



Kubernetes for Kids

Giri Kuncoro, CNCF Ambassador

Giri Kuncoro

Senior Software Engineer at  gojek

 CNCF Ambassador

 Google Dev Expert

 Active Kubernetes Contributor/Maintainer

Organizing Kubernetes Jakarta

- Building **Pivotal Container Service 1.0**
- Building Kubernetes at **Gojek**
- **Kubecon** speakers



Cloud Native Computing Foundation

Graduated



kubernetes
Orchestration



Prometheus
Monitoring



envoy
Service Proxy



CoreDNS
Service Discovery



containerd
Container Runtime



OPENTRACING
Distributed Tracing API



fluentd
Logging



Remote Procedure Call



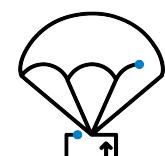
rkt
Container Runtime



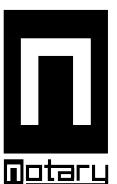
CNI
Networking API



JAEGER
Distributed Tracing



TUF
Software Update Spec



notary
Security



Vitess
Storage



NATS
Messaging



LINKERD
Service Mesh



HELM
Package Management



ROOK
Storage



HARBOR
Registry

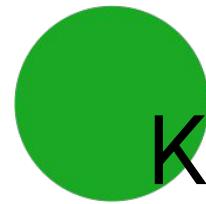


etcd
Key/Value Store

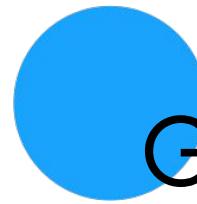


Open Policy Agent
Policy

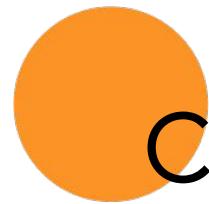
Agenda



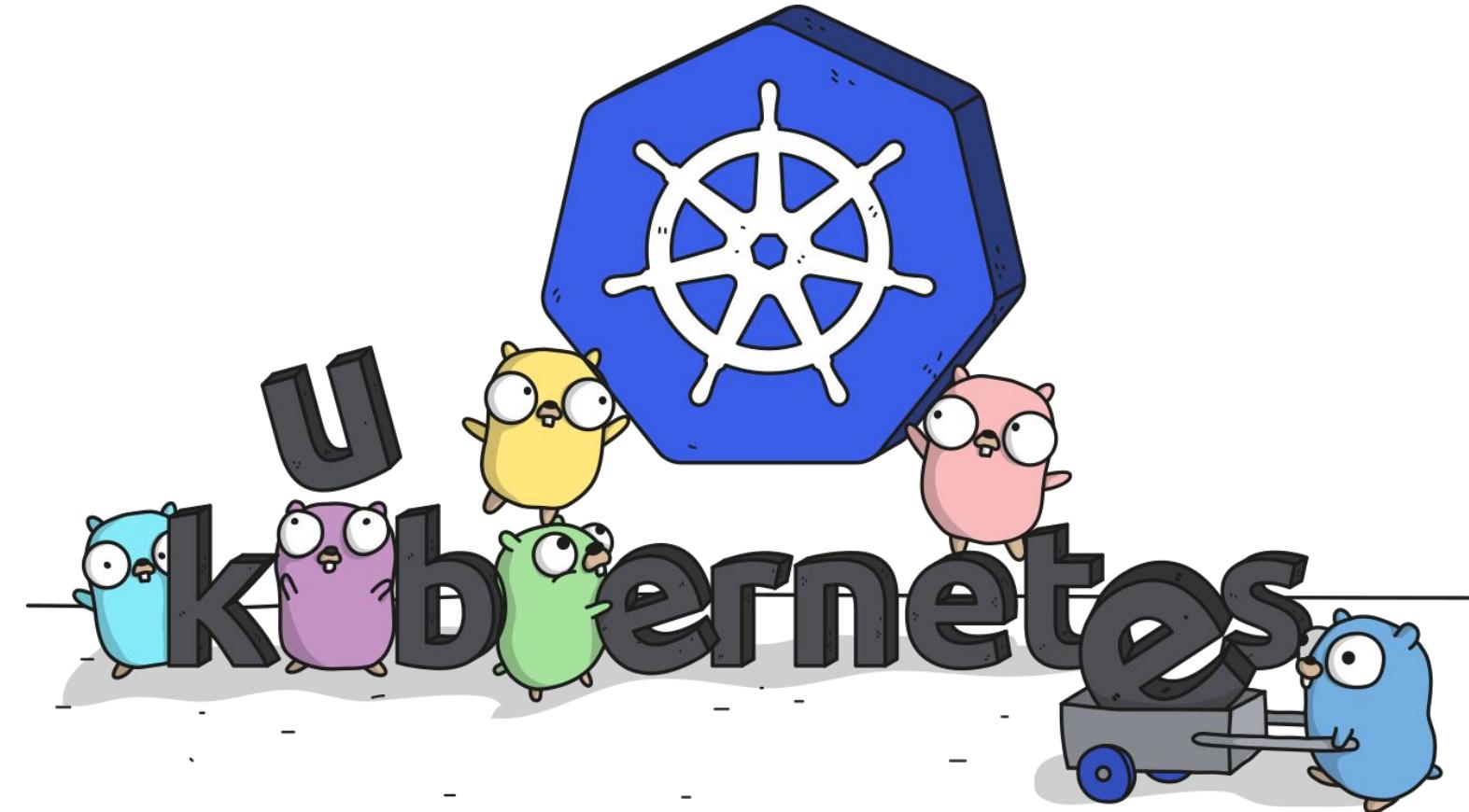
Kubernetes for Kids



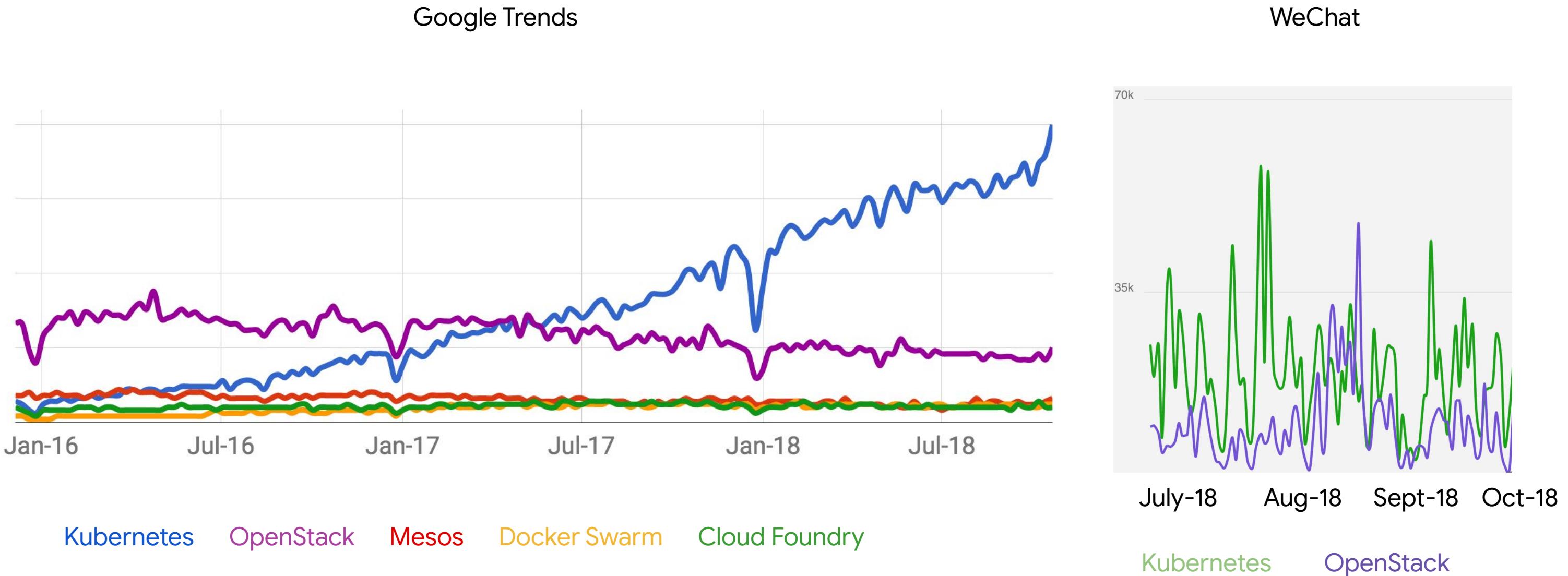
Gojek Open Source with Kubernetes



Contribute to Kubernetes



Kubernetes Search Trends



Kubernetes Incredible Velocity (last 365 days)!

55 000+
users on
Slack

35 000+
Kubernetes
jobs

32 000+
human
commits

51 000+
opened
Pull Requests

88 000+
Kubernetes
professionals

50 000+
edX course
enrolls

73 000+
opened
issues

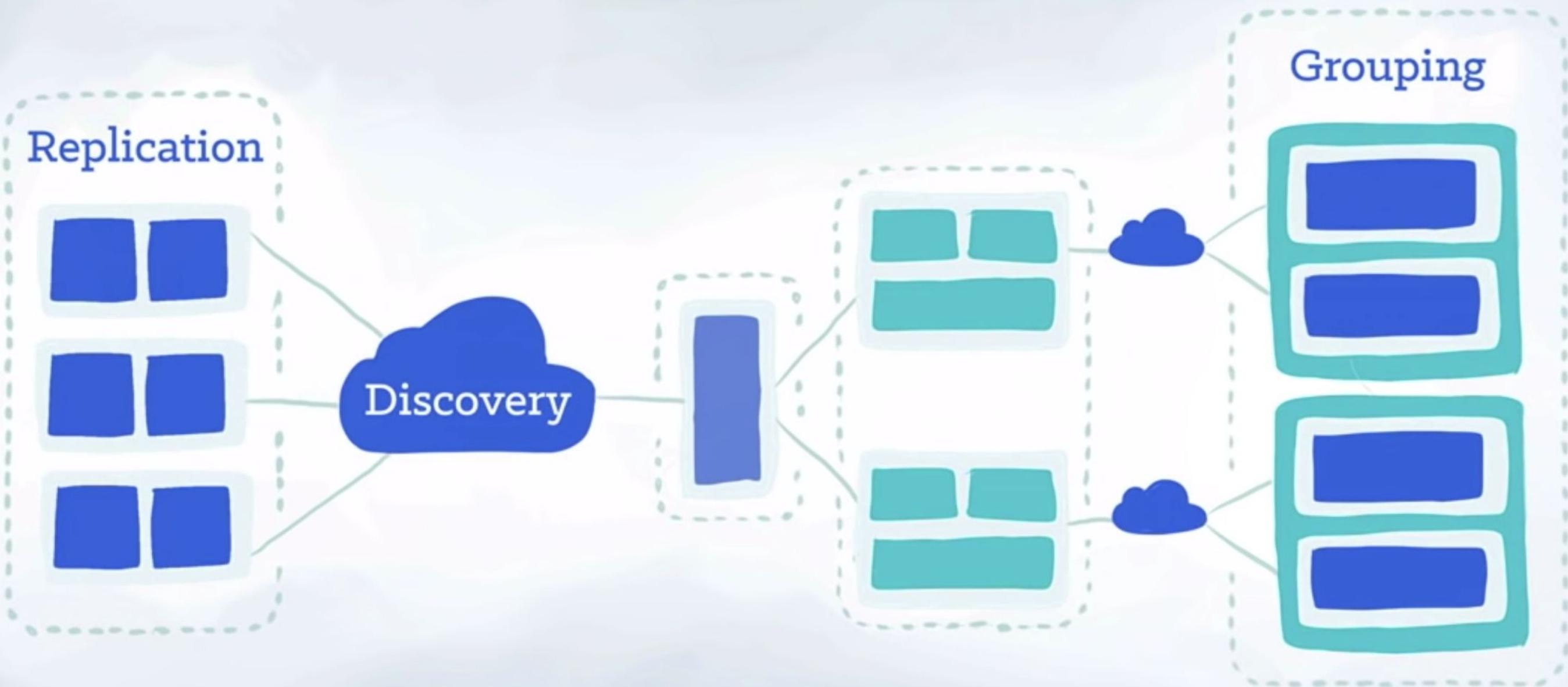
15 000+
contributors

318 000+
Github
comments

Last updated:
09.01.2019



Source: [Children's Illustrated Guide](#)





Illustrated

The Children's Guide to

^Kubernetes

Introducing
Phippy and Friends



Phippy



Goldie



Zee



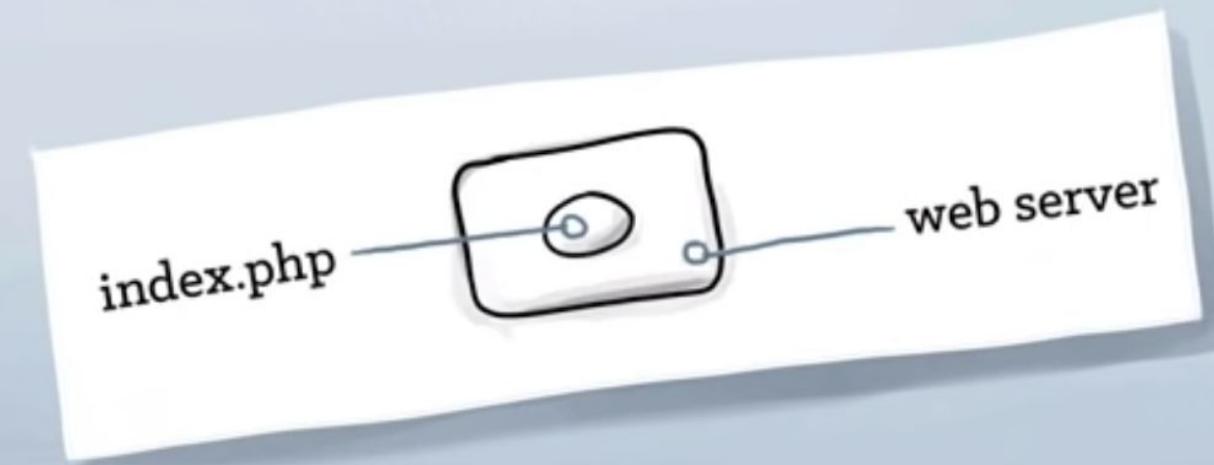
Captain Kube



Source: [Children's Illustrated Guide](#)

The Environment

- The app itself
- Supporting structure
 - › The Web Server
 - › Various pieces of the OS

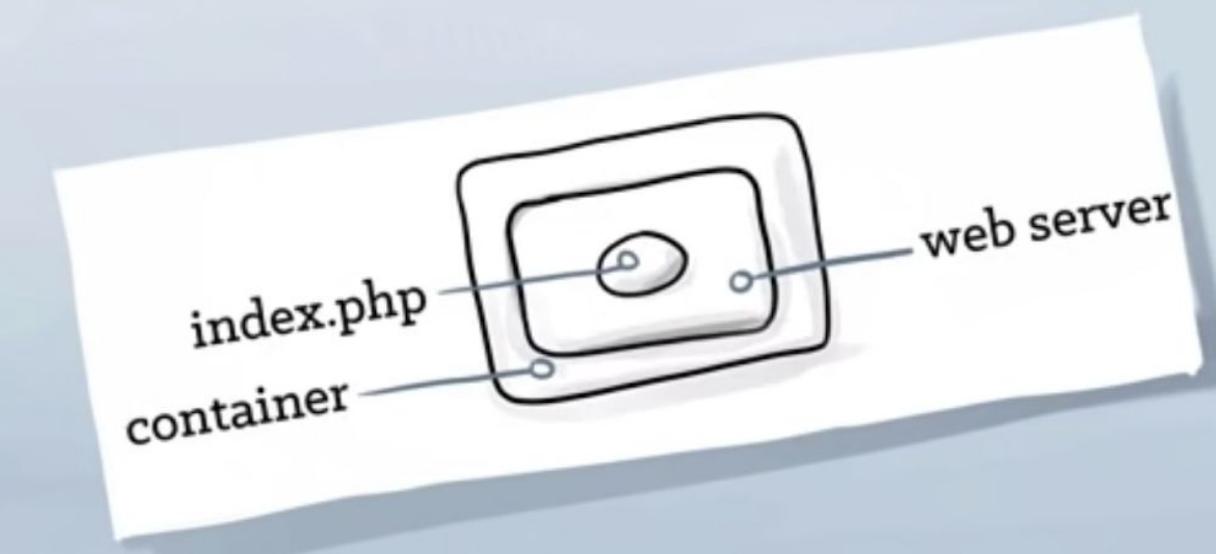




Source: [Children's Illustrated Guide](#)

Containers

- It needs to be managed
- Networking is hard
- Containers must be scheduled, distributed, and load balanced
- And the data's got to persist *somewhere*





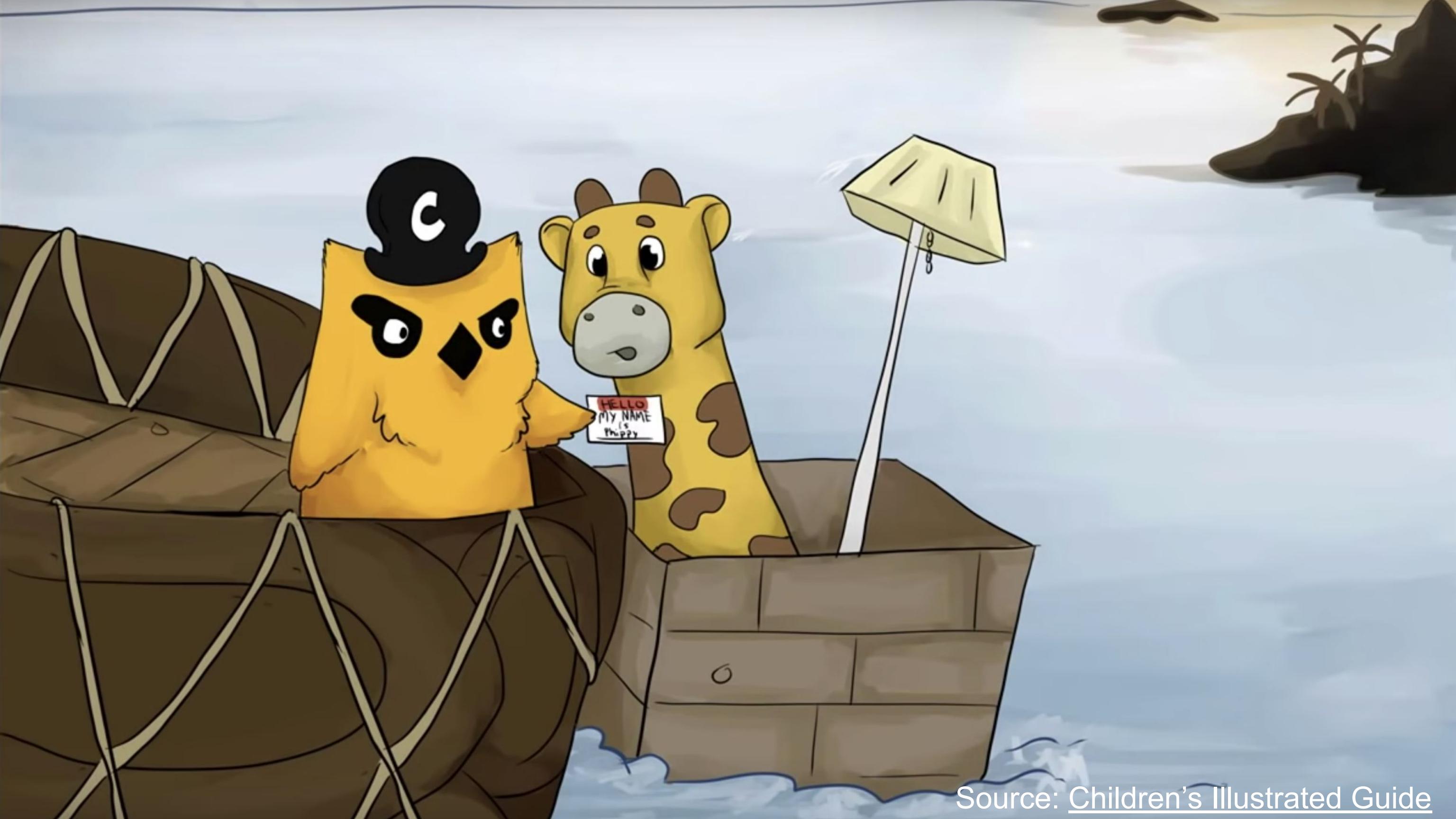
Source: [Children's Illustrated Guide](#)

Kubernetes

- “Kubernetes” is Greek for captain or pilot
- We get the words *Cybernetic* and *Gubernatorial* from it
- Phi-Beta-Kappa: Philsophia Biou Kubernetes (Love of Wisdom Pilots life)



kubernetes



Source: [Children's Illustrated Guide](#)

Kubernetes uses labels as “nametags” to identify things

and it can query based on these labels

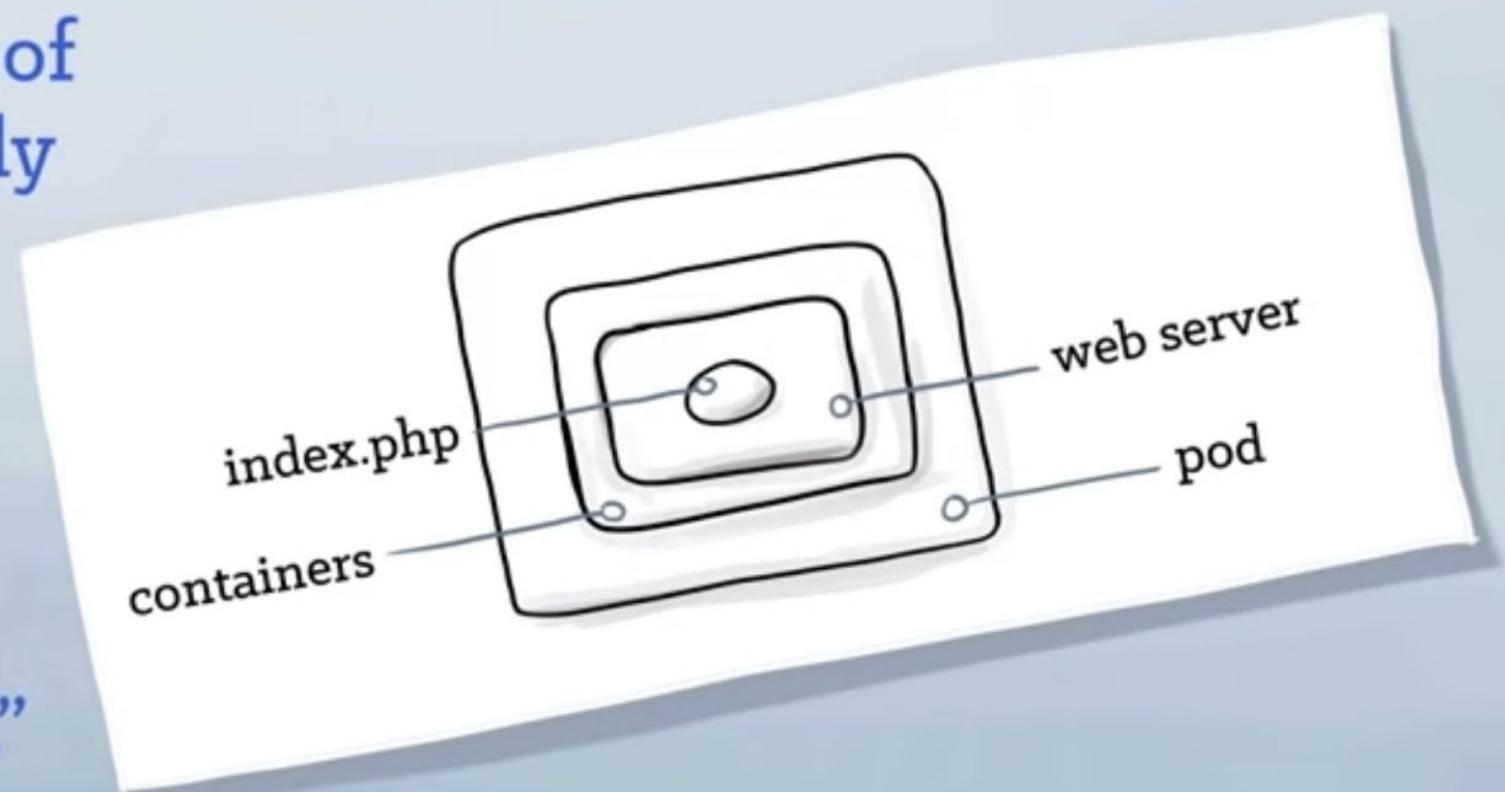




Source: [Children's Illustrated Guide](#)

Pods

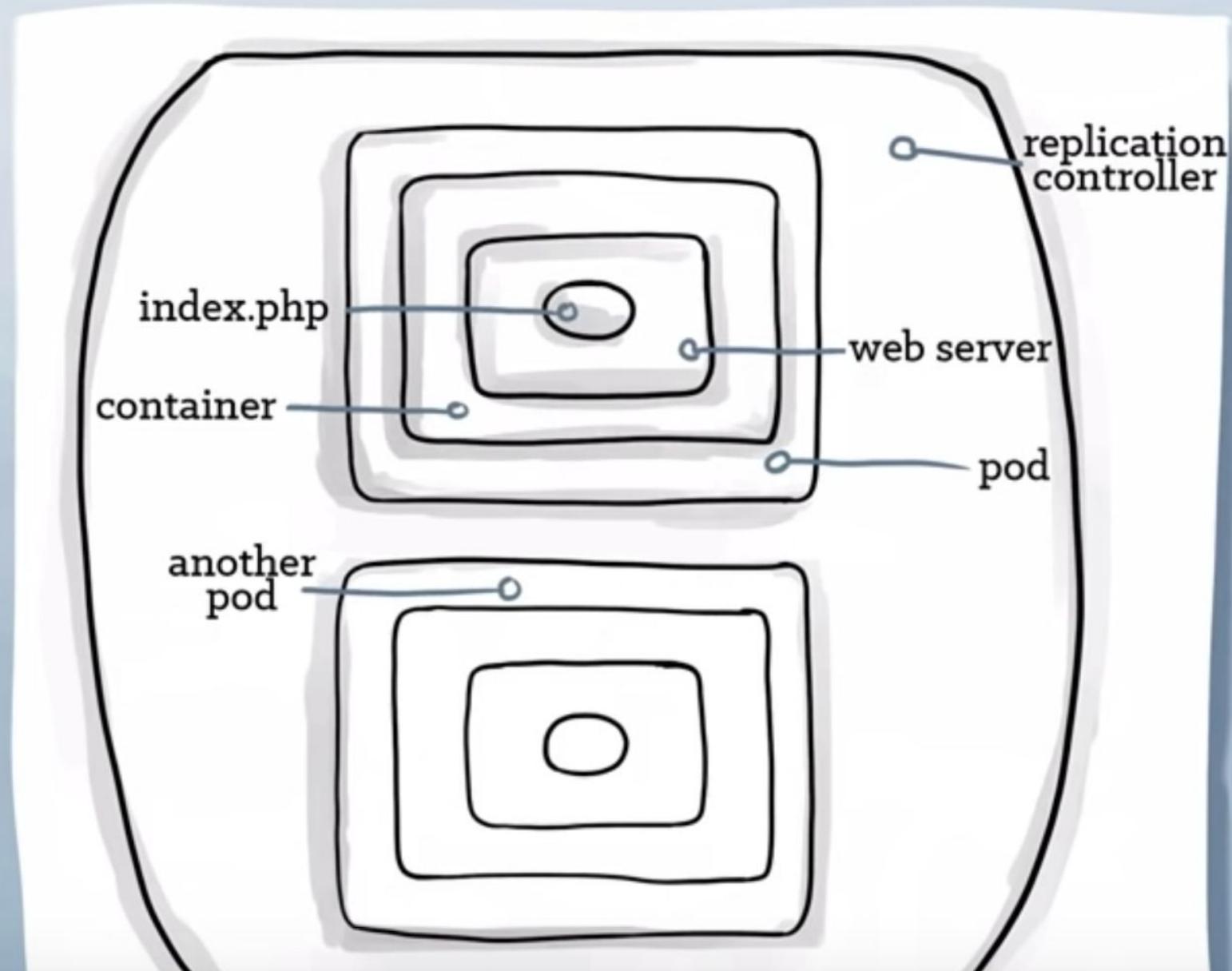
- A pod can hold any number of containers, but usually it only holds two.
- We pretend one of those containers doesn't exist
- ...so it “usually only has one.”
- A pod is connected via an overlay network to the rest of the environment.





Replication Controllers

- Provides a *pod template* for creating any number of pod copies.
- Provides logic for scaling the pod up or down.
- Can be used for rolling deploys.

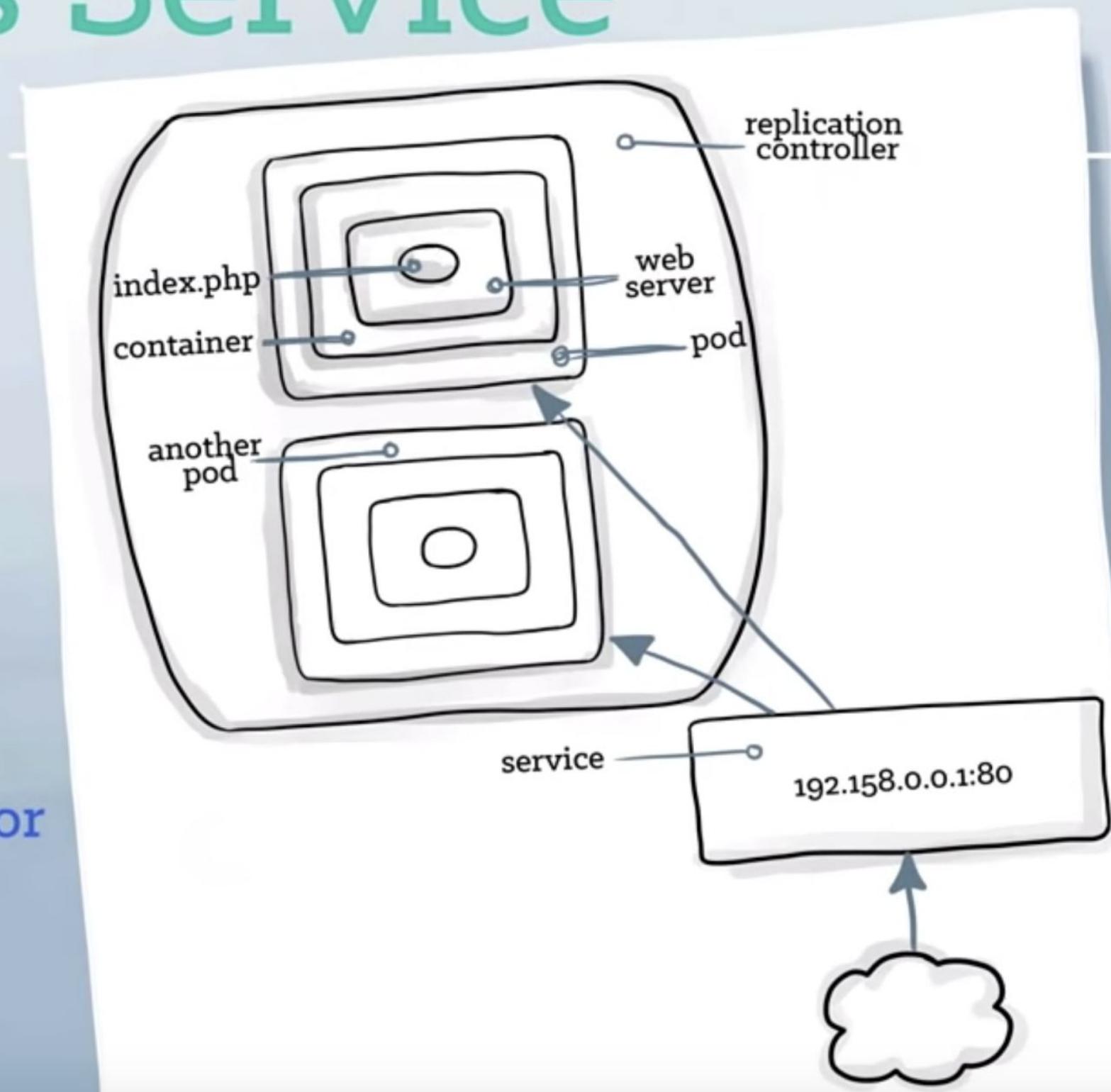




Source: [Children's Illustrated Guide](#)

A k8s Service

- is persistent
- provides discovery
- load balances
- provides VIP layer
- identifies pods by label selector

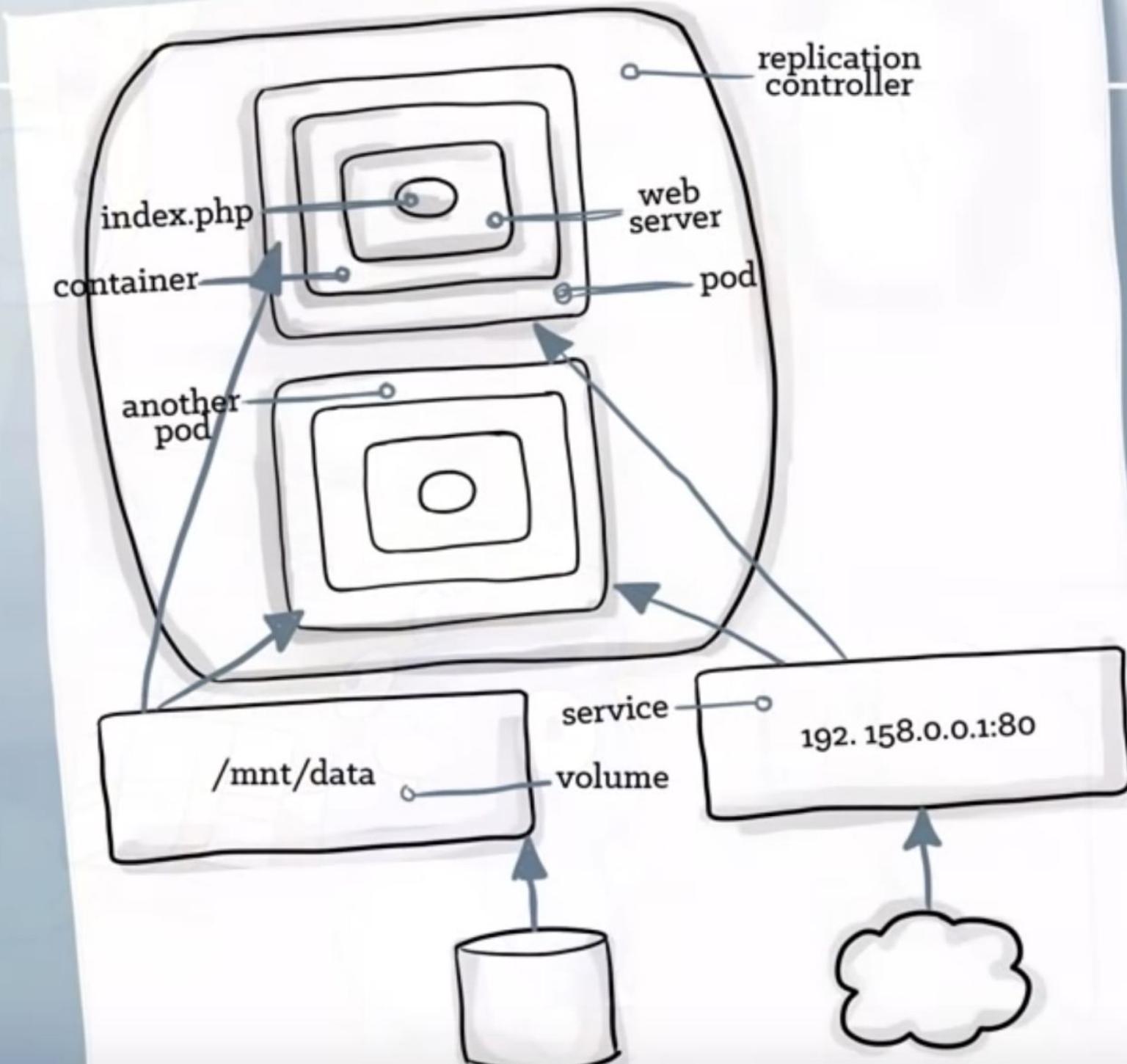




Source: [Children's Illustrated Guide](#)

Volumes

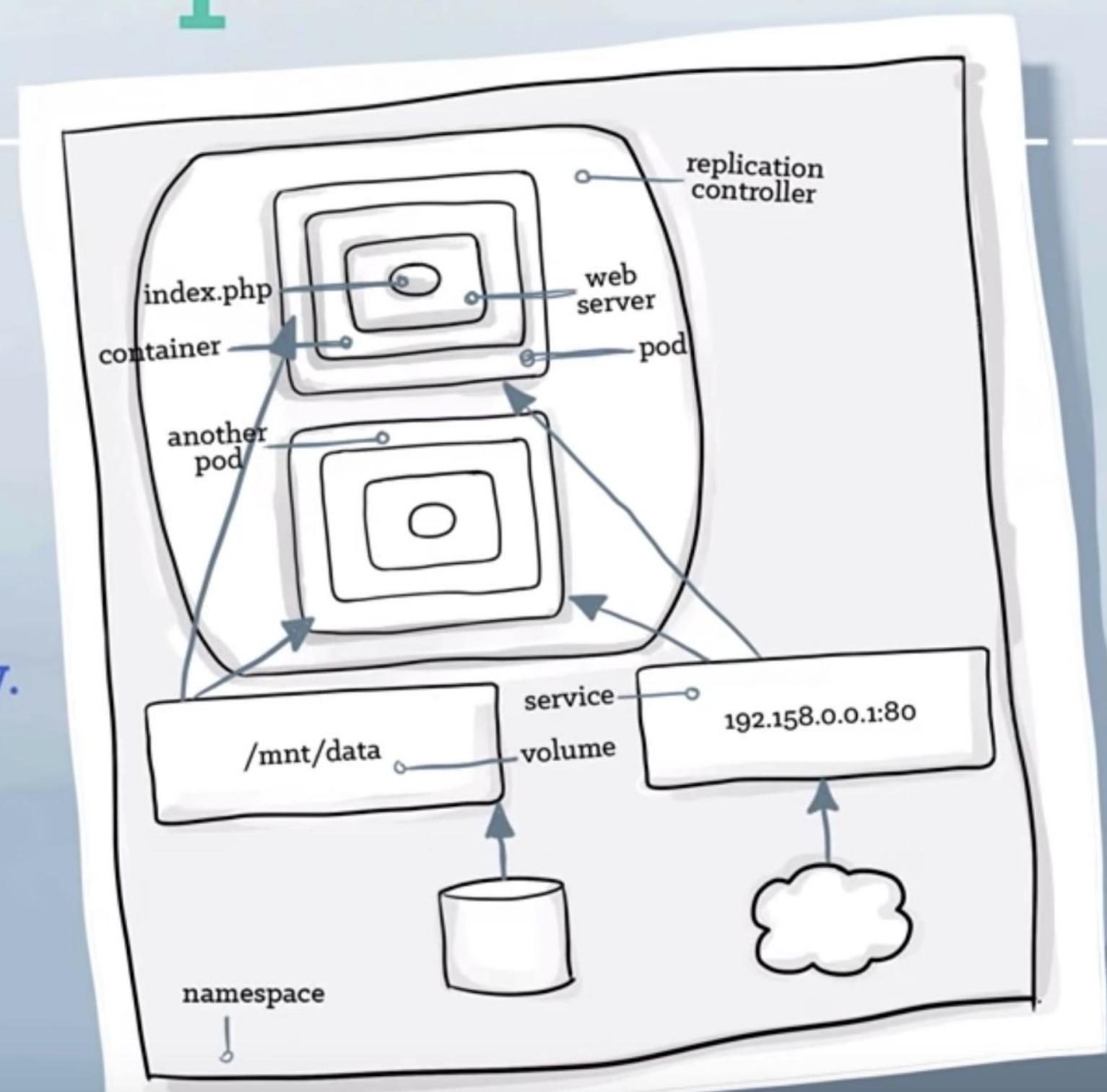
- Providers expose both persistent and ephemeral storage
 - › EBS
 - › Ceph
 - › Gluster...
- Pods can mount volumes like filesystems.





Namespace

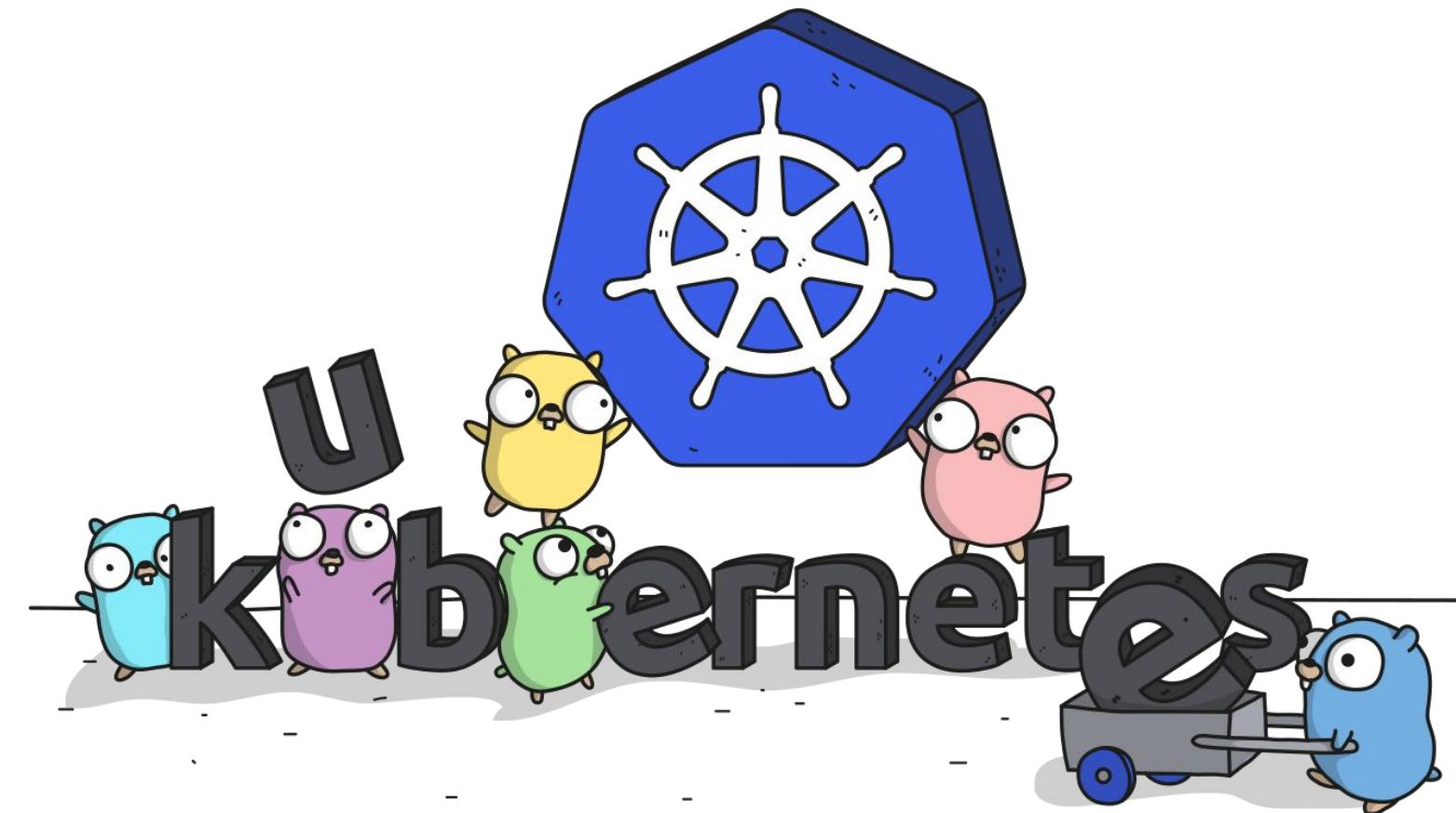
- Segment pods, rcs, volumes, & secrets from each other.
- grouping mechanism
- Not (yet) security minded, but changes services discovery.



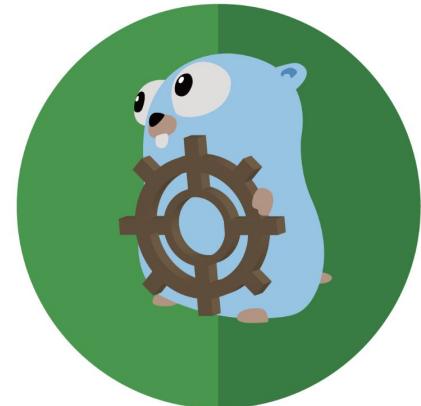


Source: Children's Illustrated Guide

Gojek Open Source with Kubernetes



Proctor



Search or jump to... / Pull requests Issues Marketplace Explore

Watch 25 Unstar 74 Fork 25

gojek / proctor

Code Issues 22 Pull requests 1 Projects 0 Wiki Security Insights

A Developer-Friendly Automation Orchestrator

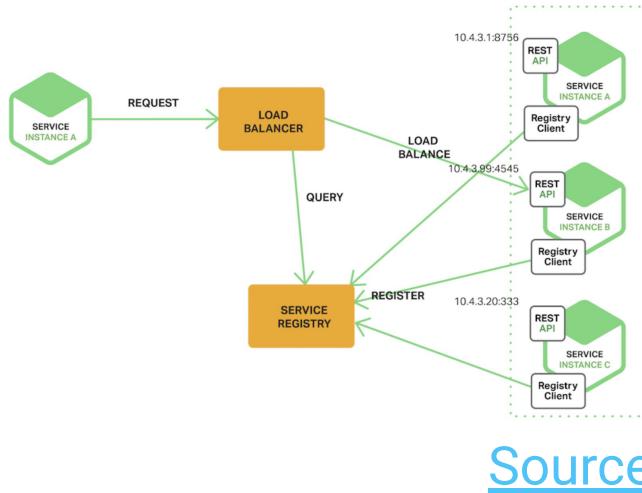
183 commits 1 branch 6 releases 13 contributors Apache-2.0

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

olttwa Merge pull request #84 from olttwa/master ... Latest commit 163ecb0 on Jun 14

Folder	Description	Time Ago
cmd	Use go modules for dependency management	2 months ago
config	Use go modules for dependency management	2 months ago
daemon	Use go modules for dependency management	2 months ago
data	[Amir/Jenson] Displaying message to create config file based on forma...	9 months ago
doc	[Aishwarya Jenson] add schedule commands doc	6 months ago
exec	Add server and cli main files	2 months ago
io	[Amir/Jenson] changes based on PR feedback	9 months ago
migrations	Use go modules for dependency management	2 months ago
procs	Jobs -> Procs	last year
proctord	Use go modules for dependency management	2 months ago
scripts	Use go modules for dependency management	2 months ago
utility/sort	Use go modules for dependency management	2 months ago
.env.sample	Use go modules for dependency management	2 months ago

XDS



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Watch 34 Star 95 Fork 28

gojek / consul-envoy-xds

Code Issues 5 Pull requests 3 Projects 0 Wiki Security Insights

Envoy XDS backed by Consul

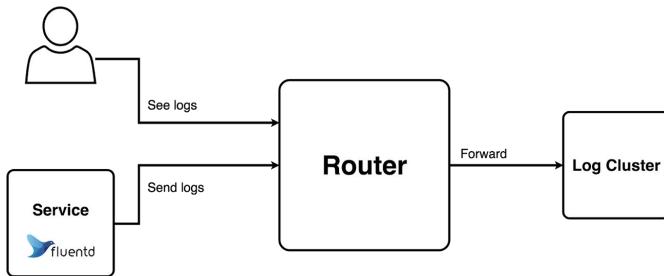
45 commits 1 branch 0 releases 9 contributors Apache-2.0

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

akula1001 Merge pull request #28 from lukluk/enable_health_check_catalog_svc ... Latest commit 1389b68 on Apr 5

File	Description	Time
.circleci	install consul for ci	10 months ago
agent	[lukluk] Implement discover catalog service using health/service api ,	5 months ago
app	[lukluk] Implement discover catalog service using health/service api ,	5 months ago
cmd	converting the project to dep, updating the readme	last year
config	[lukluk] Implement discover catalog service using health/service api ,	5 months ago
eds	[lukluk] Implement discover catalog service using health/service api ,	5 months ago
edswatch	add support to watch multiple services and configure whitelisted rout...	10 months ago
pubsub	fix intermittently failing test	9 months ago
stream	[Vinod Dhanesh] Breaks out of subscription loop when err is returned ...	7 months ago
.dockerignore	Using the circleci built binary for docker build	last year
.gitignore	add support to watch multiple services and configure whitelisted rout...	10 months ago
Dockerfile	Using the circleci built binary for docker build	last year
Gopkg.lock	[lukluk] Implement discover catalog service using health/service api ,	5 months ago

BaritoLog



fluentd



Search or jump to... / Pull requests Issues Marketplace Explore

BaritoLog / BaritoMarket Watch 11 Star 24 Fork 6

Code Issues 3 Pull requests 3 Projects 0 Wiki Security Insights

On-demand logging infrastructure platform

697 commits 3 branches 18 releases 10 contributors

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

poedja and giosakti Fix: Error when editing bootstrap attributes (#131) ... Latest commit c7b7fe3 9 days ago

app Fix: Error when editing bootstrap attributes (#131) 9 days ago

bin [opan] More adjustment in app_groups authorizations last year

blueprints [gio] fix gitignore last year

config Add require resolv-replace 13 days ago

db Delete obsolete migration seed 12 days ago

lib [opan] Refactor app group role relation to user 11 months ago

log Initial Commit 2 years ago

public Fix README last year

spec Fix: Error when editing bootstrap attributes (#131) 9 days ago

.gitignore [Bherly] Enhance README, ignoring vagrant dir & logs 11 months ago

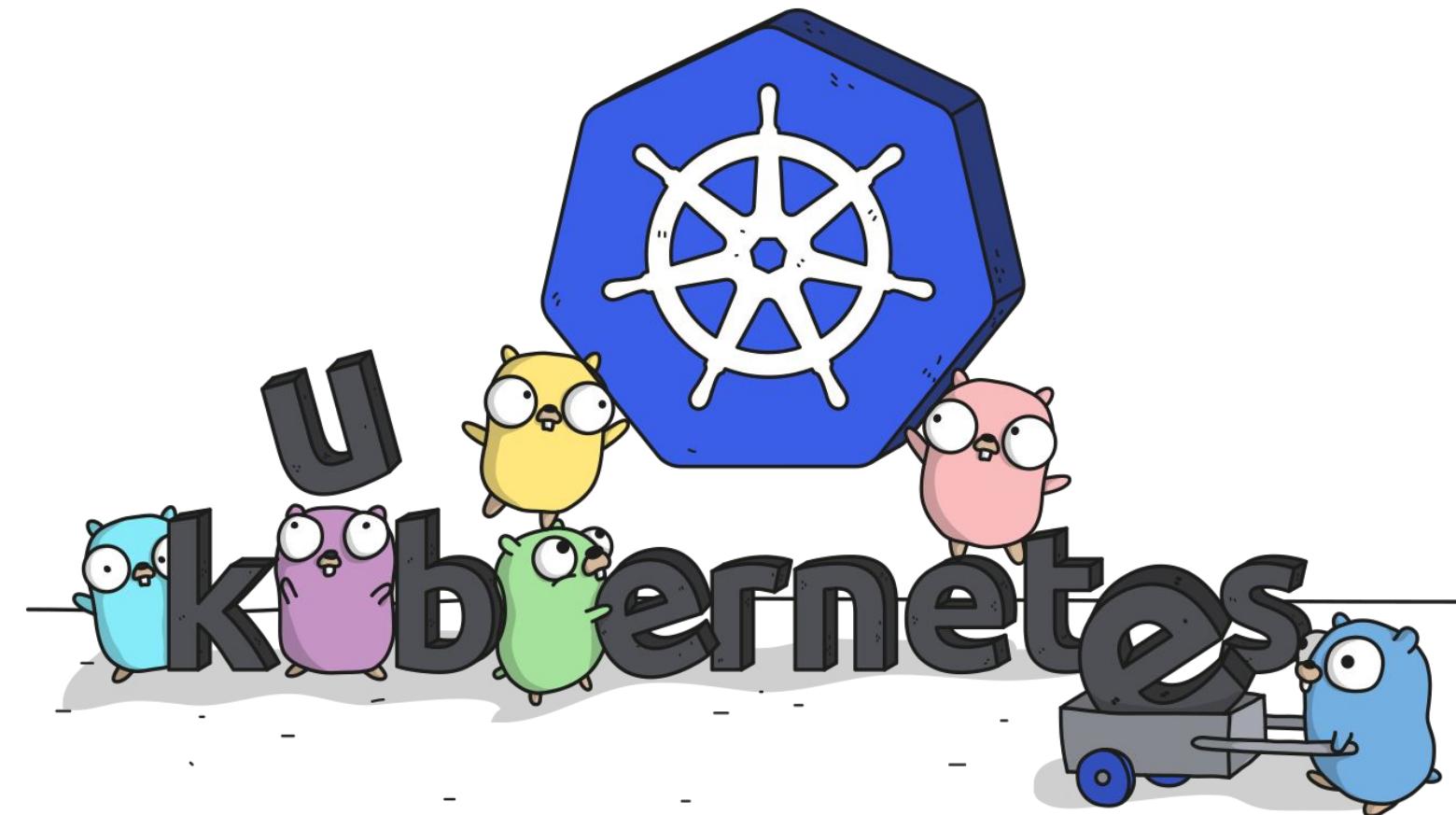
.rspec Refactored specs and standardised testing format last year

.rubocop.yml [opan] add feature and update specs last year

.travis.yml [gio] remove duplicate addon key last year

Gemfile replace deprecated chromedriver-helper gem with webdrivers 24 days ago

How to contribute to:



Contributing is not only about code

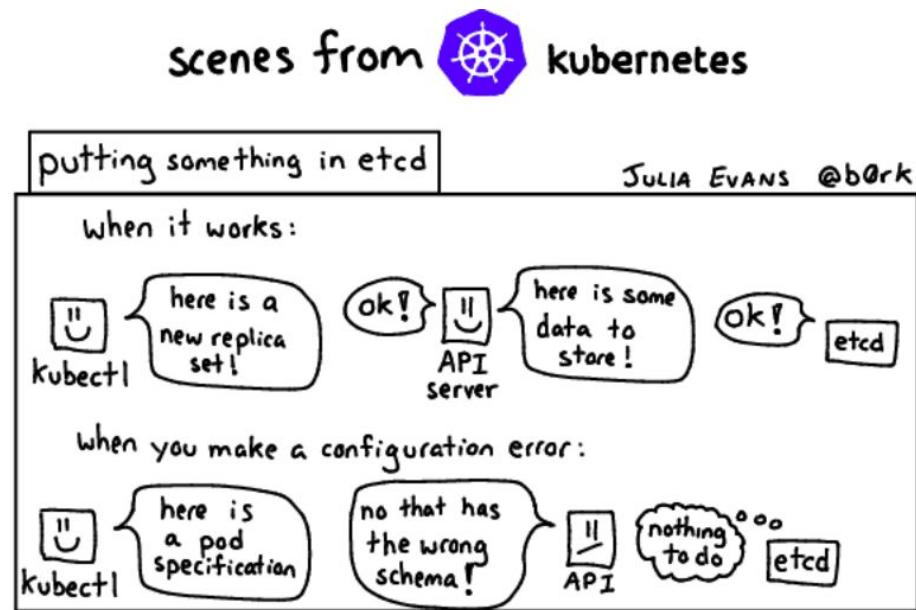
It is about helping a community

Help the Community

- Blogposts
- StackOverflow
- Slack
- Note-taking
- Be a part of the release team
- Project management
- Technical architecture

Get creative!

Draw and explain



[Julia Evans](#)

Quizes!



Lachlan Evenson

@LachlanEvenson

Following

#k8s jeopardy q5. This allows Kubernetes to be extended with additional APIs, beyond what is offered by the core Kubernetes APIs.

11:03 PM - 7 Nov 2017

3 Retweets 8 Likes



4

3

8



[Lachlan Evenson](#)

Contributing Code!

1. Choose what to work on

“I don’t know Go”

THAT’S OK!

1. Choose your language

- Go - [kubernetes/kubernetes](#)
- Python - [kubernetes-incubator/client-python](#)
- C# - [kubernetes-client/csharp](#)
- Java - [kubernetes-client/java](#)
- Javascript - [kubernetes-client/javascript](#)
- Ruby - [kubernetes-client/ruby](#)
- Typescript - [kubernetes-client/typescript](#)

2. Choose your project

- [Kubernetes](#)
- [Helm](#)
- [Kops](#)
- [Minikube](#)
- [Dashboard](#)

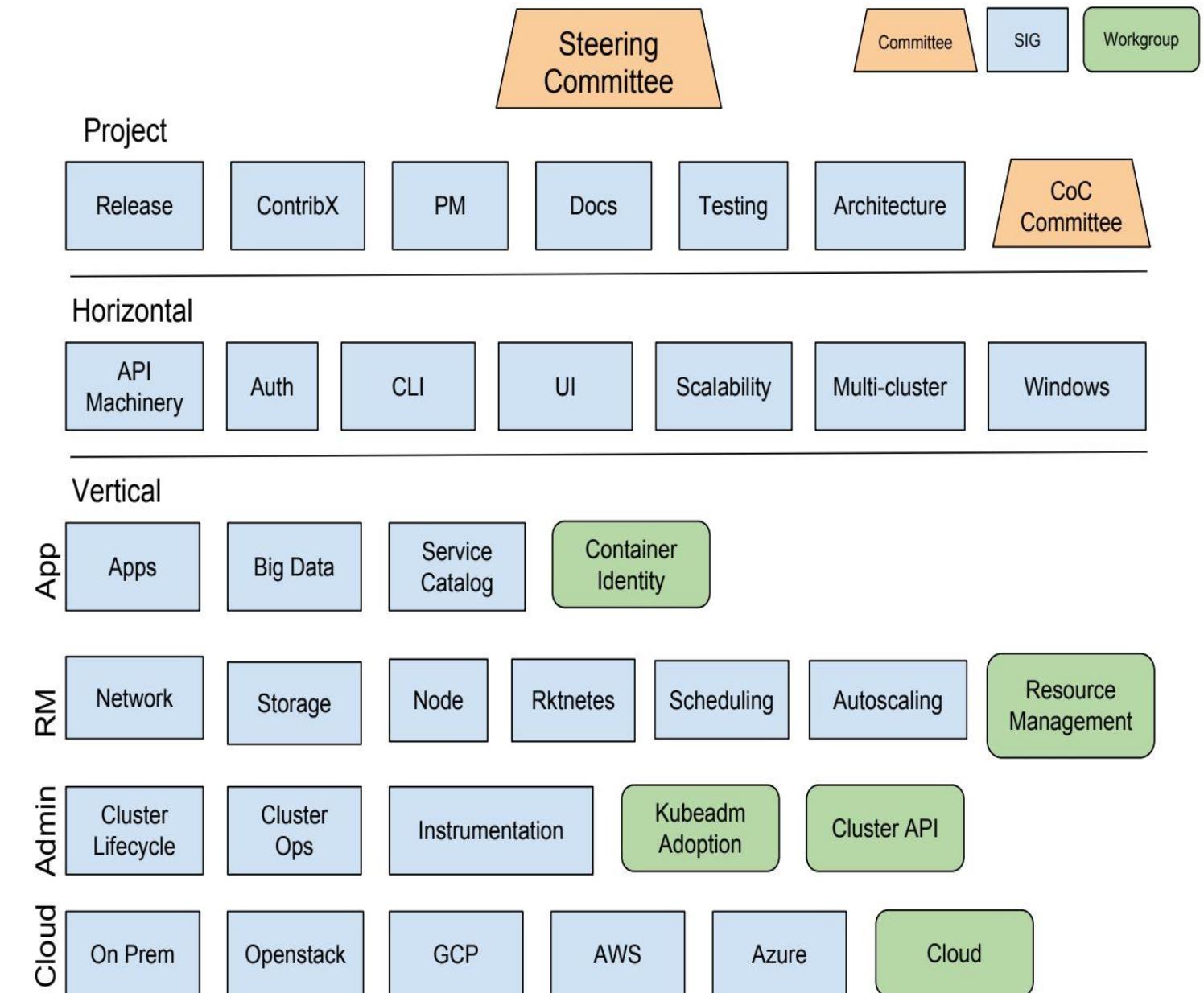
..and many more!

“K8s size is
overwhelming”

Let’s break it down!

3. Choose a SIG

SIG = Special Interest Group



Complete list:

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

“Everyone is super smart.
It’s intimidating!”

They are smart and
nice. Don’t be scared!



girikuncoro commented on Jun 1, 2017

Author

Member

+ 😊 ...

/assign @brendandburns



🤖 k8s-ci-robot assigned brendandburns on Jun 1, 2017



dims commented on Jun 1, 2017

Member

+ 😊 ...

@k8s-bot ok to test



🤖 k8s-ci-robot removed the **needs-ok-to-test** label on Jun 1, 2017



brendandburns commented on Jun 1, 2017

Member

+ 😊 ...

Thanks @girikuncoro I think you need to re-run `hack/generate-bindata.sh`

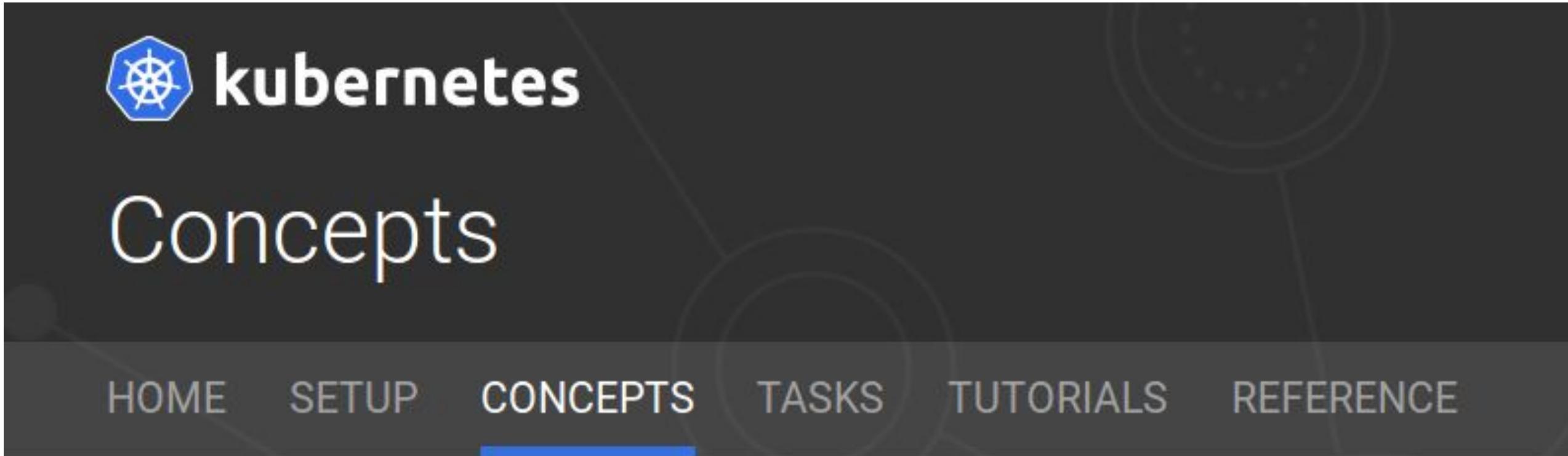
4. Reach out!

Via:

- The SIG Slack channel
- Regular SIG video meetings
- SIG mailing lists

2. Understanding the architecture

1. Docs



Start here:

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

2. Design Proposals

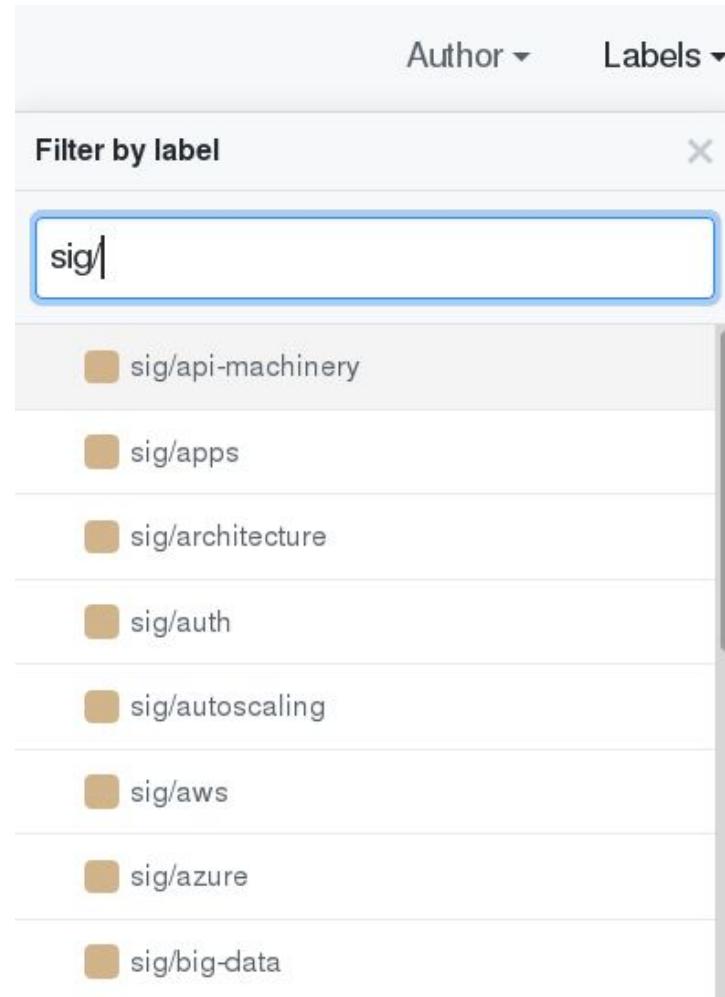
Understand the architecture and explore the design proposals!

Branch: master ▾	community / contributors / design-proposals /	Create new file	Upload files	Find file	History
	cblecker Fix anchor in pod-preset.md				Latest commit c43b1fe 2 days ago
	..				
	api-machinery	Fix broken links			7 days ago
	apps	removed autogenerated munge analytics from files			29 days ago
	architecture	Fixes relative link to Architectural Roadmap			11 days ago
	auth	Merge pull request #1403 from chenhonggc/secrets			17 days ago
	autoscaling	hpa: fix invalid links			3 days ago
	aws	removed autogenerated munge analytics from files			29 days ago
	cli	removed autogenerated munge analytics from files			29 days ago

“Design proposals are
hard to understand”

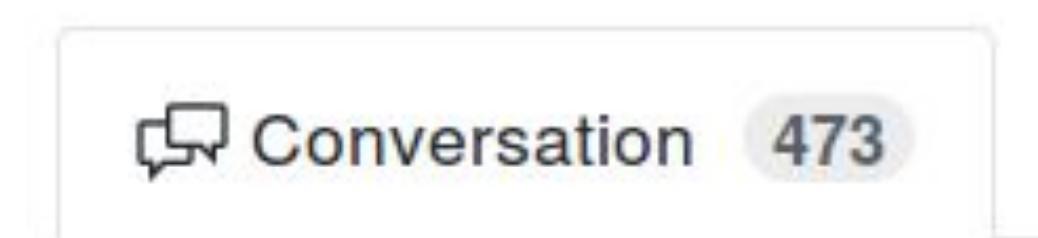
Read them again
to let it slowly soak in
and
ask questions

3. Checkout PRs/Issues



Filter using labels

Read the comments



4. Docs (again!)

But this time **YOU** write it!

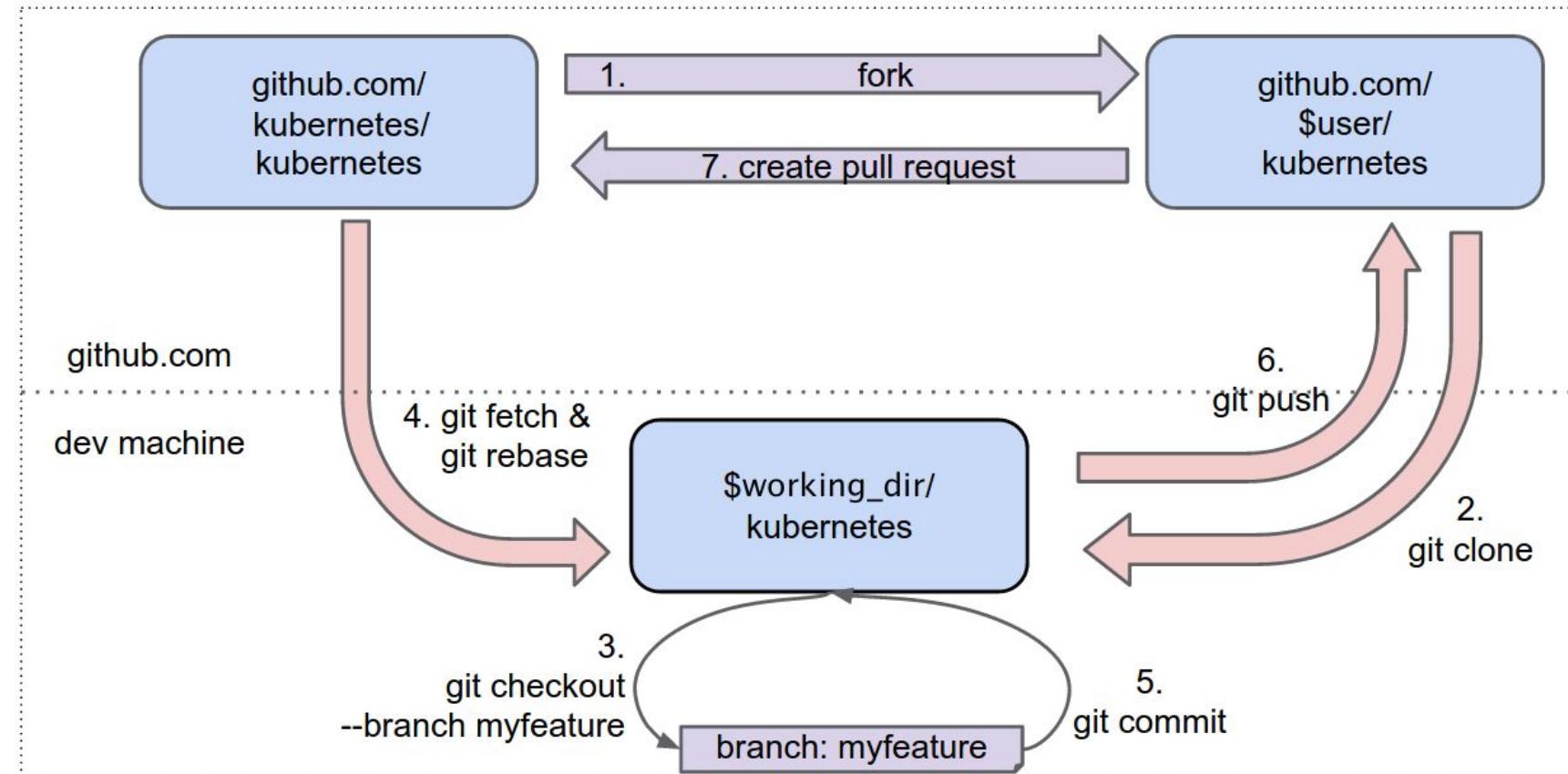
4. Docs (again!)

But this time **YOU** write it!

BOOM...YOU HAVE ALREADY CONTRIBUTED NOW!

3. Making Code changes

1. Setup dev environment



Community repo:

<https://github.com/kubernetes/community/tree/master/contributors/devel>

2. Choose an issue

- A good first issue - `is:open is:issue
label:good-first-issue label:help-wanted`
- Ask!
 - in a SIG slack channel
 - in SIG meetings
 - on mailing lists

3. PR process

- Try to fix the problem
- Ask for help if needed
- Get initial review and address comments
- Write and fix tests
- Ask for approval and get it merged!

4. Triage and Test!

Triage Issues
Test new releases



THIS. WOULD. BE. VERY. HELPFUL.

5. Roadmap

Mentoring program!

<https://github.com/kubernetes/community/tree/master/mentoring>

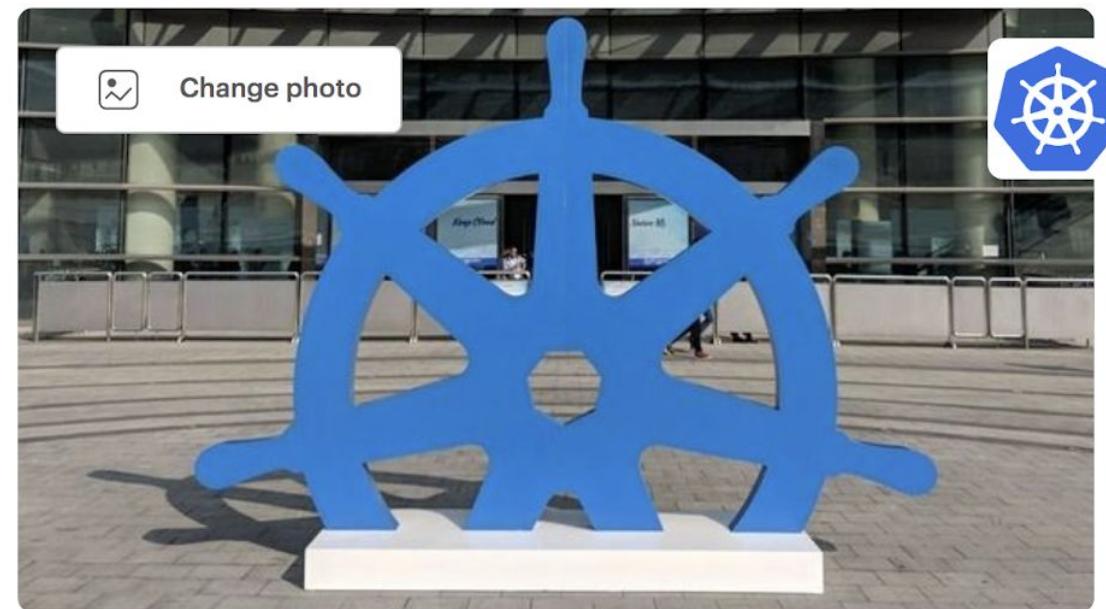
Credit to:

Phippy and Friends

Brendan Burns, Kubernetes Co-founder

Nikhita Raghunath, SIG Contribex Lead





Part of **Cloud Native Computing Foundation (CNCF) – 202**

groups



Jakarta Kubernetes Meetup

Jakarta, Indonesia

1,630 members · Public group

Organized by Giri Kuncoro and 3 others

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What we're about

Meet other developers and users of Kubernetes in Jakarta. Kubernetes is an open source application and infrastructure management platform for...

[Read more](#)

Organizers



Giri Kuncoro and 3 others

[Message](#)

Members (1,630)

[See all](#)

<https://www.meetup.com/jakarta-kubernetes/>



Part of **Cloud Native Computing Foundation (CNCF) – 208 groups**

Microservice JKT/Cloud Native User Group

• Jakarta, Indonesia

• 705 members · Public group

• Organized by **Giri Kuncoro** and 3 others

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What we're about

This is a group for anyone interested in learning, sharing and discussing all things related to microservices app development including but not limited to...

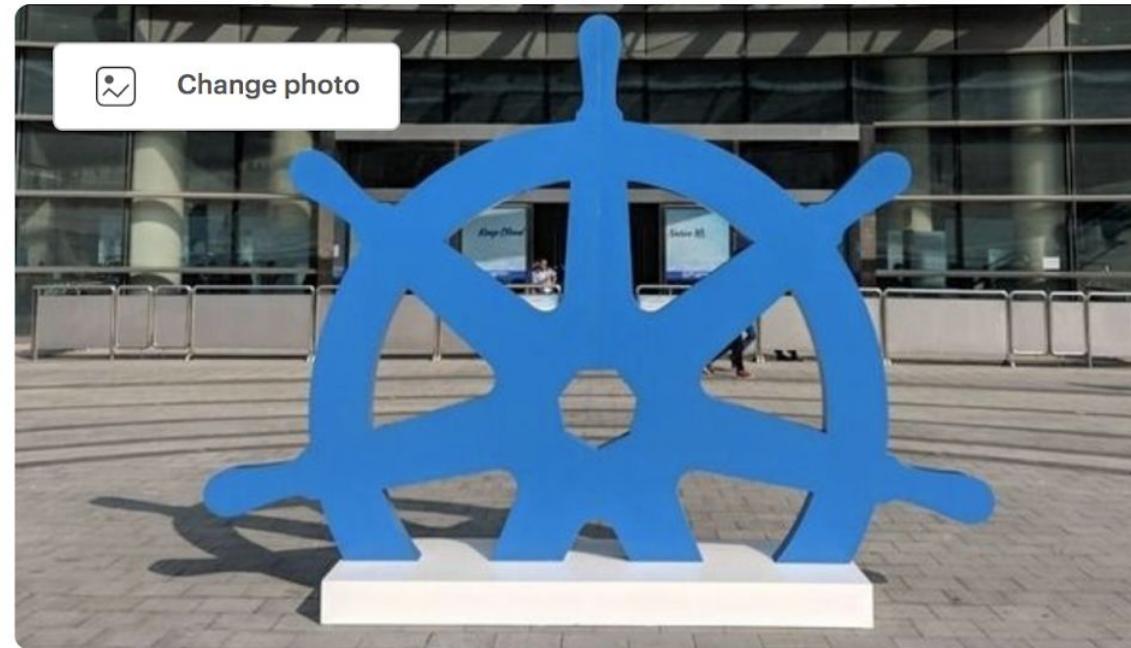
[Read more](#)

Organizers



Giri Kuncoro and 3 others

[Message](#)



Kubernetes and Cloud Native Bandung

Bandung, Indonesia

61 members · Public group

Organized by Giri Kuncoro and 2 others

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What we're about

Meet other developers and users of Kubernetes and Cloud Native technologies in Bandung....

Organizers

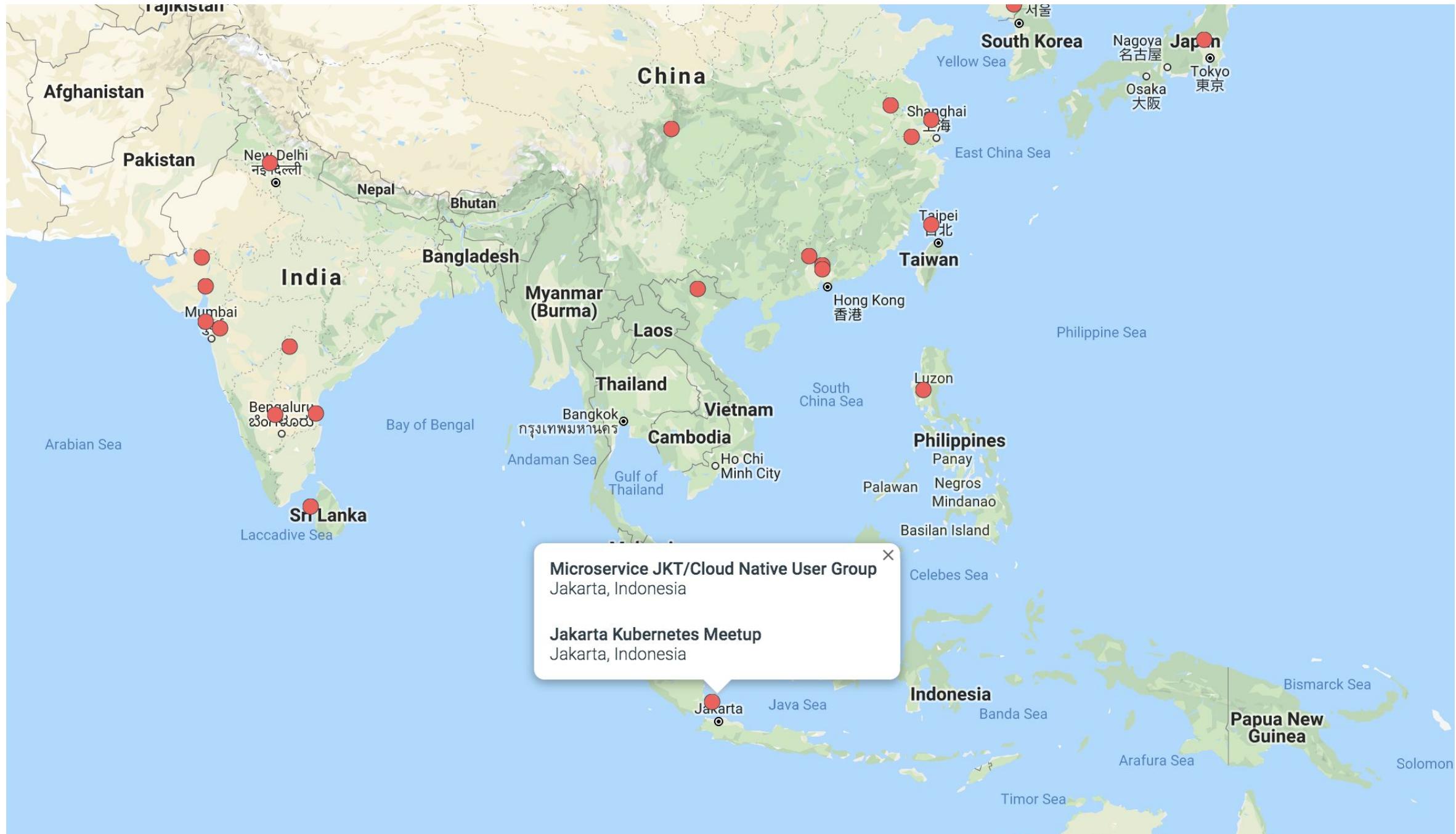


Giri Kuncoro and 2 others

[Message](#)

<https://www.meetup.com/kubernetes-and-cloud-native-bandung/>

<https://www.meetup.com/pro/cncf>





Jakarta Kubernetes Meetup 001

@GOJEK, Jan 2019







t.me/kubernetesindonesia



Telegram

Kubernetes Indonesia
837 members

Pinned message
Reminder Kita bakal ada JK8s meetup edisi april hari kamis, 11 Apr...

06 April
Yanuar Arifin joined the group
Amril Syaifa joined the group
Mohamad Jamil joined the group

Zufar Dhiyaulhaq 23.14
Danni Setiawan
setup pakai apa? manual?
Eh ini error karena load balancernya pakai octavia bukan pakai Ibaas2 😂

Today

Giri admin ✓ 09.36

JAKARTA
KUBERNETES
MEETUP
AT CBN CLOUD

April 11, 2019, 18:29 – 21:09
Marquee Offices, Duke Room, Cyber 2 Tower, Lt. 17
Jl. HR Rasuna Said Blok X5 No. 13
bit.ly/jk8s-cbn

IHW FIRQOTUL AINI
Software Engineer @ Traveloka
"Understanding Kubernetes API Server"

LUKLUK SANTOYO
Product Engineer @ GOJEK
"Understanding Consul in Kubernetes"

Sponsored by Hewlett Packard Enterprise CBN Cloud

Reminder
Kita bakal ada JK8s meetup edisi april hari kamis, 11 April 2019, di CBN. Topiknya soal Kube API Server by @irvifa (Traveloka) dan Consul di Kube by Lukluk (GOJEK). Disponsori oleh CBNCloud dan HPE.

Kita juga bakal bagi-bagi stiker dari CNCF dan kaos cloud study jam buat yang terpilih di Kubernetes workshop terakhir. Sampai jumpa!

bit.ly/jk8s-cbn

Giri pinned " *Reminder* Kita bakal ada JK..."

Write a message...



<http://bit.ly/k8s-docs-id-m2>



kubernetes / website

Unwatch releases 166 ★ Unstar 1,491 Fork 5,217

Code Issues 493 Pull requests 155 Actions Projects 2 Wiki Security Insights

Tracking Indonesian Translation Progress (M2) #15341

Open girikuncoro opened this issue 26 days ago · 2 comments

girikuncoro commented 26 days ago • edited Member + ...

This is tracking issue of our progress throughout the 1.16 release cycle.

Maintainers

- @girikuncoro
- @irvifa

For New Contributors

To translate a page:

1. Check that no one else has claimed your page in the checklist and comments below.
2. Comment below with the name of the page you would like to translate. Take only one page at a time.
3. Fork this repo, make your translations, and submit a pull request with `language/id` label!

For more detailed instruction, consult with this [JK8s guide](#). Before contributing, read the [glossary](#) and the [RSNI Glosarium from Ivan Lanin](#) to understand how to translate various technical and Kubernetes-specific terms. (If you're still not sure about something, please don't hesitate to ask in [Slack channel](#), we won't bite 😊)

Also, we haven't written special style guide for writing Bahasa Indonesia. However, in general we can follow the [English style guide](#) with some addition to italicizing imported words.

Assignees: girikuncoro, irvifa

Labels: language/id

Projects: None yet

Milestone: No milestone

Notifications: Customize

You're receiving notifications because you were assigned.

4 participants:

Lock conversation

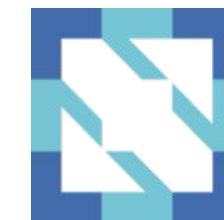


We are hiring!
giri.kuncoro [at] go-jek.com

Thank you!



Giri Kuncoro from  gojek
@girikuncoro
meetup.com/jakarta-kubernetes
t.me/kubernetesindonesia



CLOUD NATIVE COMPUTING FOUNDATION