KubeCon

CloudNativeCon

China 2018

Kubernetes: Use it, Contribute to it, and Enjoy it!

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Github: @xiangpengzhao

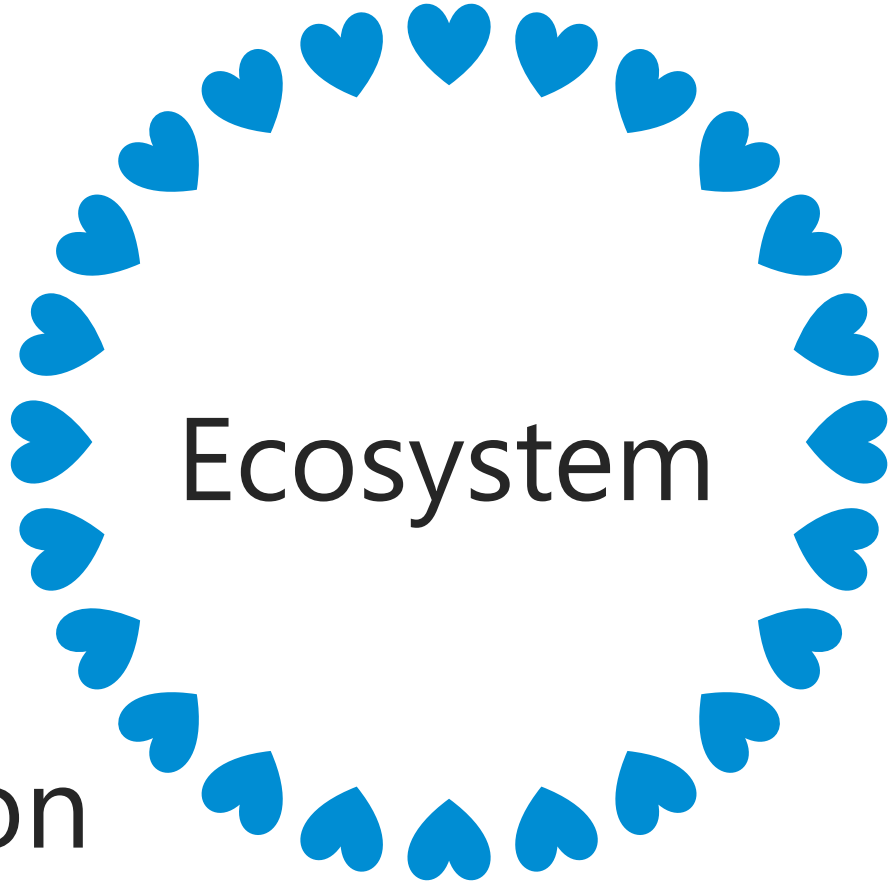
Agenda

1. **The community**
2. How to contribute
3. Versioning
4. The easy way to use it
5. Demo
6. Q & A

The community

Orgs/Repos

SIGs/WGs



Communication

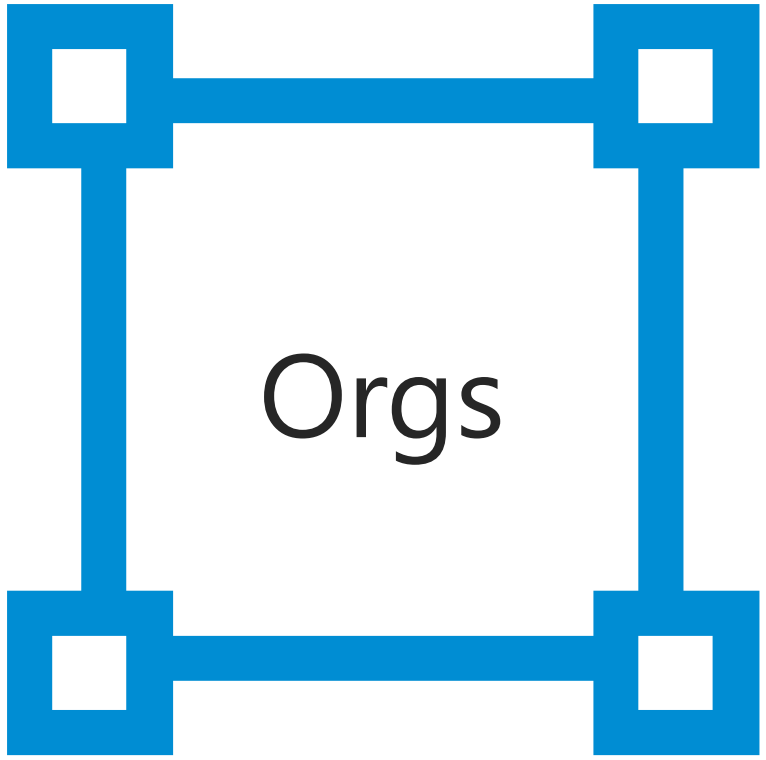
Resources

Orgs/Repos

Kubernetes

Kubernetes Clients

Kubernetes SIGs

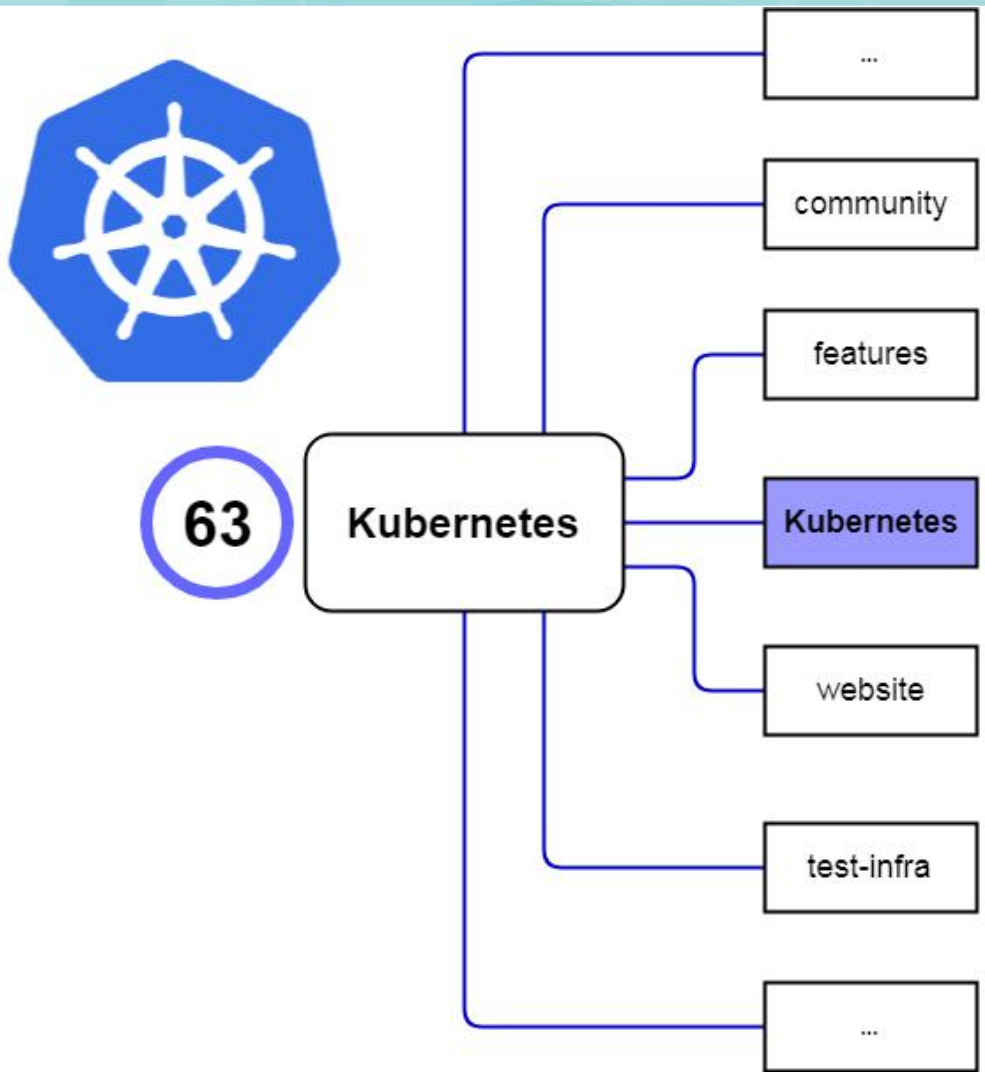


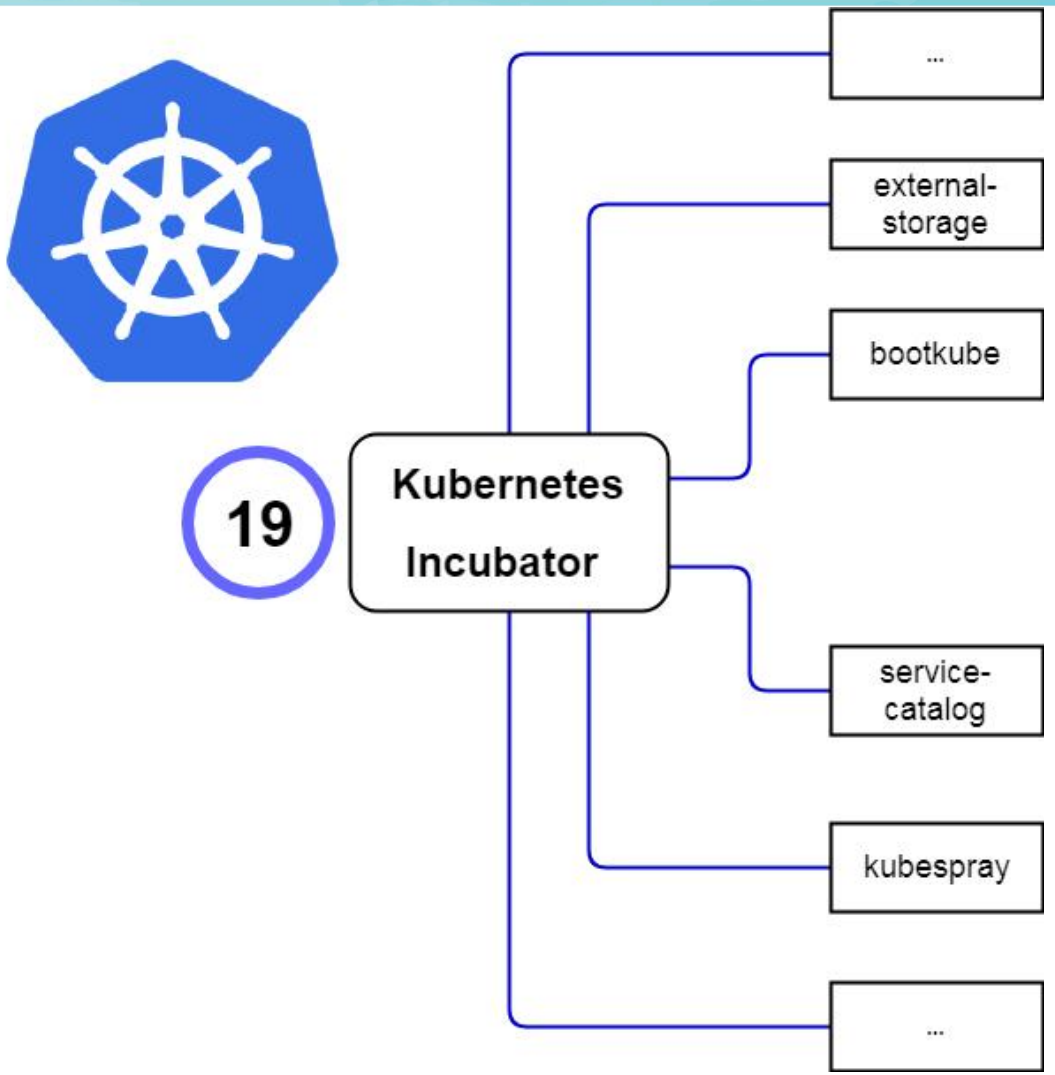
Kubernetes Incubator

kubernetes-csi

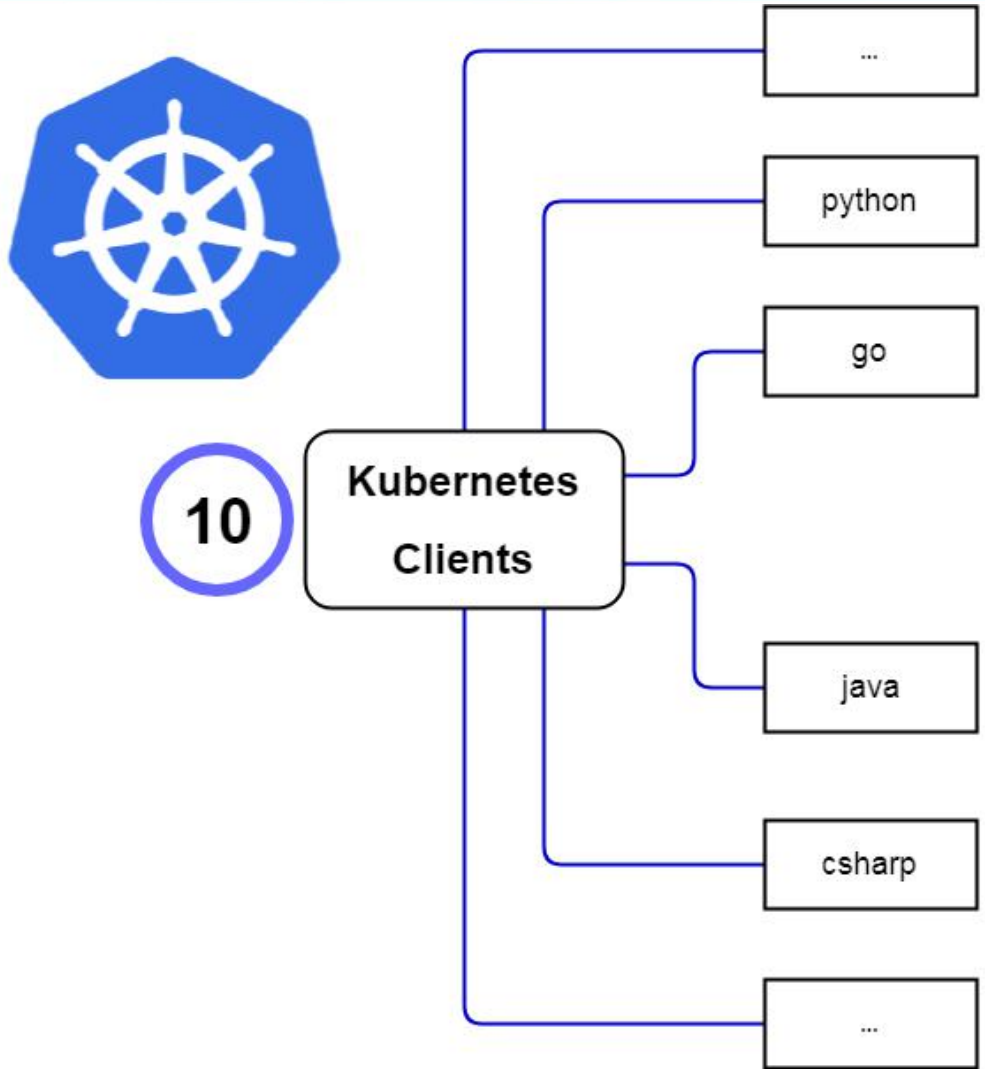
kubernetes-retired

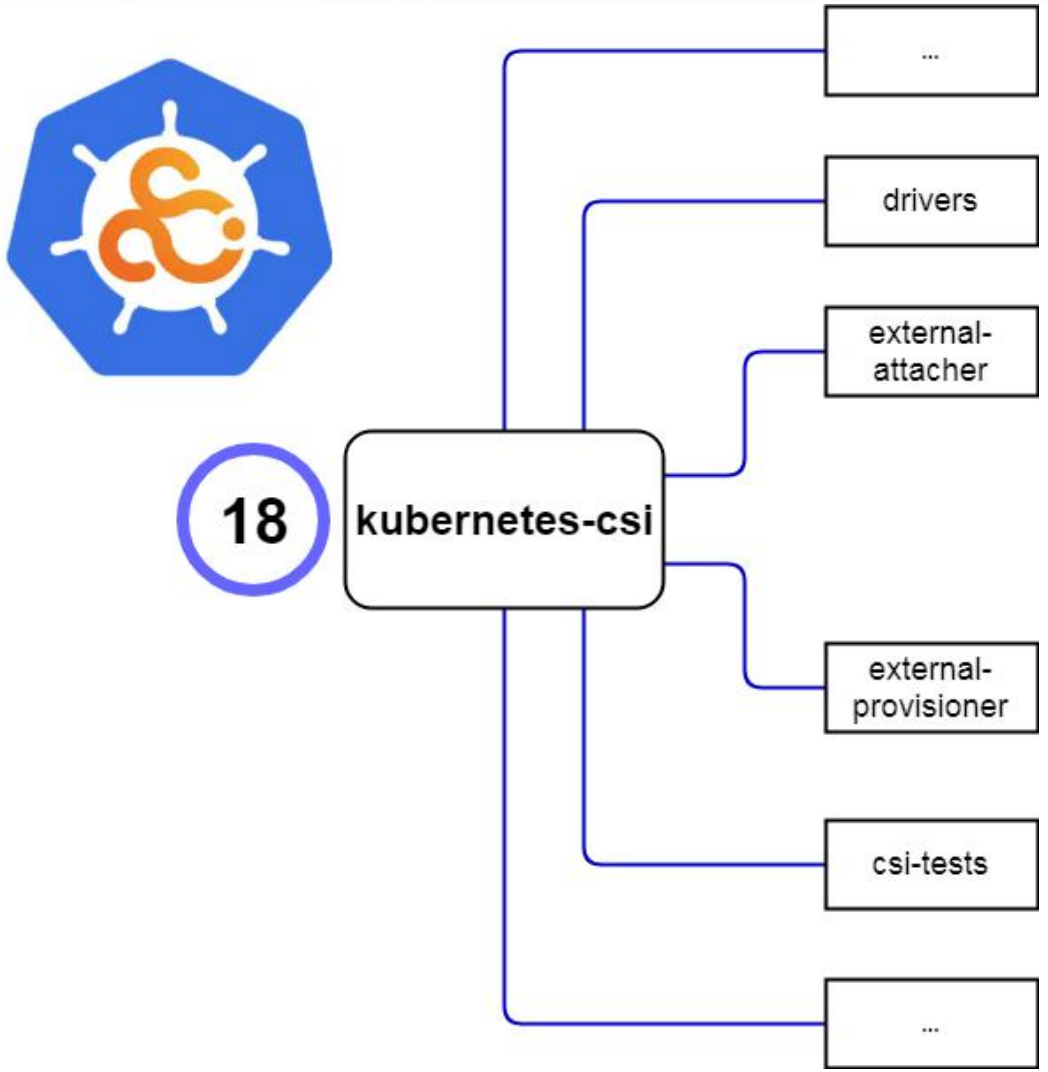
Orgs/Repos


63
Kubernetes
...
community
features
Kubernetes
website
test-infra
...

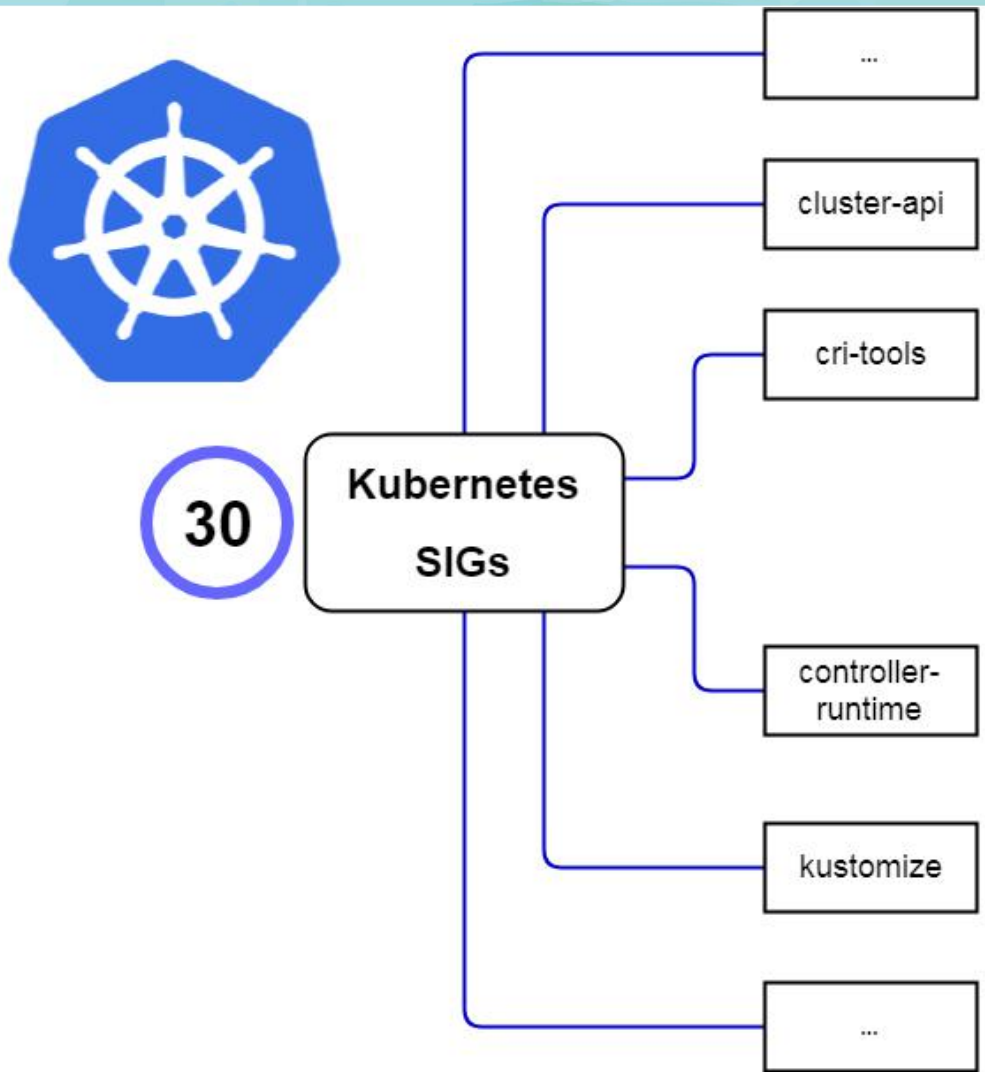

19
Kubernetes
Incubator
...
external-storage
bootkube
service-catalog
kubespray
...

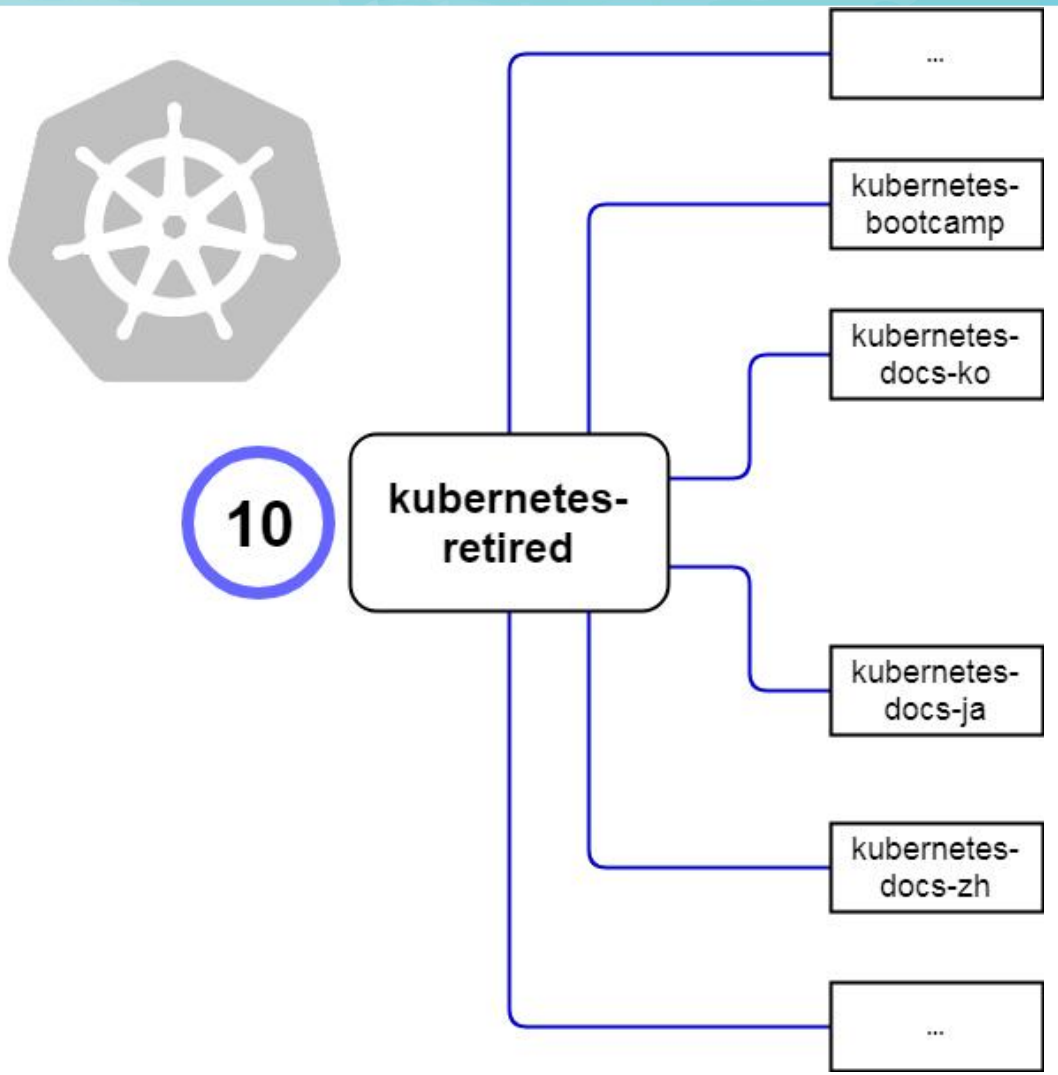
Orgs/Repos


10
Kubernetes
Clients
...
python
go
java
csharp
...


18
kubernetes-csi
...
drivers
external-
attacher
external-
provisioner
csi-tests
...

Orgs/Repos


30
Kubernetes SIGs
...
cluster-api
cri-tools
controller-runtime
kustomize
...


10
kubernetes-retired
...
kubernetes-bootcamp
kubernetes-docs-ko
kubernetes-docs-ja
kubernetes-docs-zh
...

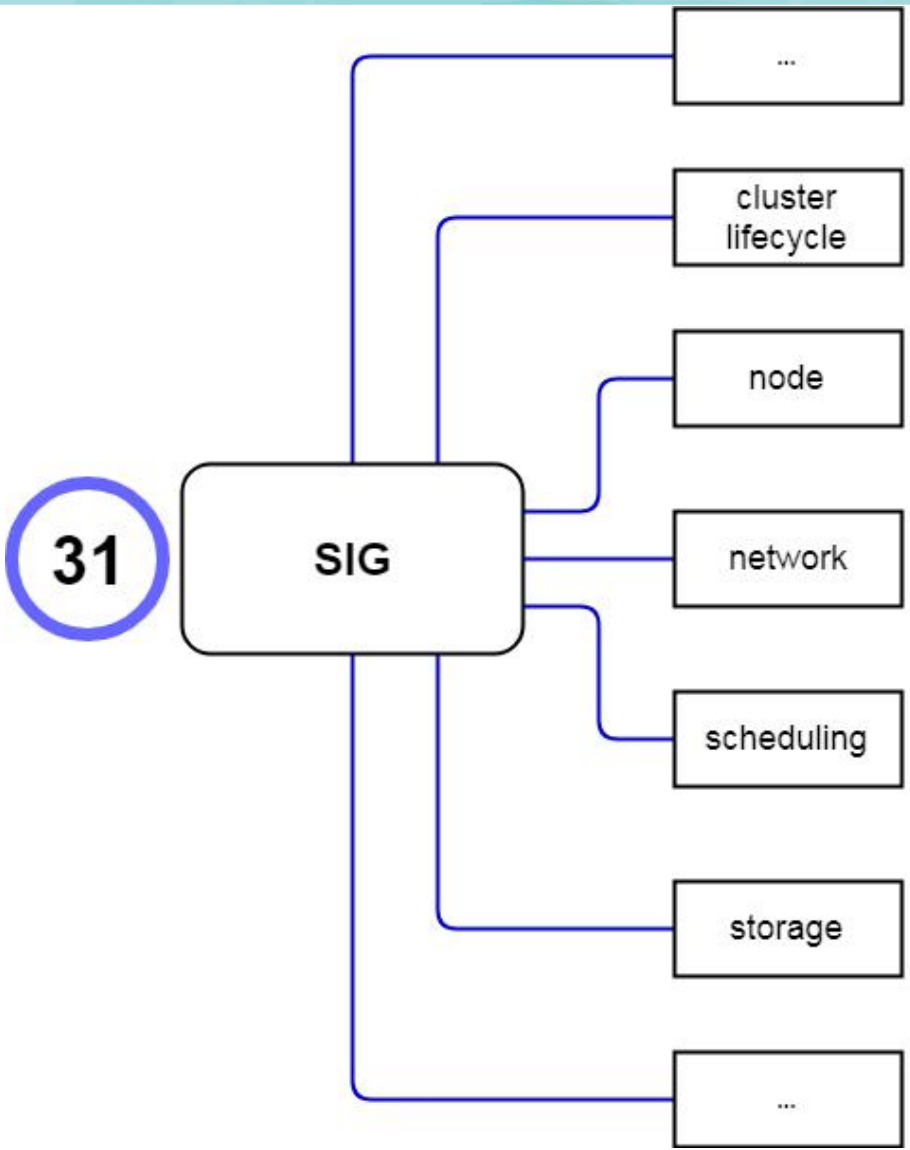
SIGs/WGs

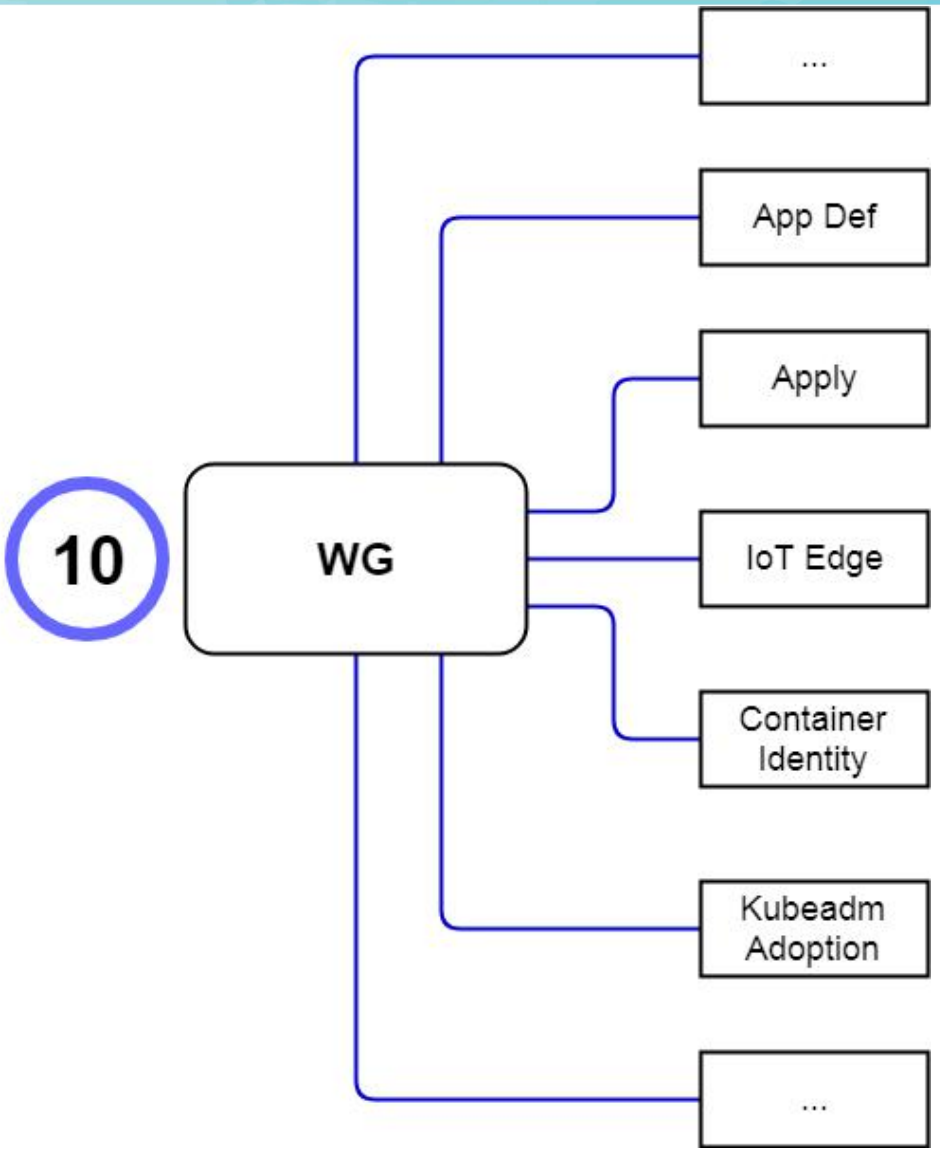
Special Interest Group

Working Group

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

SIGs/WGs


31
SIG
...
cluster lifecycle
node
network
scheduling
storage
...

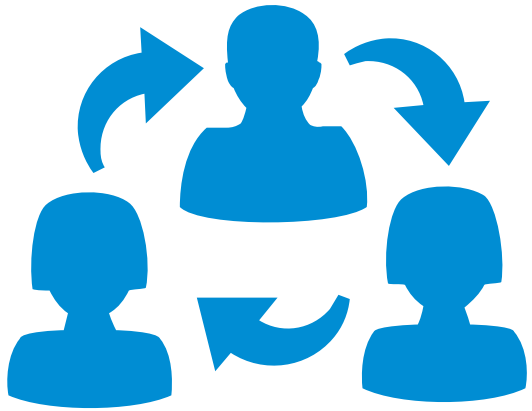

10
WG
...
App Def
Apply
IoT Edge
Container Identity
Kubeadm Adoption
...

Communication

Mailing list

Zoom

Github



Discussion board

Slack

YouTube channel

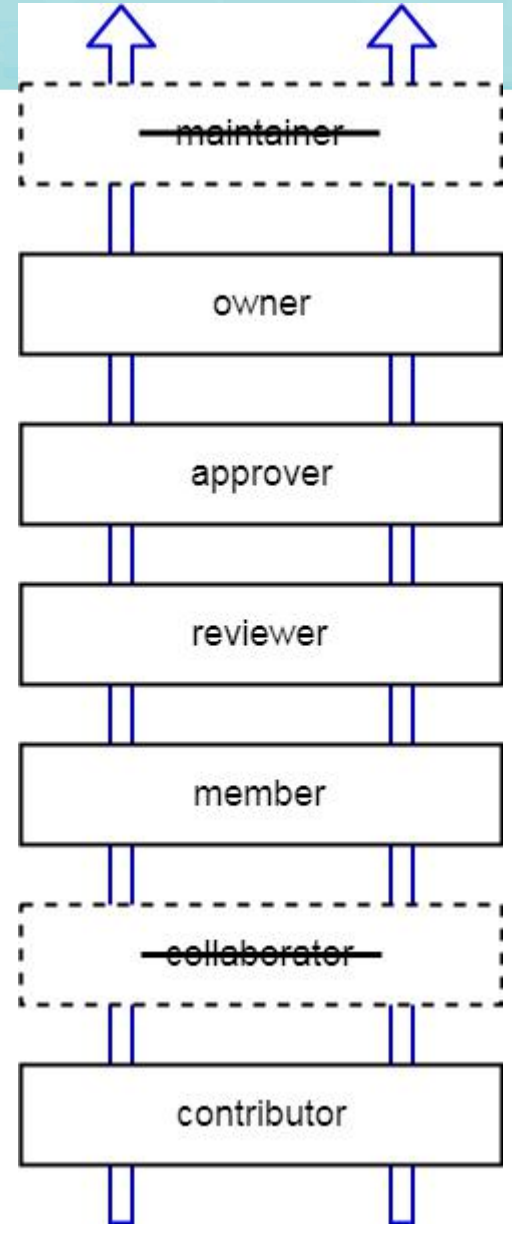
Kubecons /meetups

Communication

related links

Github	https://github.com/kubernetes/kubernetes/issues
Slack	http://slack.k8s.io/
YouTube channel	https://www.youtube.com/c/KubernetesCommunity/live
Mailing list	https://groups.google.com/forum/#!forum/kubernetes-dev
Zoom	https://zoom.us/my/kubernetescommunity
Discussion board	https://discuss.kubernetes.io
Kubecons/meetups	We are already here !

Roles



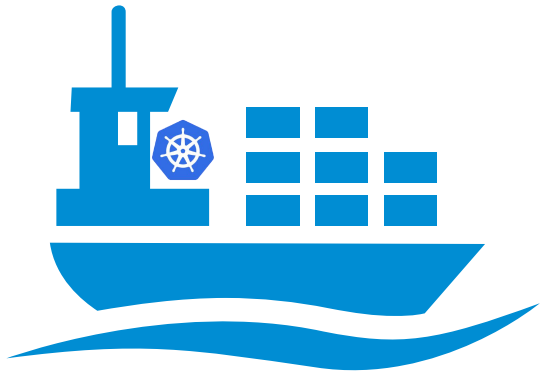
https://github.com/kubernetes/community/blob/master/community-membership.md

https://github.com/kubernetes/org/issues

Resources

Docs/blog

Course



Video

Playground

Learning platform

Resources

related links

Docs/blog	https://kubernetes.io
Course	https://www.edx.org/course/introduction-to-kubernetes
Video	https://www.youtube.com/channel/UCZ2bu0qutTOM0tHYa_jkIwg
Playground	https://labs.play-with-k8s.com
Learning platform	https://www.katacoda.com/courses/kubernetes

More:
https://kubernetes.io/docs/tutorials/online-training/overview/

Agenda

1. The community
2. **How to contribute**
3. Versioning
4. The easy way to use it
5. Demo
6. Q & A

Where to

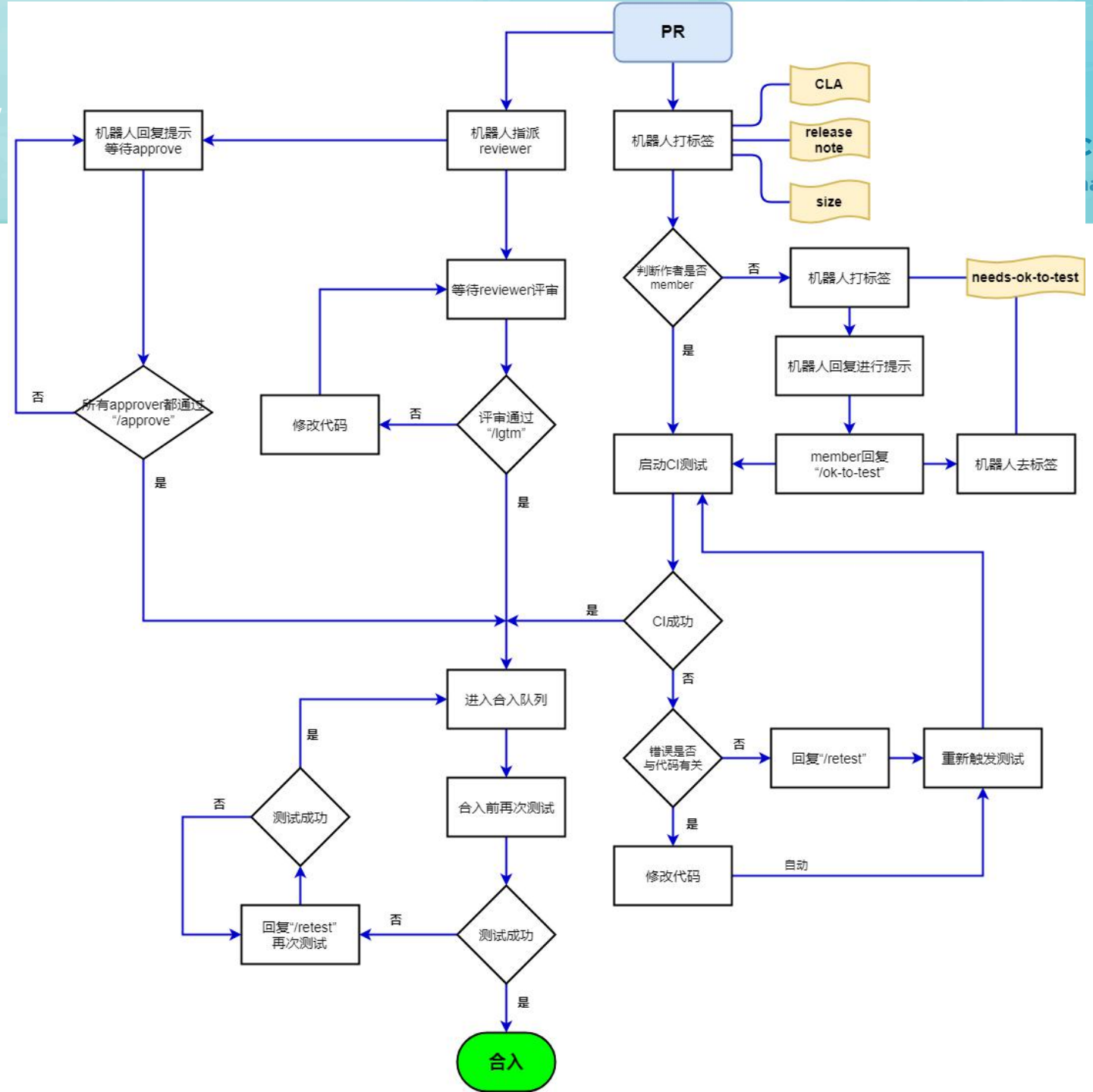
docs

code

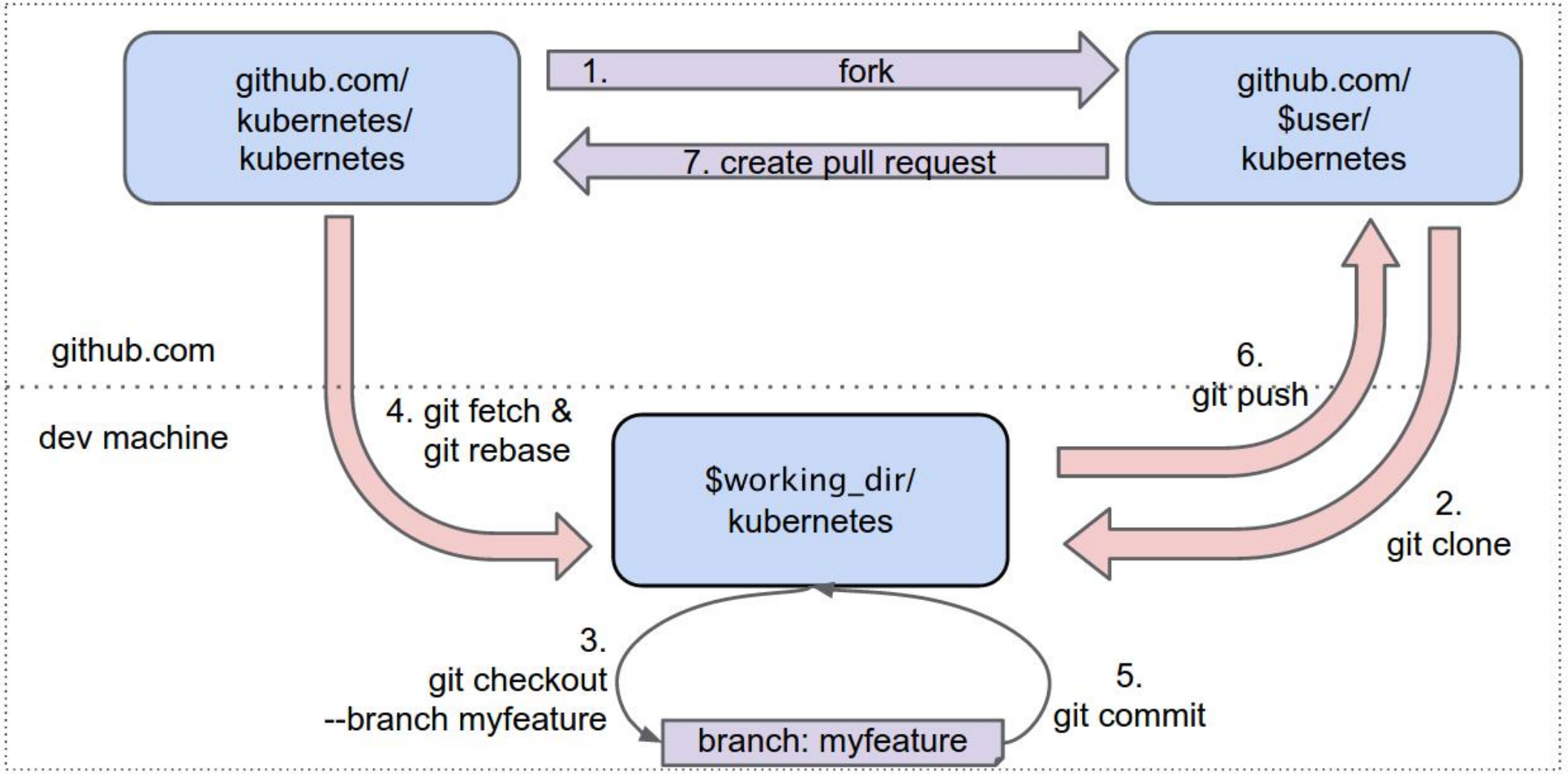
bug report

code review

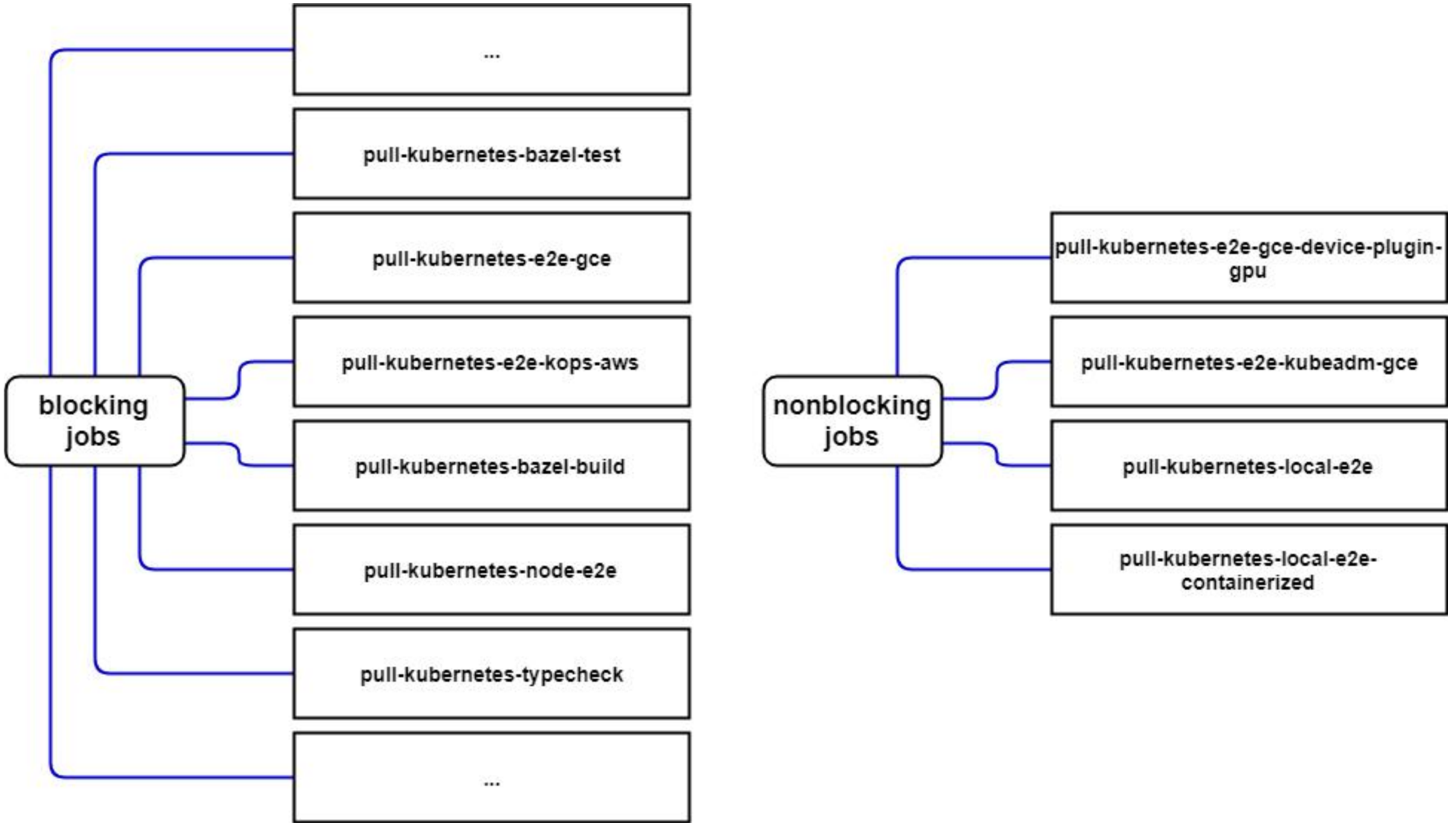
PR workflow


PR
机器人打标签
CLA
release note
size
机器人指派 reviewer
机器人回复提示 等待approve
判断作者是否 member
否
机器人打标签
needs-ok-to-test
是
机器人回复进行提示
等待reviewer评审
否
所有approver都通过 “/approve”
修改代码
否
评审通过 “/lgtm”
是
是
启动CI测试
member回复 “/ok-to-test”
机器人去标签
是
CI成功
否
进入合入队列
是
否
测试成功
合入前再次测试
错误是否 与代码有关
否
回复“/retest”
重新触发测试
是
修改代码
自动
否
回复“/retest” 再次测试
否
测试成功
是
合入

git workflow



CI


blocking jobs
...
pull-kubernetes-bazel-test
pull-kubernetes-e2e-gce
pull-kubernetes-e2e-kops-aws
pull-kubernetes-bazel-build
pull-kubernetes-node-e2e
pull-kubernetes-typecheck
...
nonblocking jobs
pull-kubernetes-e2e-gce-device-plugin-gpu
pull-kubernetes-e2e-kubeadm-gce
pull-kubernetes-local-e2e
pull-kubernetes-local-e2e-containerized

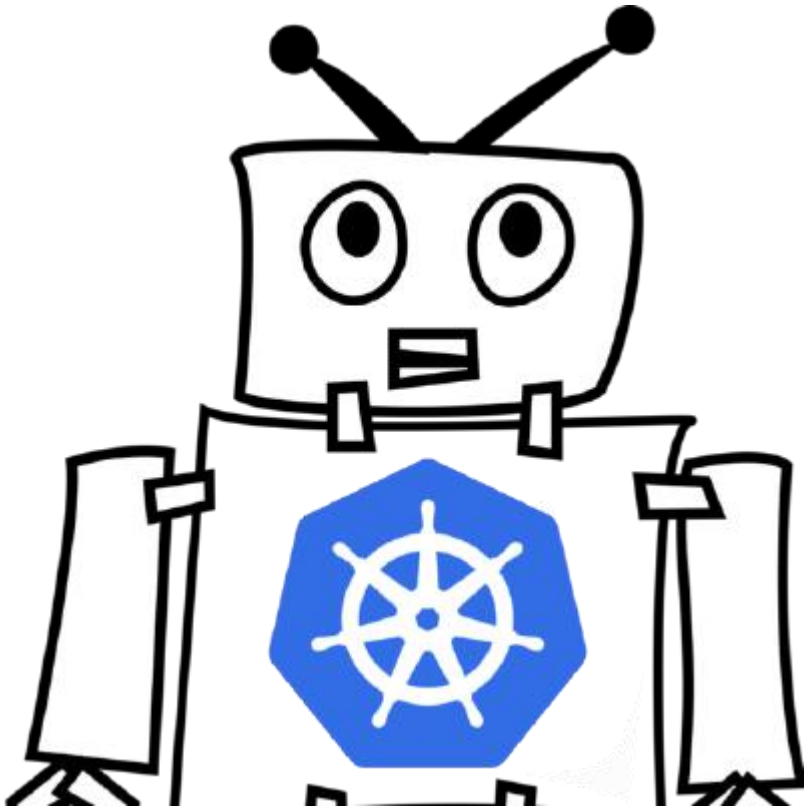
bot/commands

/approve

/cc

/lgtm

/assign



/retest

/kind bug

/hold

/lint

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

joke/shrug

xiangpengzhao commented a minute ago

/joke

k8s-ci-robot commented a minute ago

@xiangpengzhao: What does a pirate pay for his corn? A buccaneer!

▶ 详细信息

xiangpengzhao commented a minute ago

/shrug

k8s-ci-robot added the ¯_(ツ)_/¯ label a minute ago

cats vs dogs

xiangpengzhao commented 13 seconds ago — Member

/meow

k8s-ci-robot commented 12 seconds ago — Member

@xiangpengzhao:

xiangpengzhao commented just now — Member

/woof

k8s-ci-robot commented just now — Member

@xiangpengzhao:

A short demo

Agenda

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2. How to contribute
3. **Versioning**
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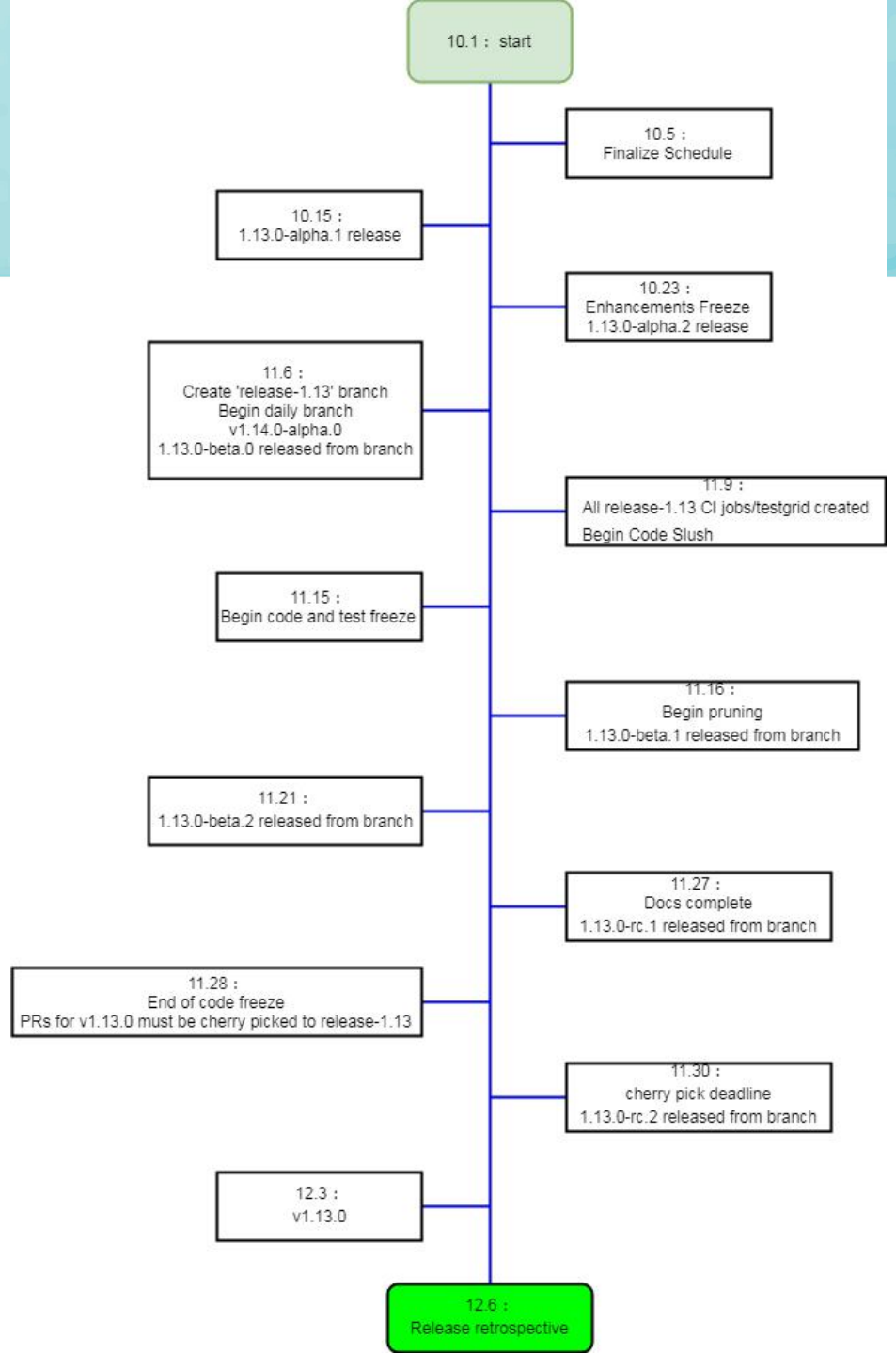
Types of Releases

- Alpha releases (vX.Y.0-alpha.W): cut directly from master.
- Beta releases (vX.Y.Z-beta.W): cut from their respective release branch, release-X.Y.
- Official releases (vX.Y.Z): cut from their respective release branch, release-X.Y.
- Emergency releases (vX.Y.Z): cut from a new release-X.Y.Z branch based on a tag

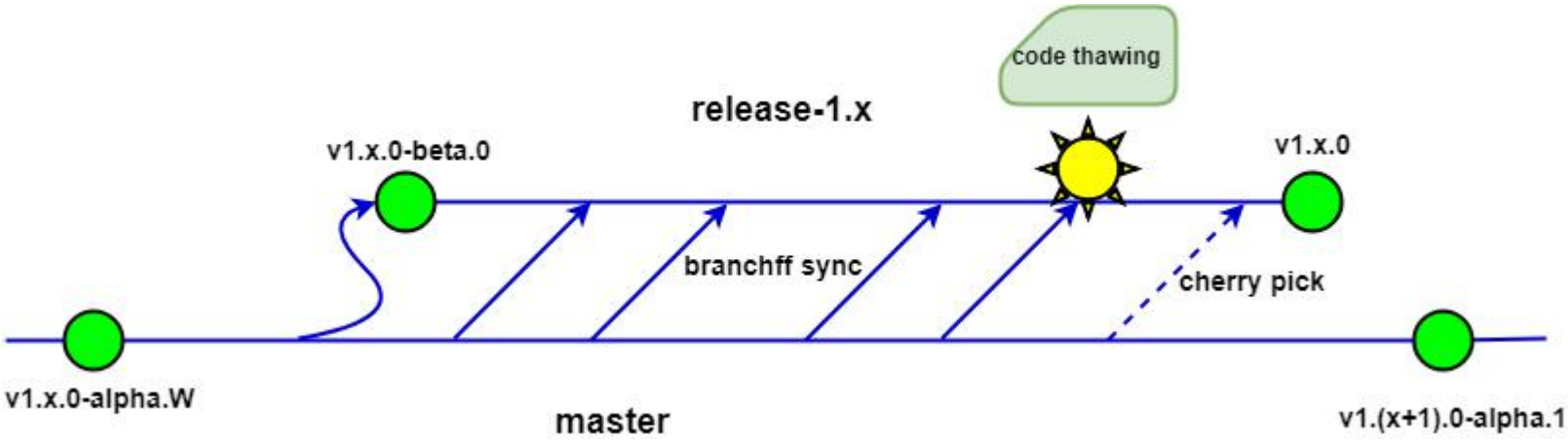
Release Schedule

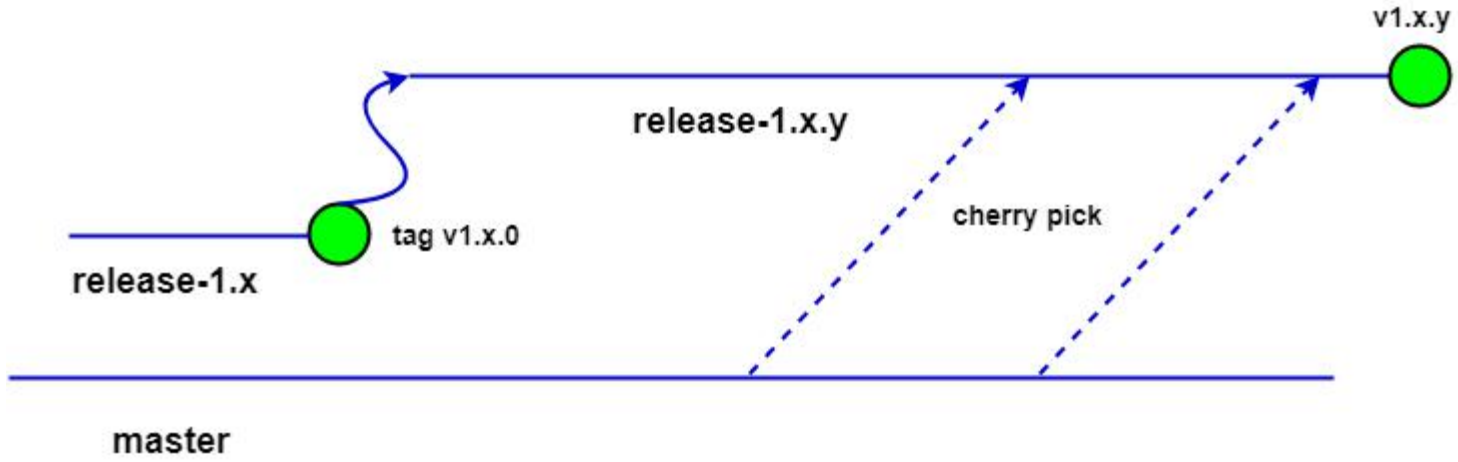
Type	Versioning	Branch	Frequency
alpha	vX.Y.0-alpha.W	master	every ~2 weeks
beta	vX.Y.Z-beta.W	release-X.Y	as needed (at branch time)
official	vX.Y.Z	release-X.Y	as needed (post beta)
emergency	vX.Y.Z	release-X.Y.Z	as needed

Release1.13

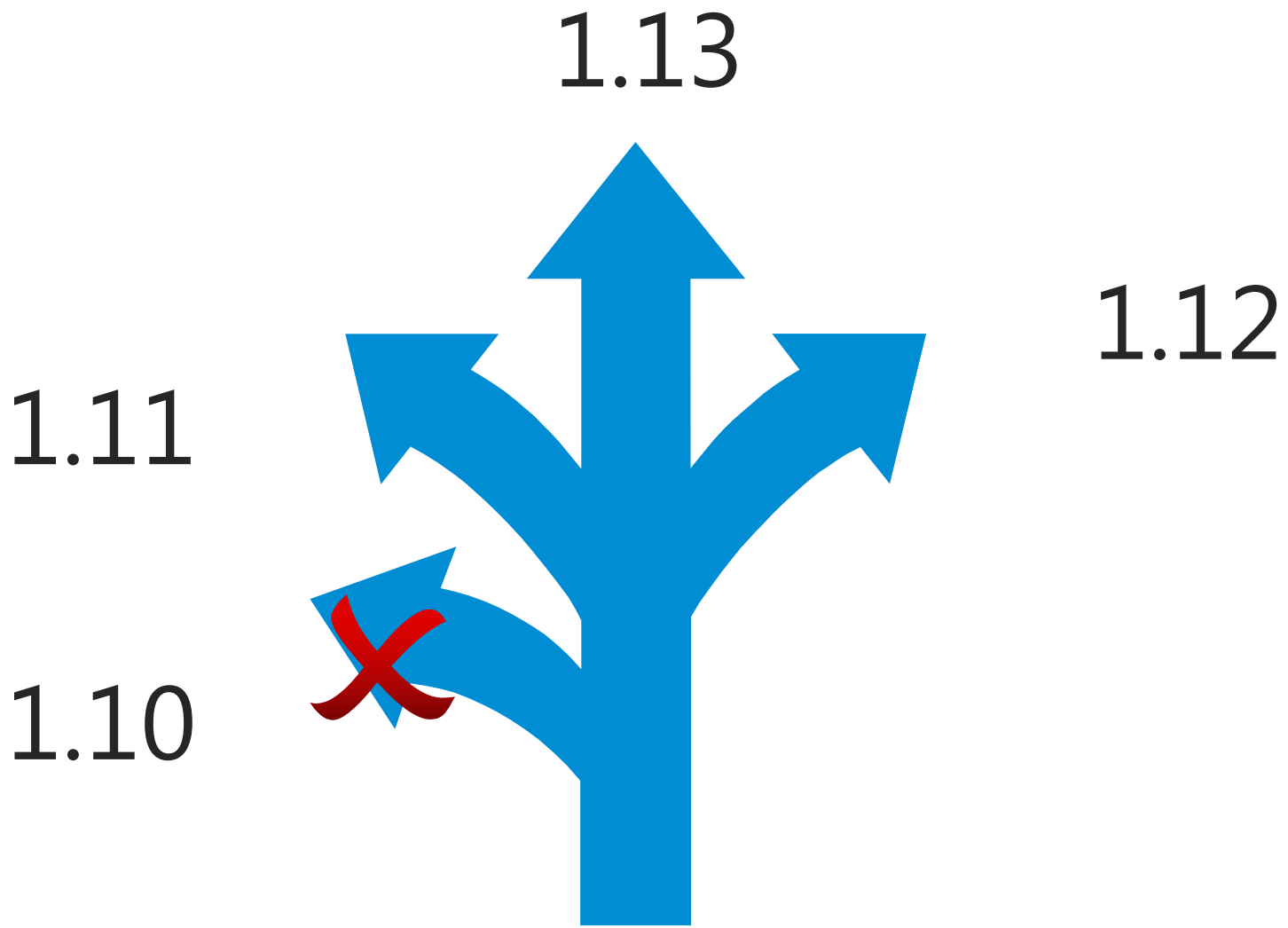

10.1 : start
10.5 :
Finalize Schedule
10.15 :
1.13.0-alpha.1 release
10.23 :
Enhancements Freeze
1.13.0-alpha.2 release
11.6 :
Create 'release-1.13' branch
Begin daily branch
v1.14.0-alpha.0
1.13.0-beta.0 released from branch
11.9 :
All release-1.13 CI jobs/testgrid created
Begin Code Slush
11.15 :
Begin code and test freeze
11.16 :
Begin pruning
1.13.0-beta.1 released from branch
11.21 :
1.13.0-beta.2 released from branch
11.27 :
Docs complete
1.13.0-rc.1 released from branch
11.28 :
End of code freeze
PRs for v1.13.0 must be cherry picked to release-1.13
11.30 :
cherry pick deadline
1.13.0-rc.2 released from branch
12.3 :
v1.13.0
12.6 :
Release retrospective

Branch


code thawing
release-1.x
v1.x.0-beta.0
v1.x.0
branchff sync
cherry pick
v1.x.0-alpha.W
master
v1.(x+1).0-alpha.1


v1.x.y
release-1.x.y
cherry pick
tag v1.x.0
release-1.x
master

Supported releases



Agenda

1. The community
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4. **The easy way to use it**
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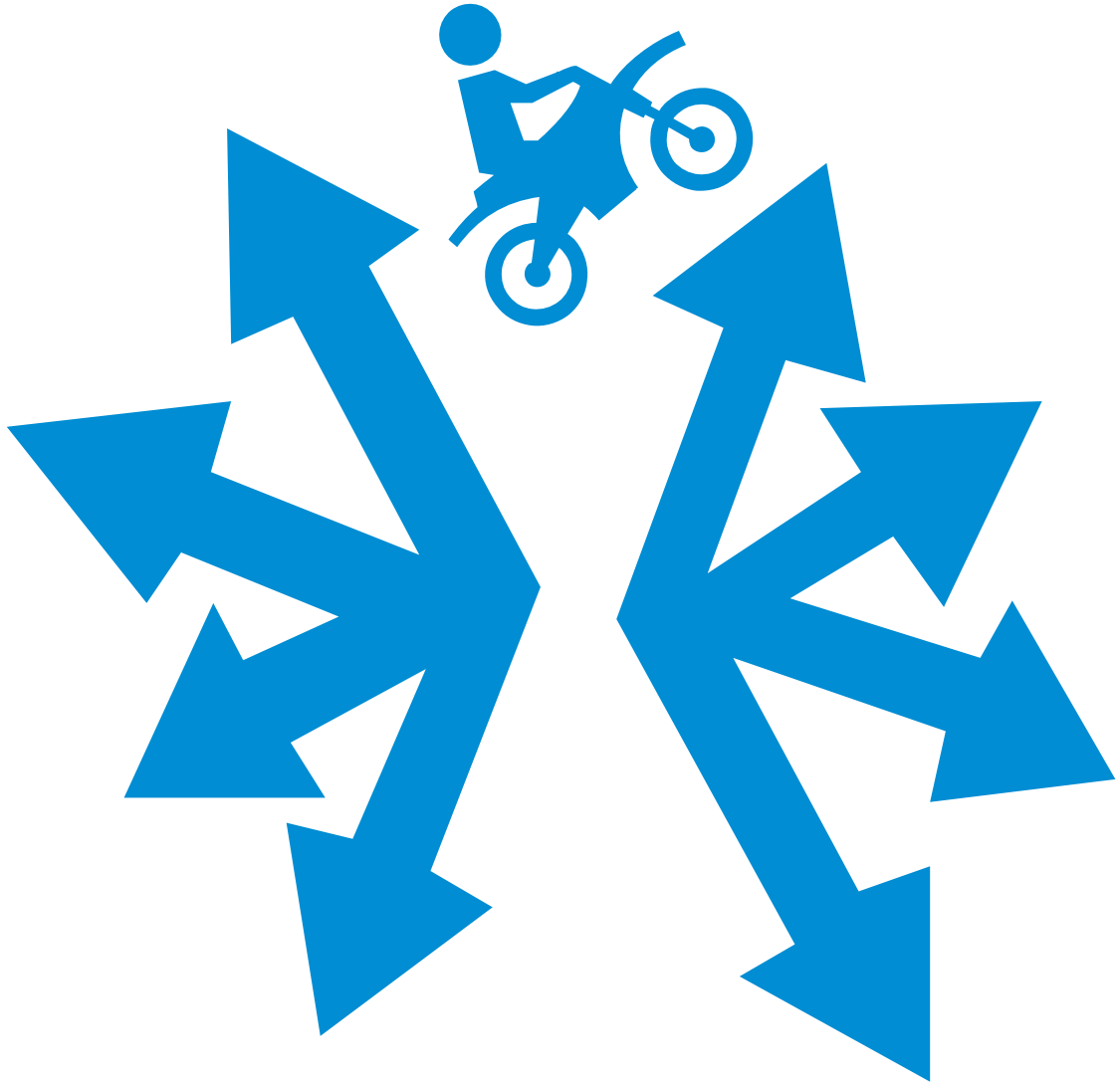
Table of Solutions

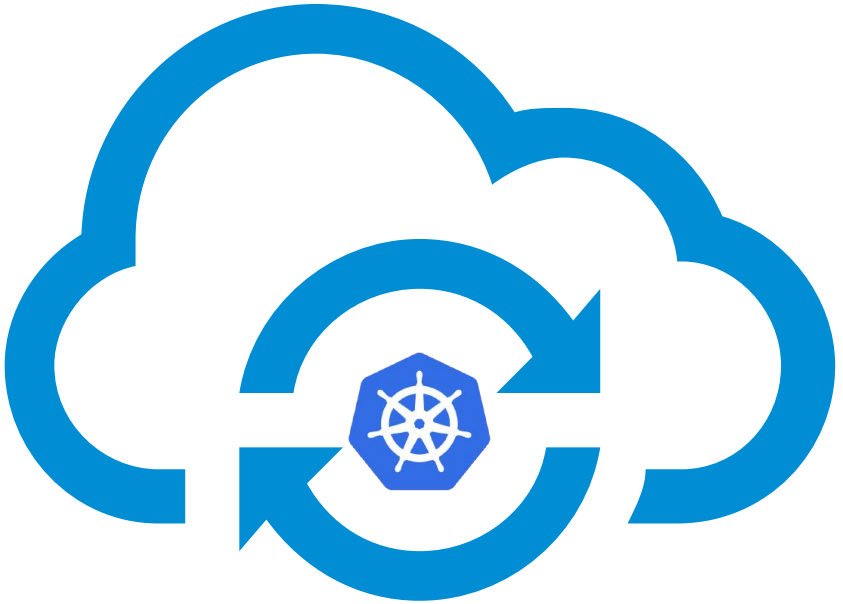
IaaS Provider	Config. Mgmt.	OS	Networking
any	any	multi-support	any CNI
Google Kubernetes Engine			GCE
Stackpoint.io		multi-support	multi-support
AppsCode.com	Saltstack	Debian	multi-support
Madcore.Ai	Jenkins DSL	Ubuntu	flannel
Platform9		multi-support	multi-support
Kublr	custom	multi-support	multi-support
Kubermatic		multi-support	multi-support
IBM Cloud Kubernetes Service		Ubuntu	IBM Cloud Networking + Calico
Giant Swarm		CoreOS	flannel and/or Calico
GCE	Saltstack	Debian	GCE
Azure Kubernetes Service		Ubuntu	Azure
Azure (IaaS)		Ubuntu	Azure
Bare-metal	custom	Fedora	*none*
Bare-metal	custom	Fedora	flannel
libvirt	custom	Fedora	flannel
KVM	custom	Fedora	flannel
DCOS	Marathon	CoreOS/Alpine	custom
AWS	CoreOS	CoreOS	flannel
GCE	CoreOS	CoreOS	flannel
Vagrant	CoreOS	CoreOS	flannel
CloudStack	Ansible	CoreOS	flannel
VMware vSphere	any	multi-support	multi-support
Bare-metal	custom	CentOS	flannel
lxd	Juju	Ubuntu	flannel/canal
AWS	Juju	Ubuntu	flannel/calico/canal
Azure	Juju	Ubuntu	flannel/calico/canal
GCE	Juju	Ubuntu	flannel/calico/canal
Oracle Cloud	Juju	Ubuntu	flannel/calico/canal
Rackspace	Juju	Ubuntu	flannel/calico/canal
VMware vSphere	Juju	Ubuntu	flannel/calico/canal
Bare Metal	Juju	Ubuntu	flannel/calico/canal
AWS	Saltstack	Debian	AWS
AWS	kops	Debian	AWS
Bare-metal	custom	Ubuntu	flannel
oVirt			

https://kubernetes.io/docs/setup/pick-right-solution/

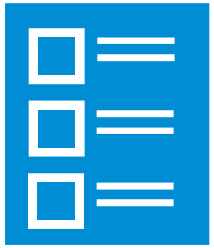
Which one should I pick ?



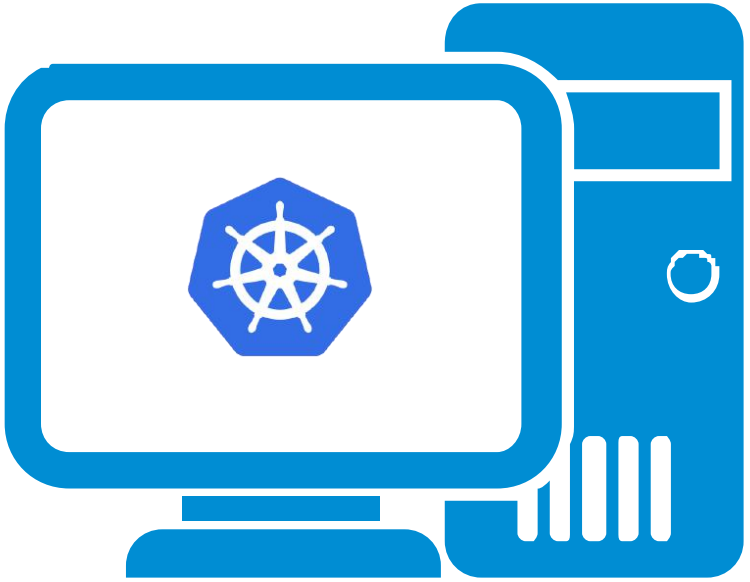
I'm a user of some Cloud



Just follow its instructions !



I have only a local machine

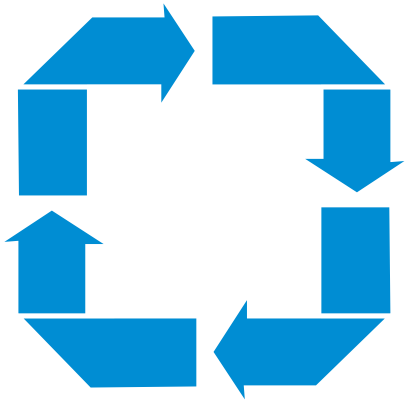


You need an easy way !

Local-machine Solutions

kubeadm-dind-cluster

kubeadm



Minikube

local-up-cluster

microk8s

Local-machine Solutions

related links

local-up-cluster	https://github.com/kubernetes/kubernetes/blob/master/hack/local-up-cluster.sh
Minikube	https://github.com/kubernetes/minikube
Kubeadm	https://kubernetes.io/docs/setup/independent/install-kubeadm
kubeadm-dind-cluster	https://github.com/kubernetes-sigs/kubeadm-dind-cluster
microk8s	https://microk8s.io/

My machine can't run Kubernetes...

Oops !

Online playgrounds !

https://labs.play-with-k8s.com/

Online playgrounds !

https://www.katacoda.com/courses/kubernetes

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4. **Demo**
5. Q & A

Demo

Agenda

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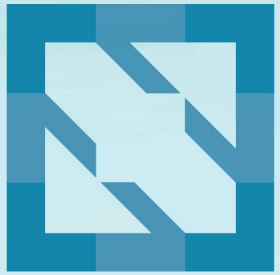
Q & A

Thank you !



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