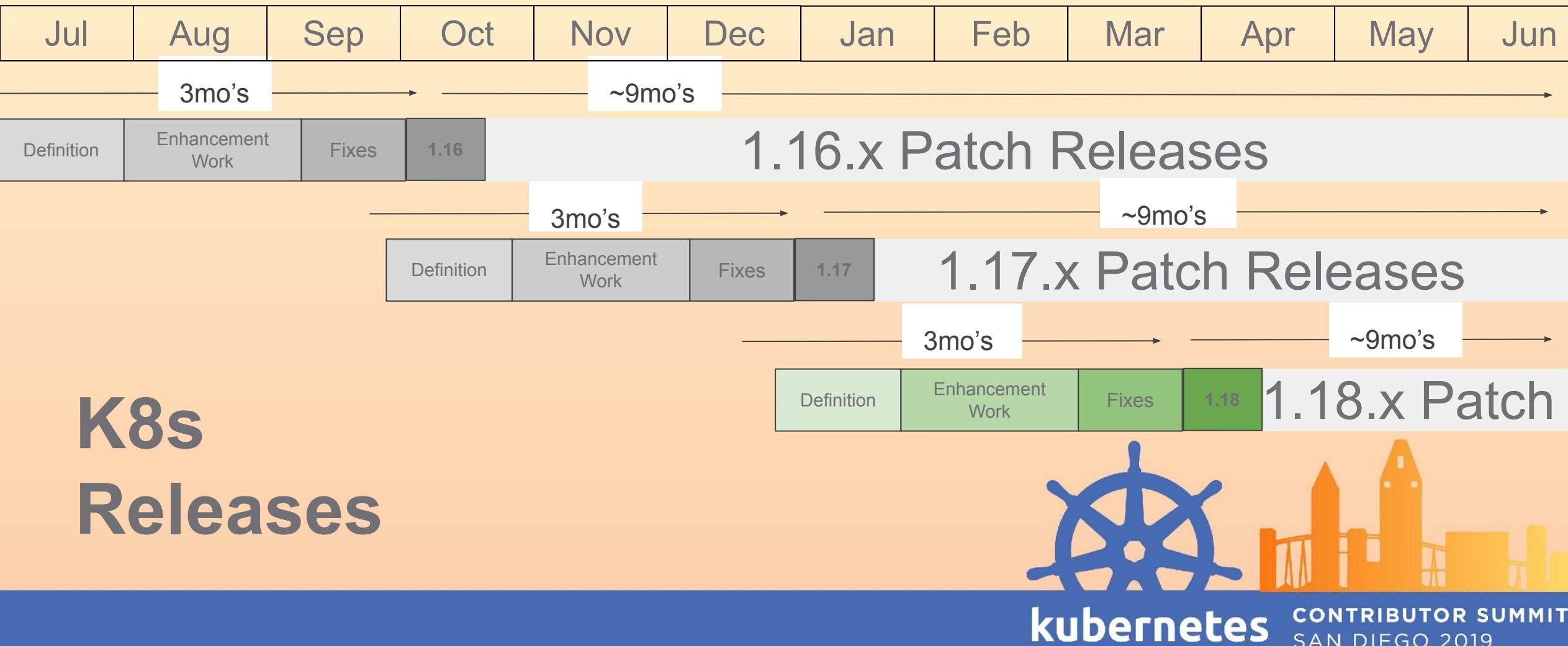
# Release Lifecycle



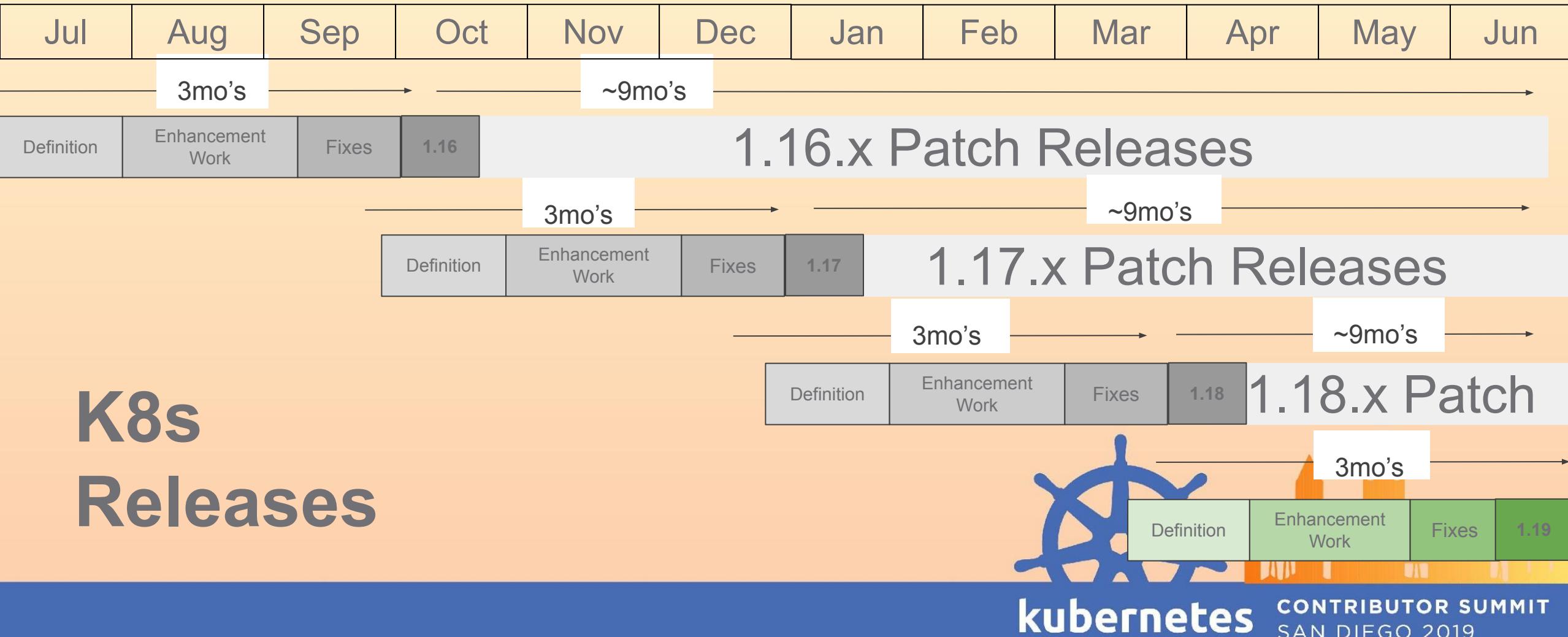
K8s  
Releases



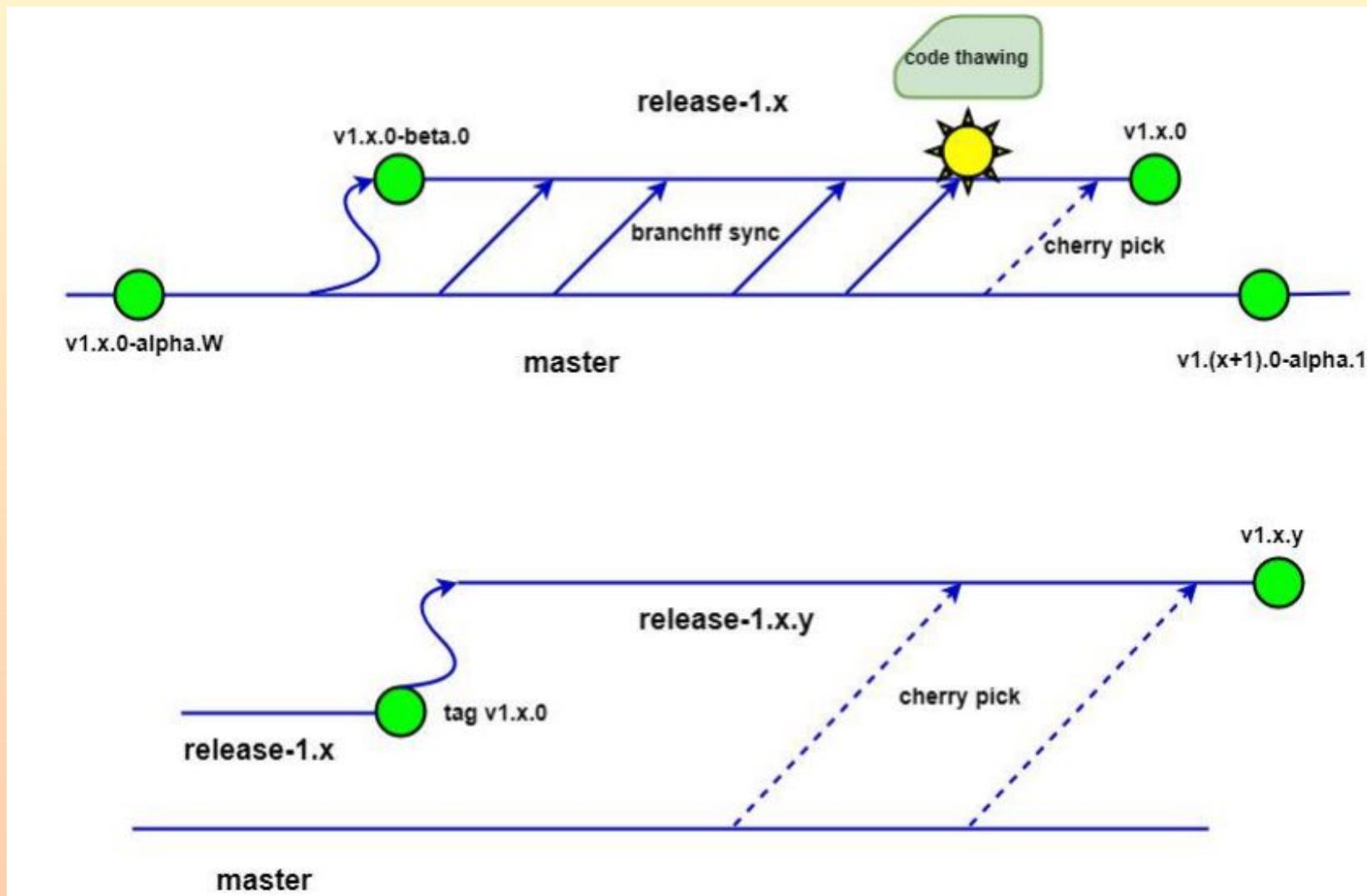
# Release Lifecycle



# Release Lifecycle



# Branch Management



# 開発環境構築

# Build System(s)

- local OS  
or
- container based
- go build
- make
- bazel build

<https://git.k8s.io/kubernetes/build/README.md>



# Make Targets

- ‘**make**’: go build of host OS/arch-specific core binaries
- ‘**make release**’: (don’t do this)
  - containerized build of client/server/node binaries
  - Window, MacOS, Linux
  - x86/386, x86\_64/amd64, arm, arm64, ppc64le, s390x
- ‘**make quick-release**’:
  - containerized build of core binaries
  - defaults to linux/amd64

# Testing

- **Unit:** test via native golang
- **Integration:** test package or component interactions
- **End-to-end (“e2e”):** tests overall system behavior and coherence on a fully integrated cluster
- **Conformance:** subset of e2e, tests SIG Architecture approved to define the core set of interoperable features

[https://git.k8s.io/community/contributors/guide/contributing.md  
#testing](https://git.k8s.io/community/contributors/guide/contributing.md#testing)

# Testing: Unit Tests

- Simple native golang
- Example: run kubectl's unit tests
- `cd pkg/kubectl; go test ./...`

```
ok     k8s.io/kubernetes/pkg/kubectl    5.525s
?      k8s.io/kubernetes/pkg/kubectl/apply [no test files]
ok     k8s.io/kubernetes/pkg/kubectl/apply/parse  0.442s
ok     k8s.io/kubernetes/pkg/kubectl/apply/strategy 2.916s
ok     k8s.io/kubernetes/pkg/kubectl/apps   0.251s
:
:
```

# Testing: Integration

- Package or component interactions
- Requires dependency management
- Example: run a test of k8s code + etcd
- `hack/install-etcd.sh; make test-integration`

# Testing: End-to-End (e2e)

- Cluster interactions
- Requires ... a cluster
- Example: run a focused e2e test (requires Linux)

```
sudo PATH=$PATH hack/local-up-cluster.sh
export KUBECONFIG=/path/to/kubeconfig
kubetest --provider=local --test --test_args="--minStartupPods=1
--ginkgo.focus=Secrets"
```

# Testing: Conformance

- Subset of e2e
- SIG Architecture approved tests
- Represent core set of interoperable features
- Example: run the conformance tests

(see previous on local-cluster-up.sh)

```
make WHAT="test/e2e/e2e.test vendor/github.com/onsi/ginkgo/ginkgo cmd/kubectl"  
kubetest --provider=skeleton --test --test_args="--ginkgo.focus=\[Conformance\]"
```

# Testing: Minikube

- <https://github.com/kubernetes/minikube/>
- Kubernetes **cluster-in-a-VM** on your local machine!
- Requirements:
  - Host machine with kubectl
  - Guest VM ability
  - Host<->Guest networking and internet connectivity

# Testing: KinD

- <https://github.com/kubernetes-sigs/kind/>
- Kubernetes **cluster-in-a-container** on your local machine!
- Requirements:
  - Docker runtime
  - Internet connectivity
- Get KinD, build k8s from source, start cluster:
  - `GO111MODULE="on" go get -u sigs.k8s.io/kind@master`
  - `kind build node-image`
  - `kind create cluster --image kindest/node:latest`



# Break - 15 minutes

Let us know if you need any additional hands on help with your laptop configuration...



# コントリビューション実践

# Open Source Interactions

# Open Source Interactions

me  
implementation  
centralized  
implicit  
assumptions



Photo by John Schnobrich on [Unsplash](#)

# Open Source Interactions

me  
~~implementation~~  
~~centralized~~  
~~implicit~~  
~~assumptions~~

we  
collaboration  
decentralized  
explicit  
shared theories

# Open Source Interactions

functionality  
code



# Open Source Interactions

functionality  
code

docs  
tests  
integrations  
releases  
security



# Open Source Interactions

**HUMAN / SOCIAL:**



functionality  
code  
docs  
tests  
integrations  
releases  
security



Photo by [You X Ventures](#) on [Unsplash](#)

# Open Source Interactions

Be good people!

Mutual respect is a prerequisite for healthy collaboration.

[git.k8s.io/community/code-of-conduct.md](https://git.k8s.io/community/code-of-conduct.md)

<https://github.com/cncf/foundation/blob/master/code-of-conduct-languages/jp.md>

# Open Source Interactions

**Goal: Get a change into project**



Photo by Alexander Muzenhardt on [Unsplash](#)

# Open Source Interactions

**Goal: Get a change into project**

**Path:**

- Visibility, transparency, proactive communication
- Code, plus documentation, plus test cases
- Presence in meetings, Slack, mailing list
- Reviewable code

# Open Source Interactions

## Reviewable code:

- demonstrates sound *IDEA*...through words
- demonstrates reasonably architected solution...through words
- polished implementation
  - coding style
  - quality standards
  - <https://chris.beams.io/posts/git-commit/>

# Open Source Interactions

## Reviewable code:

- demonstrates sound ***IDEA***...through words
- demonstrates reasonably architected solution...through words
- polished implementation
  - coding style
  - quality standards
  - <https://chris.beams.io/posts/git-commit/>

## Make the reviewer's job easy:

- commit subject line **summarizes** in “**Do foo for bar**”
- commit body details **what & why**

# Open Source Interactions

## Timing:

- expect things you **CARE** about to take time
- quality vs. speed
- decentralized consensus forming
- conversations wrap the globe
- is it code freeze right now or merge time?

## Open source is fast in aggregate, but:

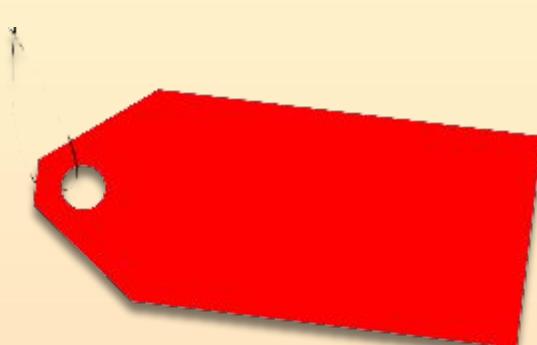
- **idea → months → alpha → 1+ release → beta → 1+ release → stable**
- ...9-24 months

# Open Source Interactions

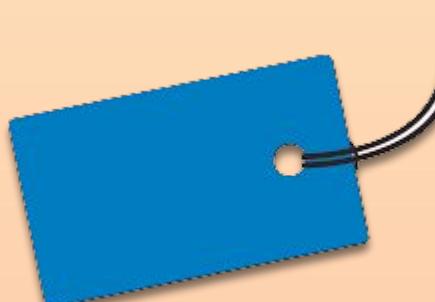


# Labels

# SIGs, Labels, Issues: Overview



How to talk to the Kubernetes  
community and automation



 k8s-ci-robot commented 14 days ago

Owner + 

Thanks for your pull request. Before we can look at your pull request, you'll need to sign a Contributor License Agreement (CLA).

 Please follow instructions at <https://git.k8s.io/community/CLA.md#the-contributor-license-agreement> to sign the CLA.

It may take a couple minutes for the CLA signature to be fully registered; after that, please reply here with a new comment and we'll verify. Thanks.

---

- If you've already signed a CLA, it's possible we don't have your GitHub username or you're using a different email address. Check your existing CLA data and verify that your [email is set on your git commits](#).
- If you signed the CLA as a corporation, please sign in with your organization's credentials at <https://identity.linuxfoundation.org/projects/cncf> to be authorized.
- If you have done the above and are still having issues with the CLA being reported as unsigned, please email the CNCF helpdesk: [helpdesk@rt.linuxfoundation.org](mailto:helpdesk@rt.linuxfoundation.org)

► Details

 k8s-ci-robot added the **cncf-cla: no** label 14 days ago

 k8s-ci-robot requested review from **idvoretskyi** and **tpepper** 14 days ago

 k8s-ci-robot added the **needs-ok-to-test** label 14 days ago

guineveresaenger

Labels

approved  
area/contributor-guide  
cncf-cla: no  
lgtm  
needs-rebase  
sig/contributor-experience  
size/XS

Projects

None yet

Milestone

No milestone

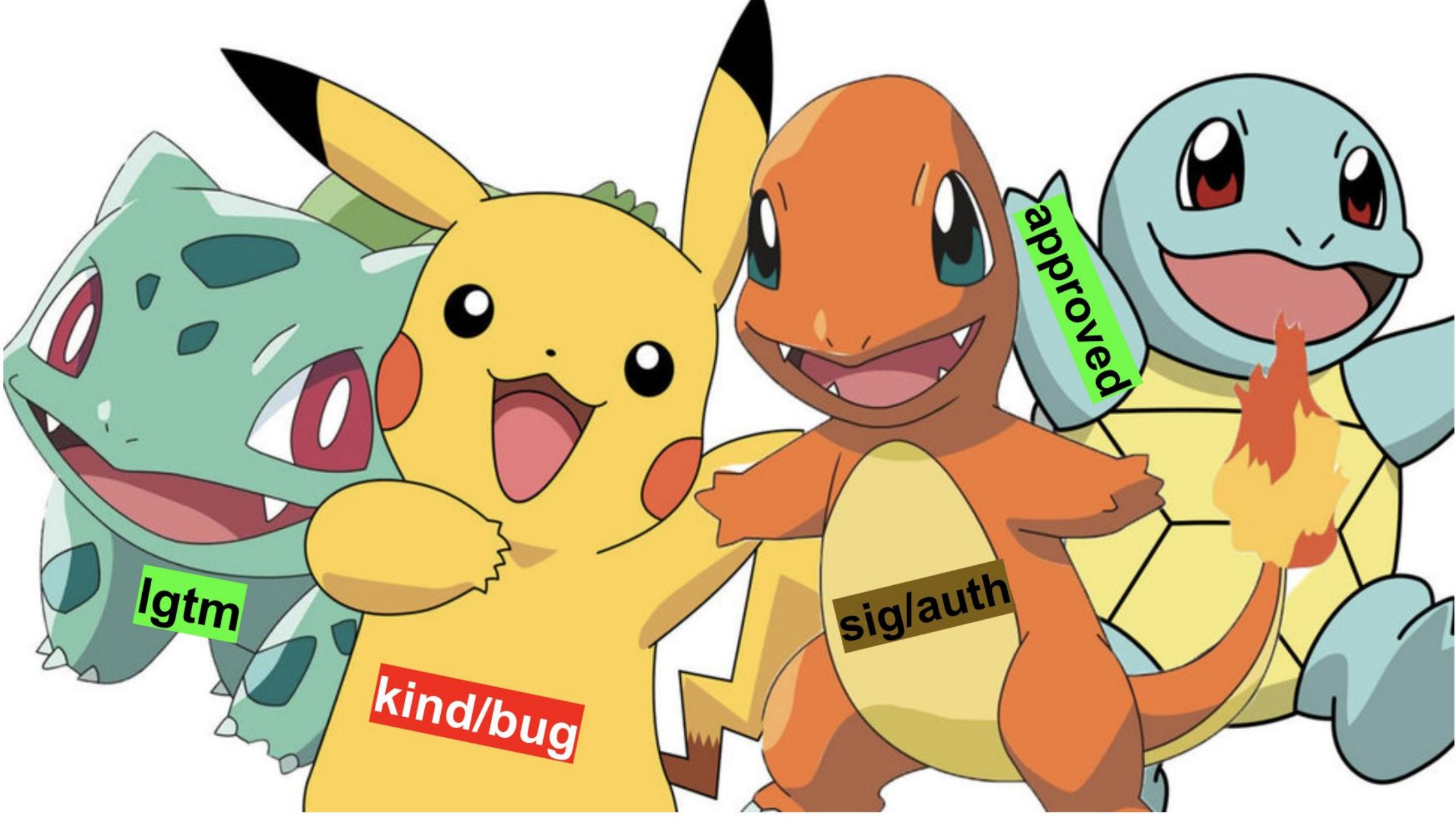
Notifications

 [Unsubscribe](#)

You're receiving notifications because you were mentioned.

7 participants





lgtm

kind/bug

sig/auth

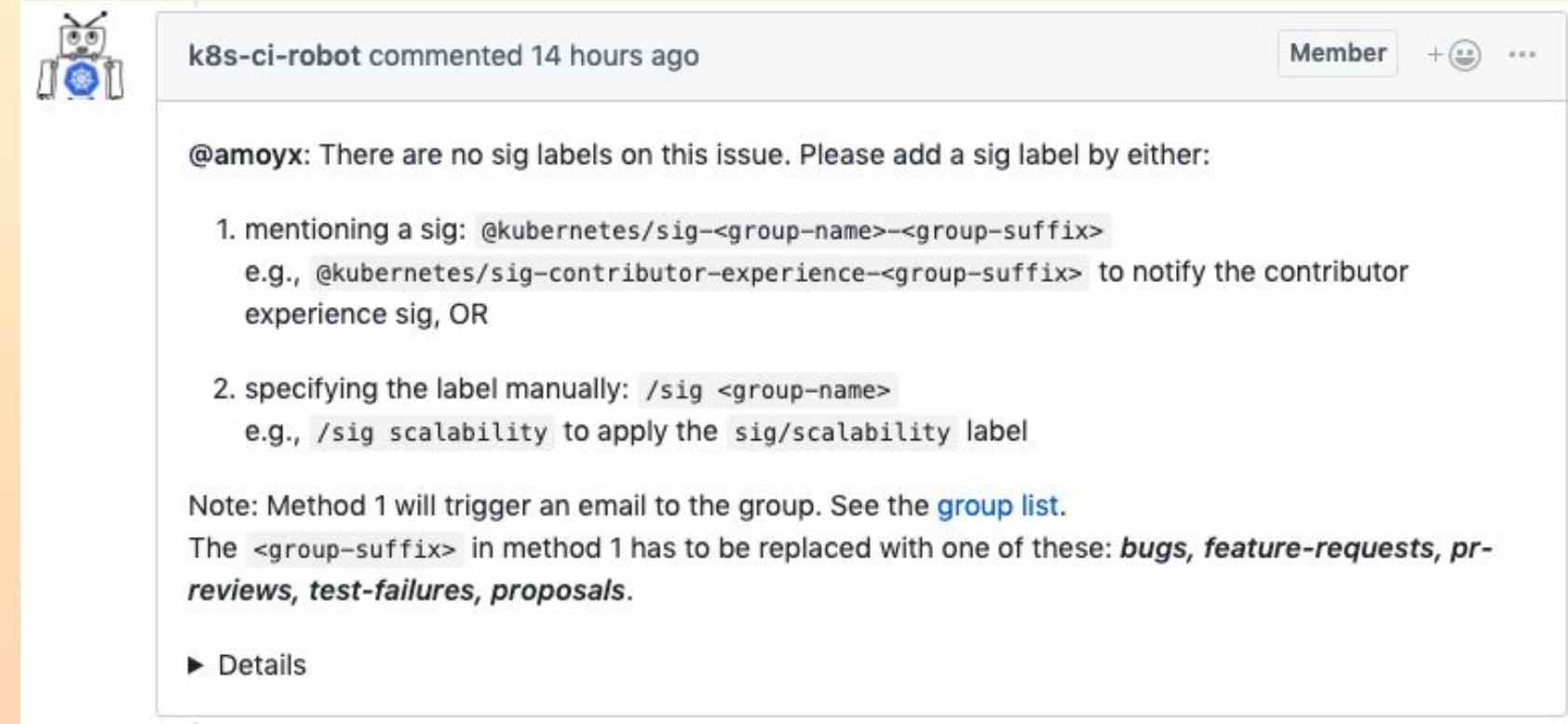
approved

WIP

# Required Labels for Issues

On creation:

sig/  
kind/



A screenshot of a GitHub issue comment. The comment is from a user named "k8s-ci-robot" and was posted 14 hours ago. The comment text reads: "@amoyx: There are no sig labels on this issue. Please add a sig label by either:

- mentioning a sig: @kubernetes/sig-<group-name>-<group-suffix>  
e.g., @kubernetes/sig-contributor-experience-<group-suffix> to notify the contributor experience sig, OR
- specifying the label manually: /sig <group-name>  
e.g., /sig scalability to apply the sig/scalability label

Note: Method 1 will trigger an email to the group. See the [group list](#). The <group-suffix> in method 1 has to be replaced with one of these: *bugs, feature-requests, pr-reviews, test-failures, proposals*.

<https://prow.k8s.io/command-help>

# The SIG Label

*Label*

sig/auth

sig/testing

sig/api-machinery

sig/node

*Bot command*

/sig auth

/sig testing

/sig api-machinery

/sig node

# Adding a label



A screenshot of a GitHub comment card. The card shows a profile picture of a person with a white owl on their shoulder, followed by the text "guineveresaenger commented on Dec 14, 2017". To the right of the comment are three icons: "Member", a smiley face, a pencil, and a close button. Below the comment, the text "/sig contributor-experience" is displayed, with the entire string circled in red.



# The Kind Label

kind/bug

kind/feature

kind/documentation

kind/design

kind/failing-test

kind/flake

kind/cleanup

*Example bot command: /kind feature*



# The Area Label

area/kubectl

area/api

area/dns

area/platform/gce

Often, the area label is  
the name of a SIG  
subproject.

# The Priority Label

priority/critical-urgent

priority/important-soon

priority/important-longterm

priority/backlog

priority/awaiting-evidence

*Example bot command: /priority critical-urgent*

# The Triage Label

triage/duplicate

triage/needs-information

triage/support

triage/unreproduceable

triage/unresolved

# はじめての コントリビューション

# Find an Issue



kubernetes / kubernetes

Watch 3.1k Star 59.9k Fork 21.1k

Code

Issues 2,245

Pull requests 1,108

Actions

Projects 9

Security

Insights

Filters

is:open label:"help wanted" label:"good first"

Labels 187

Milestones 9

New issue

Clear current search query, filters, and sorts

16 Open  32 Closed

Author ▾

Labels ▾

Projects ▾

Milestones ▾

Assignee ▾

Sort ▾

ⓘ Port parsing can overflow (TOB-K8S-015: Overflows when using strconv.Atoi and downcasting the result) area/security good first issue help wanted kind/bug priority/important-soon sig/cli sig/network wg/security-audit  
#81121 opened on Aug 7 by cji



19

ⓘ Add unit tests for Scheduler framework good first issue help wanted kind/feature sig/scheduling  
#80272 opened on Jul 17 by liu-cong



11

ⓘ Different Webhook with same name have same label-value in metric webhook\_admission\_duration\_seconds good first issue help wanted kind/bug lifecycle/rotten sig/api-machinery sig/instrumentation  
#79832 opened on Jul 5 by answer1991



12

ⓘ Support UDP with AWS NLB area/provider/aws good first issue help wanted kind/feature sig/cloud-provider  
#79523 opened on Jun 28 by kirmann v1.17

29

ⓘ Connect lower level traces to surrounding request handling trace good first issue help wanted kind/feature sig/api-machinery  
#79209 opened on Jun 19 by jpbezt

16

- good first issue
- help wanted

<https://github.com/kubernetes/kubernetes/issues?utf8=%E2%9C%93&q=is%3Aopen+label%3A%22good+first+issue%22+label%3A%22help+wanted%22>

# Help Wanted: First PR Ideas

- Search for **good first issue** & **help wanted** issues
- Search by SIG & Area labels to match your interest
- Discuss at tables ideas for contributing

...carry this discussion into the SIG Meet & Greet

# コードだけではないコントリビューション

- Issue登録
  - バグ報告／機能要望
- ドキュメントの修正

<https://kubernetes.io/docs/home/>

<https://github.com/kubernetes/website>

- ドキュメントバグ
- 実装に沿った最新化
- 日本語訳の貢献
  - kubernetes.io の英語ドキュメントの和訳
  - Kubernetes Dashboard の和訳



# PR 投稿

# Do Not Boil The Ocean

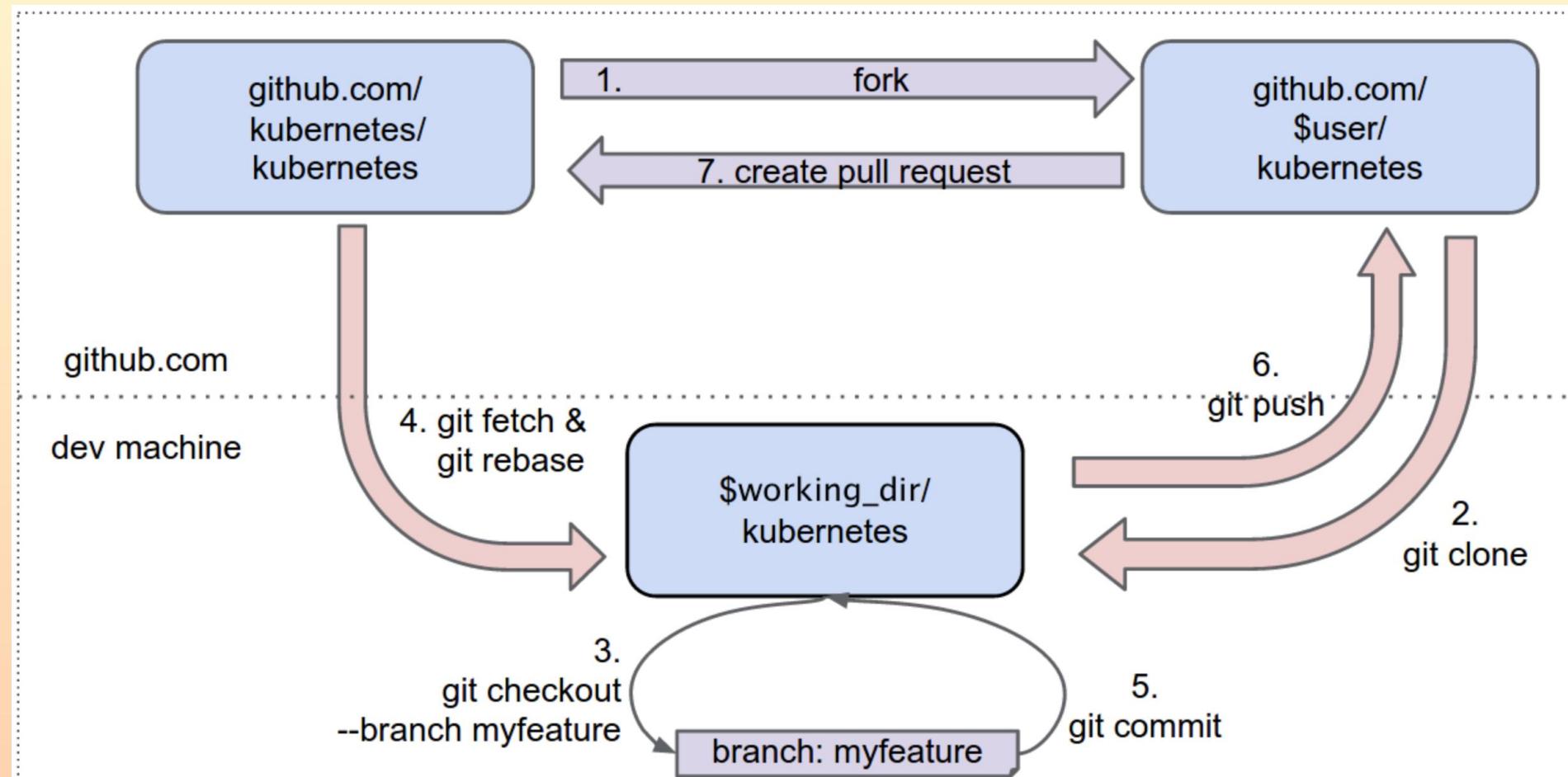


Smaller is  
better

Write good  
commit  
messages



# PRs and Bots: GitHub PR Flow

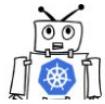


# PR Workflow on GitHub

1. You submit Pull Request (PR) using the template
2. You add labels & notes
3. Bots validate and comment on the PR  
`release-note` `cncf-cla: no` `needs-ok-to-test` `needs-kind` `needs-sig`
4. You add more labels & notes & resolve review comments
5. SIGs & OWNERS review and /approve → **approved**
6. Other contributors /lgtm → **lgtm**
7. Tests pass
8. *Tide* merges the PR



# PRs and Bots: Reviewers/Approvers



k8s-ci-robot commented 7 minutes ago

Member + ...

[APPROVALNOTIFIER] This PR is NOT APPROVED

This pull-request has been approved by: [ksubrmnn](#)

To fully approve this pull request, please assign additional approvers.

We suggest the following additional approver: [rosti](#)

If they are not already assigned, you can assign the PR to them by writing `/assign @rosti` in a comment when ready.

The full list of commands accepted by this bot can be found [here](#).

The pull request process is described [here](#)

## ▼ Details

Needs approval from an approver in each of these files:

- [cmd/kubeadm/OWNERS](#)

Approvers can indicate their approval by writing `/approve` in a comment

Approvers can cancel approval by writing `/approve cancel` in a comment

レビューアの自動アサイン



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# Bot Commands



<https://prow.k8s.io/command-help>

# PRs and Bots: Useful Commands

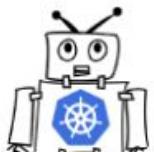
## Command

/assign @username  
/retest  
/close  
/cc @username

## Result

Assigns a Reviewer  
Reruns failed tests  
Closes PR  
Tags a user

# Watch Tests



k8s-ci-robot commented 2 minutes ago

Member



...

@ksubrmnn: The following tests failed, say `/retest` to rerun them all:

Test name	Commit	Details	Rerun command
pull-kubernetes-e2e-gce	<a href="#">0a1251a</a>	<a href="#">link</a>	<code>/test pull-kubernetes-e2e-gce</code>
pull-kubernetes-e2e-gce-device-plugin-gpu	<a href="#">0a1251a</a>	<a href="#">link</a>	<code>/test pull-kubernetes-e2e-gce-device-plugin-gpu</code>

[Full PR test history](#). [Your PR dashboard](#). Please help us cut down on flakes by [linking to an open issue](#) when you hit one in your PR.

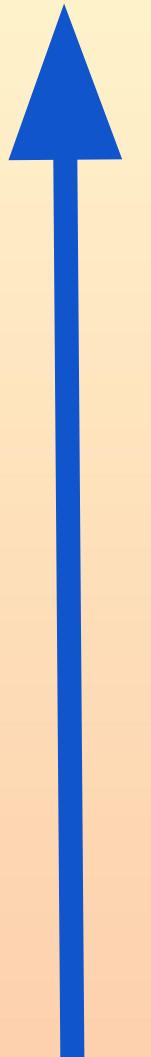
► Details

# PRs and Bots: Following Up

Answer questions  
Resolve:  
**Bot messages**  
**Code comments**  
**Test failures**



# Contributor Ladder



Owner

Set priorities and approve proposals for subproject  
Responsibility and leadership for entire repository/directory

Approver

Approve contributions for acceptance  
Highly experienced reviewer and contributor in subproject

Reviewer

History of reviewing; reviews frequently  
Authorship in subproject

Member

Active contributor to the project  
Sponsored by two Reviewers

Non-member Contributors



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# Ask For Help



# Finding A Reviewer



- Follow Bot Prompts
- Ping Issue author
- Attach /sig label
- Contact OWNERS or SIG  
(k/community/[sigs.yaml](#))
  - send email to list
  - ask Slack
  - attend SIG meeting
- #pr-reviews on k8s Slack

# Membership

## Community Groups

**Code Contributions**

**reviewing**

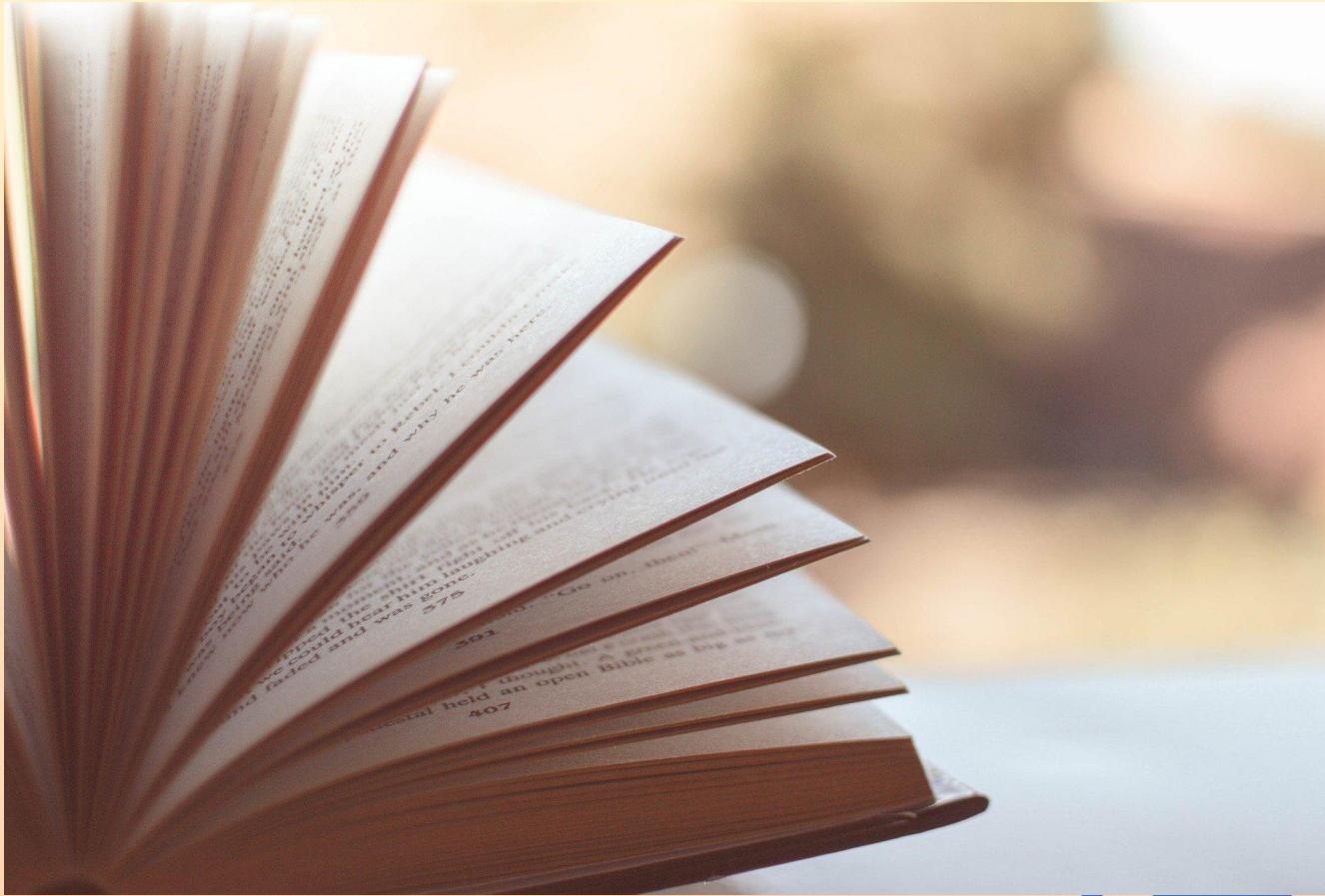
**Docs**

**Mentorship**



<http://git.k8s.io/community/community-membership.md>

# Refer to the contributor guide



<http://git.k8s.io/community/contributors/guide>



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# A Beautiful First-Time Pull Request



## Let token create help with joining a master #84591

[Edit](#)**Merged**k8s-ci-robot merged 1 commit into [kubernetes:master](#) from [TheLastProject:feature/print-join-as-admin-command](#) 5 days ago[Conversation 30](#)[Commits 1](#)[Checks 0](#)[Files changed 2](#)[+26 -9](#)

TheLastProject commented 13 days ago • edited

[Contributor](#) + ...**What type of PR is this?**

/kind feature

**What this PR does / why we need it:**

The kubeadm token create --print-join-command command is very helpful, but doesn't help with adding more masters to your cluster. This adds a --for-master flag which does setup and gives instructions for letting a master join.

**Special notes for your reviewer:**

This is the first time I am writing any Go code and I am still pretty new to Kubernetes, so this may be very ugly. I am also having trouble actually building Kubernetes on my device:

```
$ make WHAT=cmd/kubeadm
go/build: importGo k8s.io/kubernetes: exit status 1
can't load package: package k8s.io/kubernetes: cannot find module providing package k8s.
```

```
+++ [1031 12:54:41] Building go targets for darwin/amd64:
./vendor/k8s.io/code-generator/cmd/deepcopy-gen
go: finding k8s.io/kubernetes/vendor/k8s.io/code-generator/cmd/deepcopy-gen latest
go: finding k8s.io/kubernetes/vendor/k8s.io/code-generator/cmd latest
go: finding k8s.io/kubernetes/vendor/k8s.io/code-generator latest
go: finding k8s.io/kubernetes/vendor/k8s.io/code-generator latest
```

**Reviewers**

neolit123



ereslibre



fabriziopandini

**Assignees**

ereslibre

**Labels**

approved

area/kubeadm

cncf-cla: yes

kind/feature

lgtm

ok-to-test

priority/backlog

release-note

sig/cluster-lifecycle

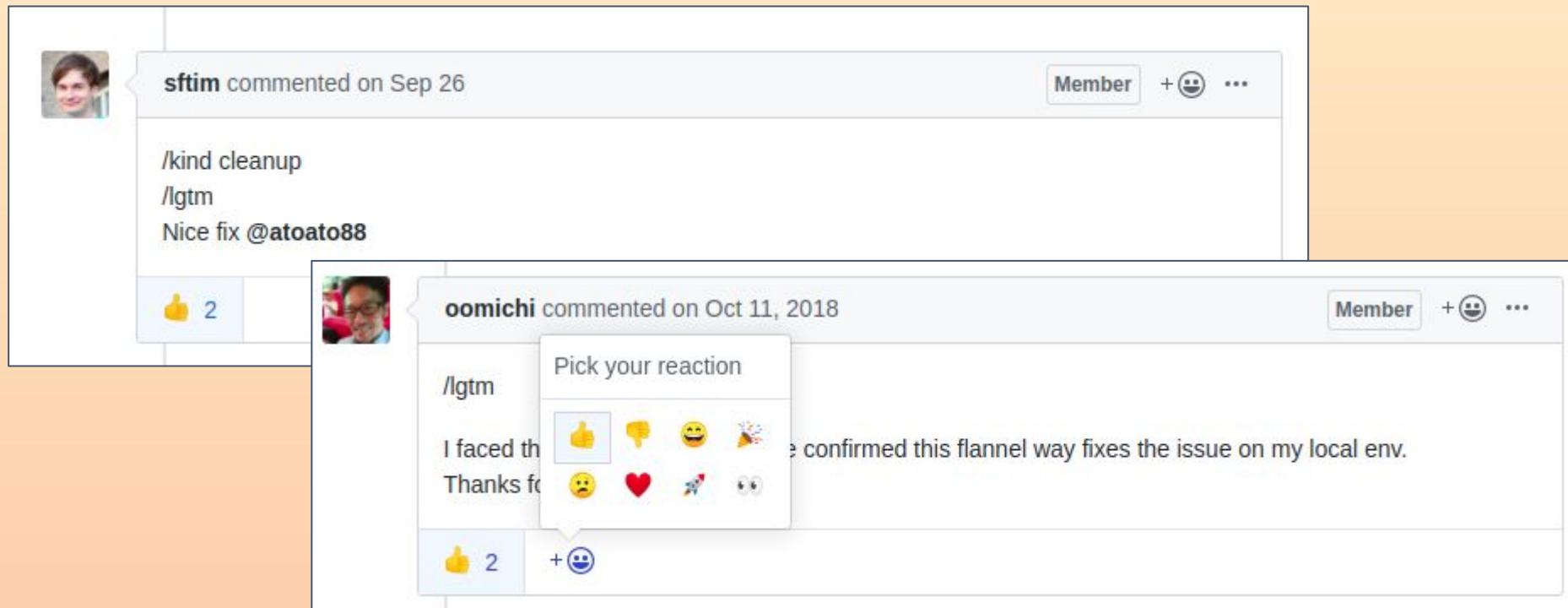
size/M

<https://github.com/kubernetes/kubernetes/pull/84591>

# コミュニケーションのTips

# コミュニケーションのTips

- 絵文字によるアクションもあります。
  - 文章を考えるまでもない同意など表現を1クリックで行えるので便利です。



# コミュニケーションのTips

- Google翻訳を使っていきましょう。
  - GithubやSlack、MLなどコミュニケーションの大半は基本的に英語で行われます。
  - Google翻訳は比較的精度も高く、英文を作るのにとても有用です。
  - 目的は意思疎通をすることです。ツールは便利に使って、積極的に目的を果たしましょう。



# コミュニケーションのTips

- 比較的使われる英語表現を列挙します。

- I'm facing the same issue. / 私も同じ問題を経験しています
- ditto / (既に指摘した部分に続いて、) 同上です
- nits / 細かい指摘だけど
- nit: ... / 細かい指摘ですが ...
- PTAL (Please take another look) / 見直して下さい
- WDYT (What do you think?) / どう思いますか？
- LGTM (Looks good to me) / 大丈夫だと思います。
- SGTM (Sounds good to me) / いいと思います。いいね。
- SG (Sounds good) / いいと思います。いいね。
- FYI (For your information) / 参考までに
- \\_(ツ)\_/- (shrug) / 肩をすくめる
- IMHO (In my humble opinion) / つまらない意見ですが、私に言わせていただければ
- TBH (To Be Honest) / 正直に言うと、はっきり言って



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# コミュニケーションのTips

- 1文は短めに。
  - 英語を書こうとすると、長く、読みにくくなりがちですが、伝わりやすさを重視した、短めの文章を心がけましょう。



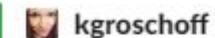
# コミュニケーションのTips

- Issue や PR を作ったら GitHub 上でレビュー依頼を出しますが、反応が少ないようであれば Slack で連絡を出すと良いです。
- Slack の #jp-dev や #jp-mentoring も活用してみてください。



shu 08:26

Could you review <https://github.com/kubernetes/org/issues/1663>? This is New membership request for German translator.



kgroschoff

#1663 REQUEST: New membership for kgroschoff

GitHub Username

@kgroschoff

Organization you are requesting membership in

@kubernetes

Requirements

- I have reviewed the community membership guidelines (<https://git.k8s.io/community/community-membership.md>)
- I have enabled 2FA on my GitHub account (<https://github.com/settings/security>)
- I have subscribed to the kubernetes-dev e-mail list (<https://groups.google.com/forum/#!forum/kubernetes-dev>)
- I am actively contributing to 1 or more Kubernetes subprojects
- I have two sponsors that meet the sponsor requirements listed in the community membership guidelines

[もっと表示する](#)

Labels

area/github-membership

Comments

1

 [kubernetes/org](#) | 2月27日 投稿したメンバー: GitHub



# Break - 10 minutes



# Hands On

# Playground Exercise

Your turn!!!

<https://sigs.k8s.io/contributor-playground>



# Playground Exercise

<https://sigs.k8s.io/contributor-playground>

1. Fork and clone
2. Make changes in “**cndt-2020/workdir/**” directory
3. Pull request
4. Review/comment/rebase
5. Pay attention to labels and bot prompts

# Playground Exercise - Ask reviews

Ask reviews on #jp-dev

example:

@Shu Muto Please review

<https://github.com/kubernetes/kubernetes/pull/79695>

Reviewers list on k8s slack

@akihito-inou(atoato88)

@s-ito

@Shu Muto

@toyoda



# Playground Exercise

```
$ git clone https://github.com/foo/contributor-playground  
$ cd contributor-playground  
$ git remote add upstream https://github.com/kubernetes-sigs/contributor-playground  
$ git remote set-url --push upstream no_push  
  
$ git remote -v  
origin https://github.com/foo/contributor-playground (fetch)  
origin https://github.com/foo/contributor-playground (push)  
upstream https://github.com/kubernetes-sigs/contributor-playground (fetch)  
upstream no_push (push)
```

# Playground Exercise

```
$ cd cndt-2020/workdir/  
$ git checkout -b add_foo_md  
$ vi foo.md  
$ git add foo.md  
$ git commit -m "Add foo.md"
```

```
$ git fetch upstream  
$ git rebase upstream/master  
$ git push origin add_foo_md
```



# Playground Exercise

access <https://github.com/kubernetes-sigs/contributor-playground>

create PR

ask reviews on slack #jp-dev



# Playground Exercise

- ハンズオンで実行したコマンド

[https://github.com/kubernetes-sigs/contributor-playground/blob/master/cndt-2020/hands\\_on.md](https://github.com/kubernetes-sigs/contributor-playground/blob/master/cndt-2020/hands_on.md)

- ご質問は、slack の **#jp-mentoring** まで

- PR のレビュー依頼は、slack の **#jp-dev** まで

@akihito-inou(atoato88)

@s-ito

@Shu Muto

@toyoda





Thank you, and  
welcome aboard!



# Appendix01



# Building Binaries

Build and modify the kubectl binary, and use it against a locally deployed cluster



# Building Binaries: Prerequisites

[docker](#)

[go1.13.4 or later](#)

[kubernetes/kubernetes repo](#)

KinD

```
GO111MODULE="on"; go get sigs.k8s.io/kind@v0.6.0  
export PATH=$PATH:$GOPATH/bin
```

# Modifying Kubectl

Open the file

cmd/kubectl/kubectl.go

with your preferred text editor.

Add “fmt” to the imports

After ~line 38

```
command := cmd.NewDefaultKubectlCommand()
```

add a print statement

```
fmt.Println("Alpacas are fluffy")
```

# Building the modified kubectl

```
$make WHAT=cmd/kubectl
```

# Using The Binary

## Deploy a cluster using KinD

```
kind create cluster \  
--image=kubecon.goharbor.io/contribsummit/kindest/node:v1.16.3
```

Run the binary you built against the cluster!

```
./_output/bin/kubectl get po
```



# Using The Binary

```
usage: kubectl [options] <cmd> [args...]
alison@MacBook-Pro ~% kubectl get po
o hallo
No resources found in default namespace.
```



# Make Targets

- ‘make WHAT=cmd/kubectl’
  - build kubectl for your host OS/arch
- ‘KUBE\_BUILD\_PLATFORMS=windows/amd64 \  
 make WHAT=cmd/kubectl’
  - build kubectl for windows/amd64
- ‘make help’: info on make targets

# Make Targets: Try it...build kubectl!

1. Edit cmd/kubectl/kubectl.go
2. Add a “hello world” print out in “func main()”, eg:  
`fmt.Println("Hello Kubernetes!")`
3. Build:  
**`make WHAT=cmd/kubectl`**
4. New binary?  
**`ls -al _output/local/go/bin/kubectl`**
5. Run your binary:  
**`cd ._output/local/go/bin`**  
**`./kubectl version`**

