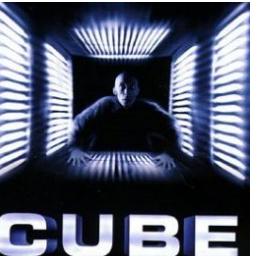
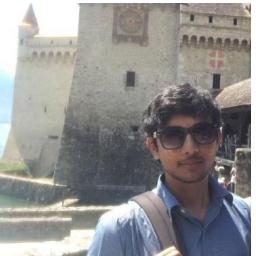
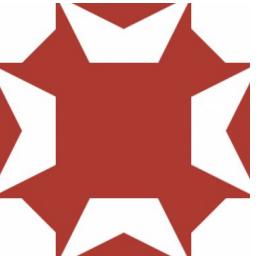
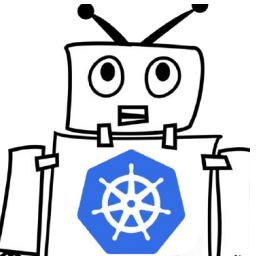
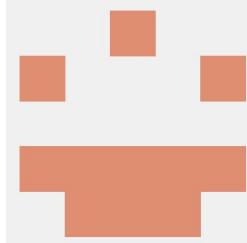


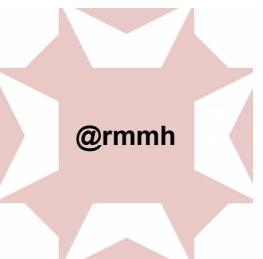
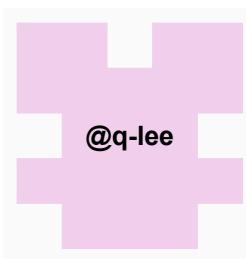
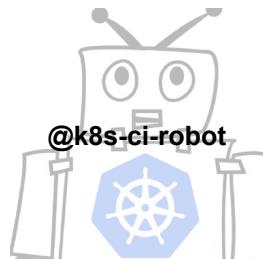
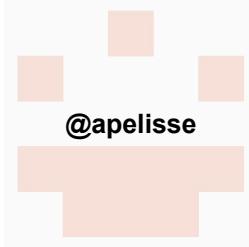
# Machines Can Do the Work

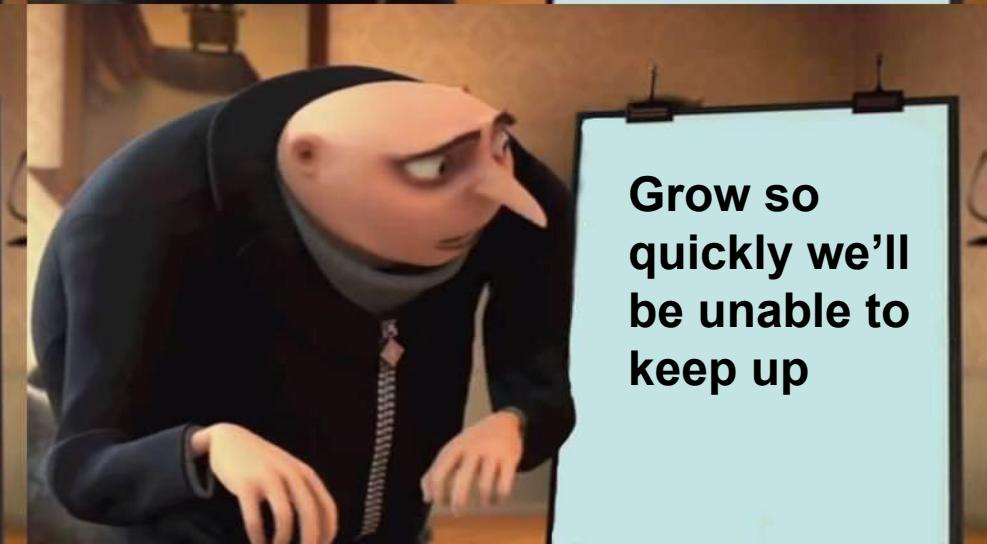
Automation and the Kubernetes Contributor Experience

A close-up photograph of a brown plush toy, possibly a dog or bear, looking out over a city skyline at sunset. The toy's large, dark eyes are focused on the horizon where the sun is setting, casting a warm glow over the clouds and the city below. The foreground is slightly blurred, showing some greenery and a paved area.

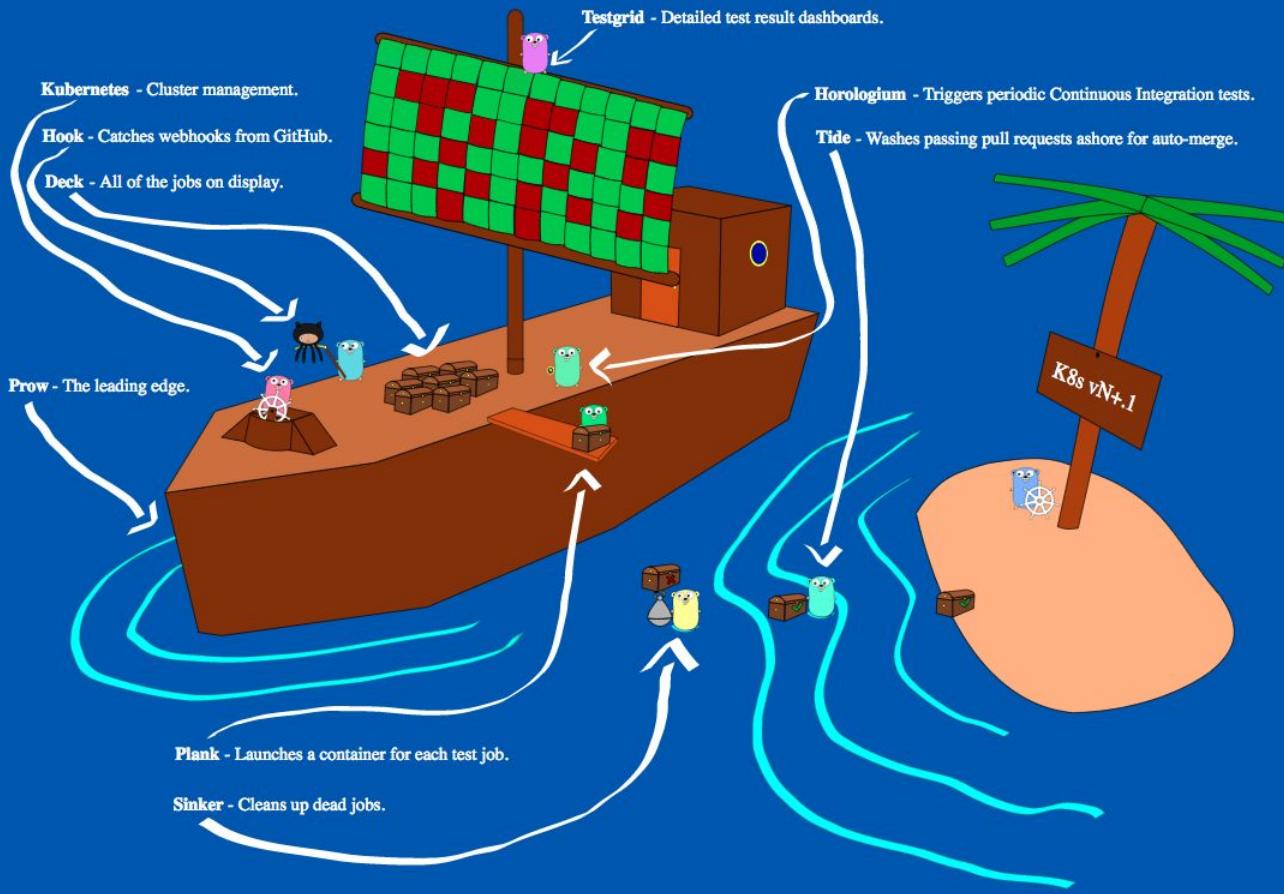
Aaron Crickenberger (@spiffxp)  
Samsung SDS  
May 2, 2018











**Prow** - extended nautical metaphor. Go Gopher originally by [Renee French](#), [SVG version](#) by [Takuya Ueda](#), modified under the [CC BY 3.0 license](#). Ship's wheel from [Kubernetes logo](#) by [Tim Hockin](#).

# prow



# used by





<b>approve</b>  The approve plugin implements a pull request approval process that manages the 'approved' label and an approval notification comment.  <a href="#">DETAILS</a>	<b>assign</b>  The assign plugin assigns or requests reviews from users.  <a href="#">DETAILS</a>	<b>blockade</b>  The blockade plugin blocks pull requests from merging if they touch specific files.  <a href="#">DETAILS</a>	<b>blunderbuss</b>  The blunderbuss plugin automatically requests reviews from reviewers when a new PR is created.  <a href="#">DETAILS</a>	<b>cat</b>  The cat plugin adds a cat image to an issue in response to the '/meow' command.  <a href="#">DETAILS</a>	<b>cla</b>  The cla plugin manages the application and removal of the 'onc-cla' prefixed labels on pull requests as a reaction to the 'cla/linuxfoundation' github status context.  <a href="#">DETAILS</a>	<b>close</b>  Deprecated! Please use the lifecycle plugin instead of close.  <a href="#">DETAILS</a>
<b>config-updater</b>  The config-updater plugin automatically redeploys configuration and plugin configuration files when they change.  <a href="#">DETAILS</a>	<b>docs-no-retest</b>  The docs-no-retest plugin applies the 'retest-not-required-docs-only' label to pull requests that only touch documentation type files and thus do not need to be retested against the latest master commit before merging.  <a href="#">DETAILS</a>	<b>dog</b>  The dog plugin adds a dog image to an issue in response to the '/woof' command.  <a href="#">DETAILS</a>	<b>golint</b>  The golint plugin runs golint on changes made to *.  <a href="#">DETAILS</a>	<b>heart</b>  The heart plugin celebrates certain Github actions with the reaction emojis.  <a href="#">DETAILS</a>	<b>help</b>  The help plugin provides commands that add or remove the 'help wanted' label from issues.  <a href="#">DETAILS</a>	<b>hold</b>  The hold plugin allows anyone to add or remove the 'do-not-merge/hold' label from a pull request in order to temporarily prevent the PR from merging without withholding approval.  <a href="#">DETAILS</a>
<b>label</b>  The label plugin provides commands that add or remove certain types of labels.  <a href="#">DETAILS</a>	<b>lgtm</b>  The lgtm plugin manages the application and removal of the 'lgtm' (Looks Good To Me) label which is typically used to gate merging.  <a href="#">DETAILS</a>	<b>lifecycle</b>  Close, reopen, flag and/or unflag an issue or PR as stale/putrid/rotten/frozen  <a href="#">DETAILS</a>	<b>milestone</b>  The milestone plugin allows members of a configurable GitHub team to set the milestone on an issue or pull request.  <a href="#">DETAILS</a>	<b>milestonestatus</b>  The milestonestatus plugin allows members of the milestone maintainers GitHub team to specify the 'status/*' label that should apply to a pull request.  <a href="#">DETAILS</a>	<b>needs-rebase</b> <small>external plugin</small>  The needs-rebase plugin manages the 'needs-rebase' label by removing it from Pull Requests that are mergeable and adding it to those which are not.  <a href="#">DETAILS</a>	<b>owners-label</b>  The owners-label plugin automatically adds labels to PRs based on the files they touch.  <a href="#">DETAILS</a>
<b>release-note</b>  The releasenote plugin implements a release note process that uses a markdown 'releasenote' code block to associate a release note with a pull request.  <a href="#">DETAILS</a>	<b>reopen</b>  Deprecated! Please use the lifecycle plugin instead of reopen.  <a href="#">DETAILS</a>	<b>require-sig</b>  When a new issue is opened the require-sig plugin adds the 'needs-sig' label and leaves a comment requesting that a SIG (Special Interest Group) label be added to the issue.  <a href="#">DETAILS</a>	<b>sigmentation</b>  The sigmentation plugin responds to SIG (Special Interest Group) GitHub team mentions like '@kubernetes/sig-testing-bugs'.	<b>size</b>  The size plugin manages the 'size/*' labels, maintaining the appropriate label on each pull request as it is updated.  <a href="#">DETAILS</a>	<b>skip</b>  The skip plugin allows users to clean up GitHub stale commit statuses for non-blocking jobs on a PR.  <a href="#">DETAILS</a>	<b>slackevents</b>  The slackevents plugin reacts to various GitHub events by commenting in Slack channels.  <a href="#">DETAILS</a>
		<b>trigger</b>  The trigger plugin starts tests in reaction to commands and pull request events.  <a href="#">DETAILS</a>	<b>wip</b>  The wip (Work In Progress) plugin applies the 'do-not-merge/work-in-progress' label to pull requests whose title starts with 'WIP' and removes it from pull requests when they remove the title prefix.  <a href="#">DETAILS</a>	<b>yucks</b>  The yucks plugin comments with jokes in response to the '/joke' command.  <a href="#">DETAILS</a>		



Command help for all commands



Command	Example	Description	Who Can Use	Plugin
★ <code>/[approve lgtm] [no-issue cancel]</code>	<code>/approve</code> <code>/approve no-issue</code> <code>/lgtm</code> <code>/lgtm cancel</code>	Approves a pull request	Users listed as ' approvers' in appropriate OWNERS files.	APPROVE
★ <code>/[un]cc [[@]...]</code>	<code>/cc</code> <code>/uncc</code> <code>/cc @k8s-ci-bot</code>	Requests a review from the user(s).	Anyone can use the command, but the target user must be a member of the org that owns the repository.	ASSIGN
★ <code>/lgtm [cancel]</code>	<code>/lgtm</code> <code>/lgtm cancel</code>	Adds or removes the 'lgtm' label which is typically used to gate merging.	Members of the organization that owns the repository. '/lgtm cancel' can be used additionally by the PR author.	LGTM
★ <code>/[un]assign [[@]...]</code>	<code>/assign</code> <code>/unassign</code>	Assigns an assignee to the PR	Anyone can use the command, but the target user must be a member of the org that owns the	ASSIGN



# SIG Testing Deep Dive

Friday May 4th, 14:00 - 14:35

# The Work

Implement PR workflow (review, test, merge)

Facilitate triage workflow (categorize, route, close)

Configure and run jobs

Provide insights into project health

# PR Workflow

PR author must have signed CLA

PR must pass tests

PR must be approved

PR must be mergeable

Merge commit must pass tests

Review requested [Show all reviewers](#)  
Review has been requested on this pull request. It is not required to merge. [Learn more](#).

Some checks haven't completed yet [Hide all checks](#)  
1 pending and 14 successful checks

- Submit Queue Pending — PR does not have approved label. [Details](#)
- cla/linuxfoundation msau42 authorized [Required Details](#)
- pull-kubernetes-bazel-build Job succeeded. [Required Details](#)
- pull-kubernetes-bazel-test Job succeeded. [Required Details](#)
- pull-kubernetes-cross Skipped
- pull-kubernetes-e2e-gce Job succeeded. [Required Details](#)
- pull-kubernetes-e2e-gce-device-plugin-gpu Job succeeded. [Details](#)
- pull-kubernetes-e2e-gke Skipped
- pull-kubernetes-e2e-kops-aws Job succeeded. [Required Details](#)
- pull-kubernetes-integration Job succeeded. [Required Details](#)
- pull-kubernetes-kubemark-e2e-gce Job succeeded. [Required Details](#)
- pull-kubernetes-local-e2e Skipped
- pull-kubernetes-node-e2e Job succeeded. [Required Details](#)
- pull-kubernetes-typecheck Job succeeded. [Required Details](#)
- pull-kubernetes-verify Job succeeded. [Required Details](#)

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# PR Workflow

PR author must have signed CLA

PR must pass tests

PR must be approved

PR must be mergeable

Merge commit must pass tests

 Review requested	Show all reviewers
Review has been requested on this pull request. It is not required to merge. Learn more.	
 Some checks haven't completed yet	Hide all checks
1 pending and 14 successful checks	
 Submit Queue Pending — PR does not have approved label.	Details
  cla/linuxfoundation — msau42 authorized	Required Details
  pull-kubernetes-bazel-build — Job succeeded.	Required Details
  pull-kubernetes-bazel-test — Job succeeded.	Required Details
  pull-kubernetes-cross — Skipped	
  pull-kubernetes-e2e-gce — Job succeeded.	Required Details
  pull-kubernetes-e2e-device-plugin-gpu — Job succeeded.	Details
  pull-kubernetes-e2e-gke — Skipped	
  pull-kubernetes-e2e-kops-aws — Job succeeded.	Required Details
  pull-kubernetes-integration — Job succeeded.	Required Details
  pull-kubernetes-kubemark-e2e-gce — Job succeeded.	Required Details
  pull-kubernetes-local-e2e — Skipped	
  pull-kubernetes-node-e2e — Job succeeded.	Required Details
  pull-kubernetes-typecheck — Job succeeded.	Required Details
  pull-kubernetes-verify — Job succeeded.	Required Details
 This branch has no conflicts with the base branch	
Merging can be performed automatically.	

# PR Workflow

PR author must have signed CLA

PR must pass tests

PR must be approved

PR must be mergeable

Merge commit must pass tests

Review requested [Show all reviewers](#)  
Review has been requested on this pull request. It is not required to merge. [Learn more](#).

Some checks haven't completed yet [Hide all checks](#)  
1 pending and 14 successful checks

- Submit Queue Pending — PR does not have approved label. [Details](#)
- cla/linuxfoundation msau42 authorized [Required](#) [Details](#)
- pull-kubernetes-bazel-build Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-bazel-test Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-cross Skipped
- pull-kubernetes-e2e-gce Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-e2e-gce-device-plugin-gpu Job succeeded. [Details](#)
- pull-kubernetes-e2e-gke Skipped
- pull-kubernetes-e2e-kops-aws Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-integration Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-kubemark-e2e-gce Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-local-e2e Skipped
- pull-kubernetes-node-e2e Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-typecheck Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-verify Job succeeded. [Required](#) [Details](#)

This branch has no conflicts with the base branch  
Merging can be performed automatically.

TEST ALL THE  
THINGS!



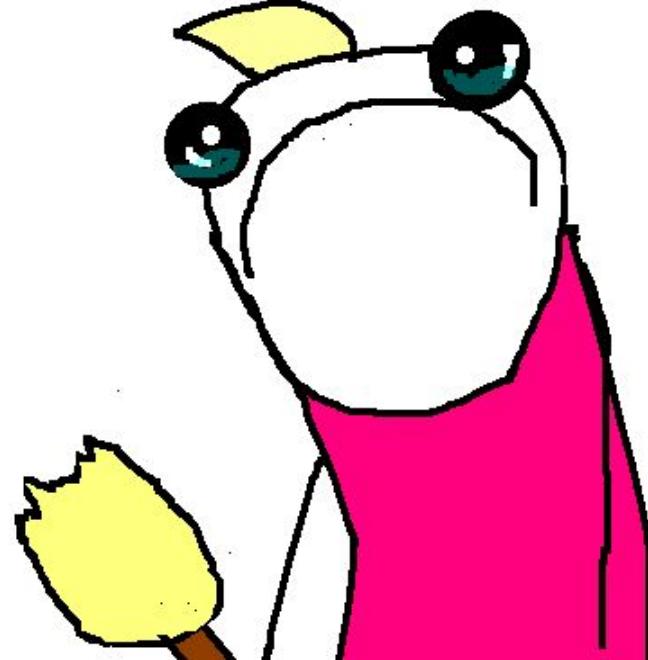
# BASH SCRIPTS



# BASH SCRIPTS EVERYWHERE



+e5+ all +he +things?



# +test+ all +the+ things?

September 2016

6 of 7 checks passed	
● <b>Submit Queue</b> Github CI tests are not green.	<a href="#">Details</a>
✓ <b>Jenkins GCE Node e2e</b> Build finished. 667 tests run, 175 skipped, 1 failed.	<a href="#">Details</a>
✓ <b>Jenkins GCE e2e</b> Build finished. 406 tests run, 194 skipped, 0 failed.	<a href="#">Details</a>
✓ <b>Jenkins GKE smoke e2e</b> Build succeeded.	<a href="#">Details</a>
✓ <b>Jenkins unit/integration</b> Build finished. 3990 tests run, 24 skipped, 0 failed.	<a href="#">Details</a>
✓ <b>Jenkins verification</b> Build finished.	<a href="#">Details</a>
✓ <b>cla/google</b> All necessary CLAs are signed	



## Presubmit Results

### Batch Builds

- ✓ pull-kubernetes-bazel-build
- ✓ pull-kubernetes-bazel-test
- ✓ pull-kubernetes-e2e-gce
- ✓ pull-kubernetes-e2e-kops-aws
- ✓ pull-kubernetes-integration
- ✓ pull-kubernetes-kubemark-e2e-gce
- ✓ pull-kubernetes-node-e2e
- ✓ pull-kubernetes-typecheck
- ✓ pull-kubernetes-verify

### Single Builds

- ✓ pull-kubernetes-bazel-build
- ✓ pull-kubernetes-bazel-test
- ✓ pull-kubernetes-e2e-gce
- ✓ pull-kubernetes-e2e-gce-100-performance
- ✓ pull-kubernetes-e2e-gce-device-plugin-gpu
- ✓ pull-kubernetes-e2e-kops-aws
- ✓ pull-kubernetes-integration
- ✓ pull-kubernetes-kubemark-e2e-gce
- ✓ pull-kubernetes-kubemark-e2e-gce-big
- ✓ pull-kubernetes-node-e2e
- ✓ pull-kubernetes-typecheck
- ✓ pull-kubernetes-verify

## End-to-End Results

### Non-Queue-Blocking Builds

- ✓ ci-kubernetes-bazel-build
- ✓ ci-kubernetes-bazel-build
- ✓ ci-kubernetes-bazel-test
- ✓ ci-kubernetes-bazel-test
- ✓ ci-kubernetes-build
- ✓ ci-kubernetes-cross-build
- ✗ ci-kubernetes-e2e-gce-multizone
- ✓ ci-kubernetes-e2e-gce-taint-evict
- ✓ ci-kubernetes-e2e-gci-gce
- ✓ ci-kubernetes-e2e-gci-gce-autoscaling
- ✓ ci-kubernetes-e2e-gci-gce-autoscaling-migs
- ✓ ci-kubernetes-e2e-gci-gce-es-logging
- ✓ ci-kubernetes-e2e-gci-gce-etcd3
- ✓ ci-kubernetes-e2e-gci-gce-garbage
- ✓ ci-kubernetes-e2e-gci-gce-ingress
- ✓ ci-kubernetes-e2e-gci-gce-proto
- ✓ ci-kubernetes-e2e-gci-gce-reboot
- ✓ ci-kubernetes-e2e-gci-gce-scalability
- ✗ ci-kubernetes-e2e-gci-gce-sd-logging
- ✗ ci-kubernetes-e2e-gci-gce-serial
- ✓ ci-kubernetes-e2e-gci-gce-slow
- ✓ ci-kubernetes-e2e-gci-gce-statefulset
- ✗ ci-kubernetes-e2e-gci-gke
- ✗ ci-kubernetes-e2e-gci-alpha-features
- ✗ ci-kubernetes-e2e-gci-gke-autoscaling
- ✗ ci-kubernetes-e2e-gci-gke-ingress
- ✗ ci-kubernetes-e2e-gci-gke-multizone
- ✗ ci-kubernetes-e2e-gci-gke-prod
- ✓ ci-kubernetes-e2e-gci-gke-prod-parallel
- ✓ ci-kubernetes-e2e-gci-gke-prod-smoke
- ✗ ci-kubernetes-e2e-gci-gke-reboot
- ✗ ci-kubernetes-e2e-gci-gke-serial
- ✗ ci-kubernetes-e2e-gci-gke-slow
- ✗ ci-kubernetes-e2e-gci-gke-updown
- ✓ ci-kubernetes-e2e-kops-aws
- ✓ ci-kubernetes-e2e-kops-aws-updown
- ✗ ci-kubernetes-e2e-kops-aws-weave
- ✓ ci-kubernetes-integration-master
- ✓ ci-kubernetes-kubemark-5-gce
- ✓ ci-kubernetes-kubemark-500-gce
- ✓ ci-kubernetes-node-kubelet
- ✗ ci-kubernetes-node-kubelet-serial
- ✓ ci-kubernetes-verify-master

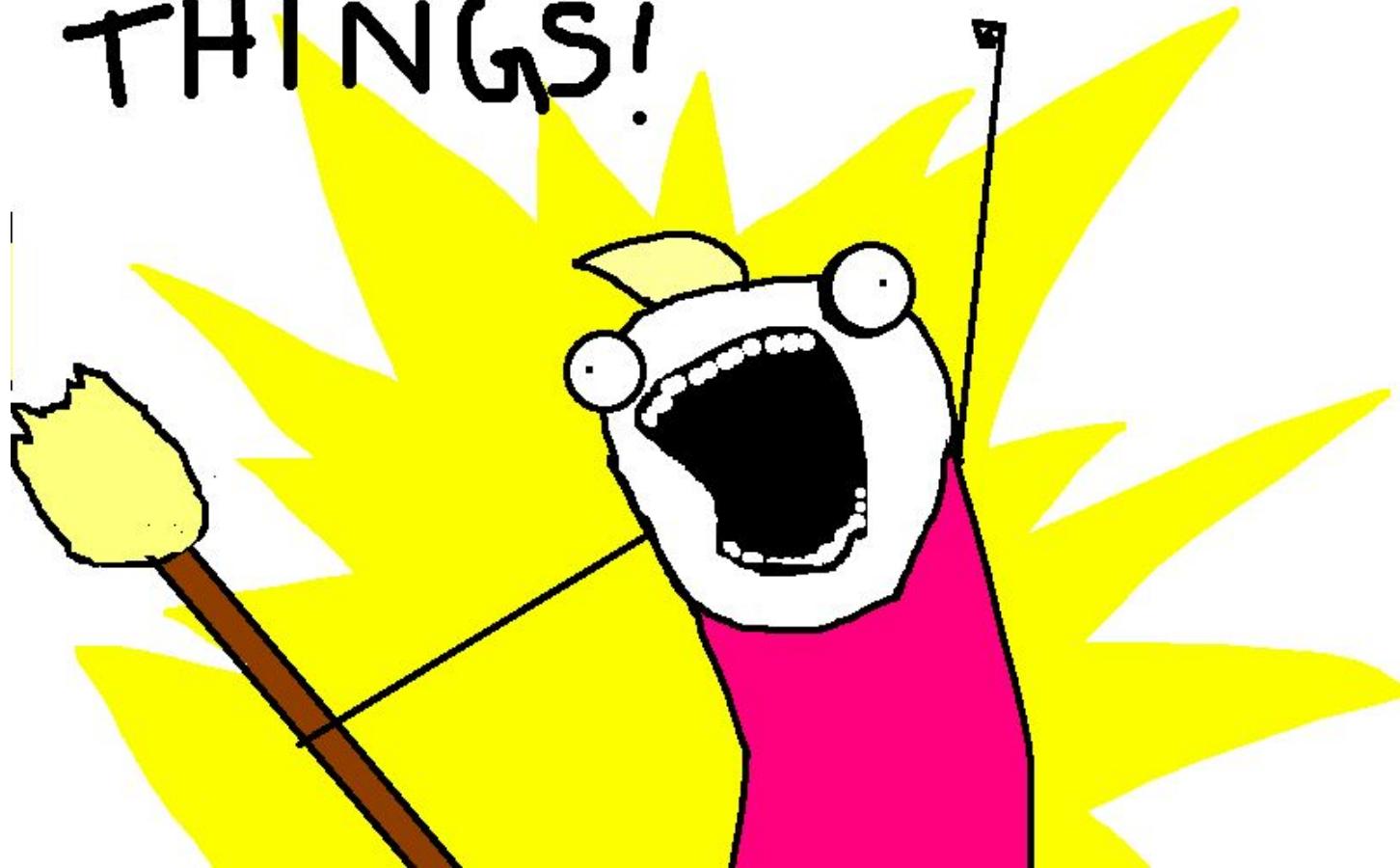
# Buildcop problem now



# prow

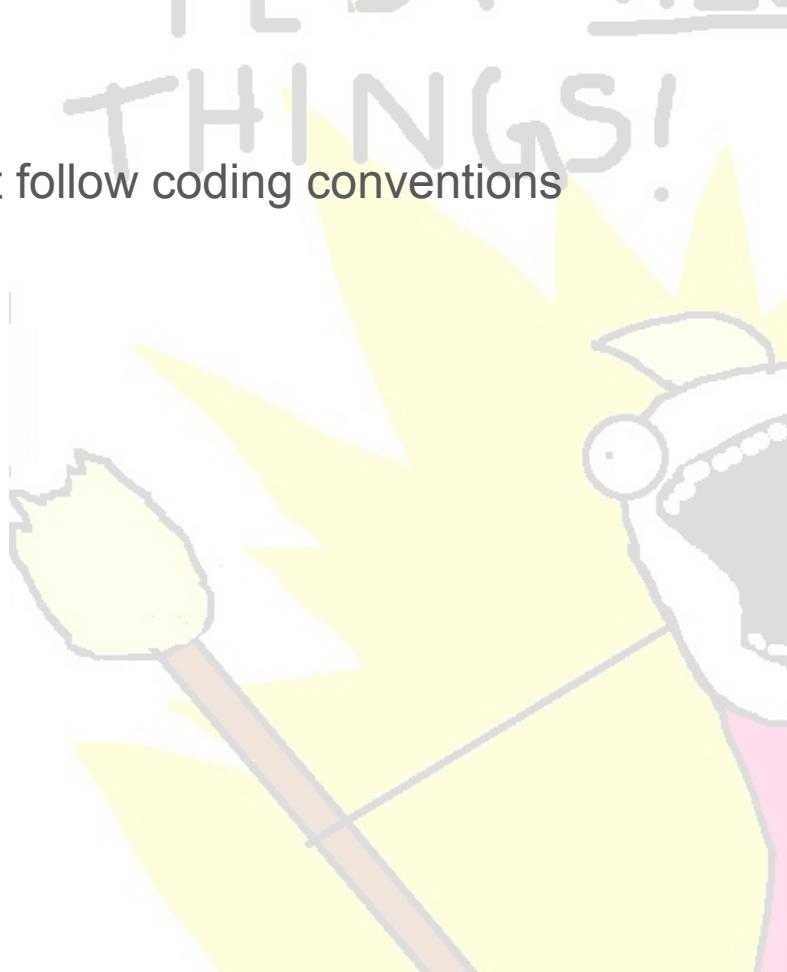


**TEST ALL THE  
THINGS!**



# TEST ALL THINGS!

Does it follow coding conventions



Review requested  
Review has been requested on this pull request. It is not required to merge. Learn more.

Some checks haven't completed yet  
1 pending and 14 successful checks

Submit Queue Pending — PR does not have approved label. Details

cla/linuxfoundation — msau42 authorized Required Details

pull-kubernetes-bazel-build — Job succeeded. Required Details

pull-kubernetes-bazel-test — Job succeeded. Required Details

pull-kubernetes-cross — Skipped Required Details

pull-kubernetes-e2e-gce — Job succeeded. Required Details

pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded. Required Details

pull-kubernetes-e2e-gke — Skipped Required Details

pull-kubernetes-e2e-kops-aws — Job succeeded. Required Details

pull-kubernetes-integration — Job succeeded. Required Details

pull-kubernetes-kubemark-e2e-gce — Job succeeded. Required Details

pull-kubernetes-local-e2e — Skipped Required Details

pull-kubernetes-node-e2e — Job succeeded. Required Details

pull-kubernetes-typecheck — Job succeeded. Required Details

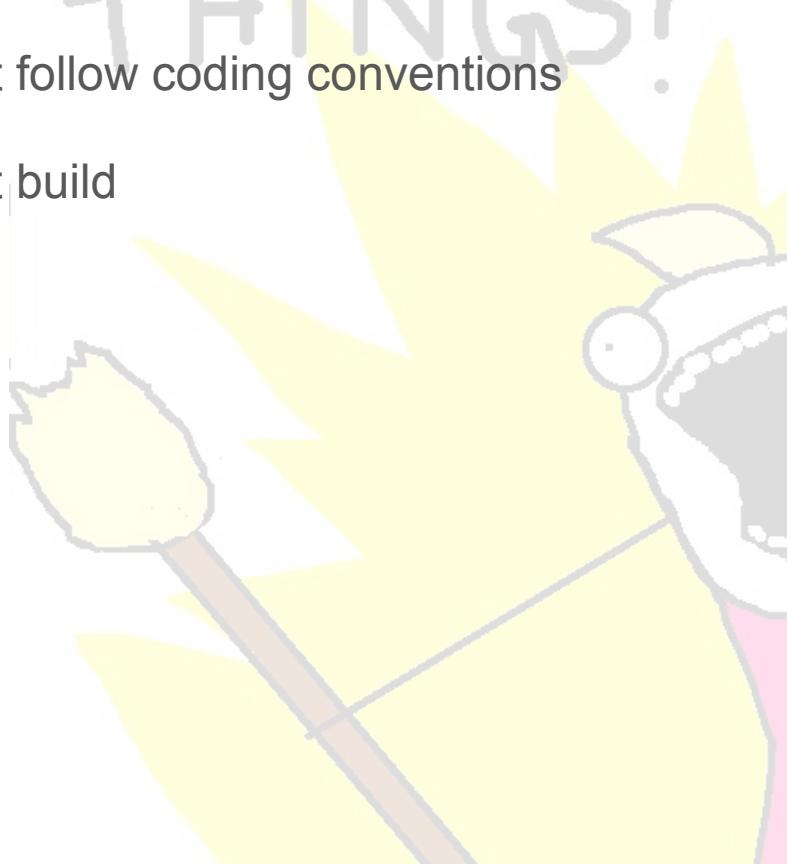
pull-kubernetes-verify — Job succeeded. Required Details

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# TEST ALL THINGS!

Does it follow coding conventions

Does it build



A screenshot of a GitHub pull request review interface. At the top right, there are three small profile icons. Below them is a green circular icon with a checkmark and the text "Review requested". To its right, a message says "Review has been requested on this pull request. It is not required to merge. Learn more." with a "Show all reviewers" link. Further down, a green circular icon with a checkmark and the text "Some checks haven't completed yet" is followed by "1 pending and 14 successful checks" and a "Hide all checks" link. A yellow circular icon with a question mark and the text "Submit Queue Pending — PR does not have approved label." is followed by a "Details" link. A green circular icon with a checkmark and the text "cla/linuxfoundation — msau42 authorized" is followed by a "Required" button and a "Details" link. The main list of checks starts with a green circular icon with a checkmark and the text "pull-kubernetes-bazel-build — Job succeeded." followed by a "Required" button and a "Details" link. This is followed by several other green circular icons with checkmarks and their corresponding job names: "pull-kubernetes-bazel-test — Job succeeded.", "pull-kubernetes-cross — Skipped", "pull-kubernetes-e2e-gce — Job succeeded.", "pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded.", "pull-kubernetes-e2e-gke — Skipped", "pull-kubernetes-e2e-kops-aws — Job succeeded.", "Required" and "Details" links, "pull-kubernetes-integration — Job succeeded.", "Required" and "Details" links, "pull-kubernetes-kubemark-e2e-gce — Job succeeded.", "Required" and "Details" links, "pull-kubernetes-local-e2e — Skipped", "Required" and "Details" links, "pull-kubernetes-node-e2e — Job succeeded.", "Required" and "Details" links, "pull-kubernetes-typecheck — Job succeeded.", "Required" and "Details" links, and "pull-kubernetes-verify — Job succeeded.", "Required" and "Details" links. At the bottom, a green circular icon with a checkmark and the text "This branch has no conflicts with the base branch" is followed by "Merging can be performed automatically." and a "Details" link.

# TEST ALL THINGS!

# Does it follow coding conventions

# Does it build

# Does it pass unit and integration tests

	<b>Review requested</b>	Show all reviewers
Review has been requested on this pull request. It is not required to merge. <a href="#">Learn more</a> .		
	<b>Some checks haven't completed yet</b>	<a href="#">Hide all checks</a>
1 pending and 14 successful checks		
	Submit Queue · Pending — PR does not have approved label.	<a href="#">Details</a>
	cla/linuxfoundation — msau42 authorized	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-bazel-build — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-bazel-test — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-cross — Skipped	
	pull-kubernetes-e2e-gce — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded.	<a href="#">Details</a>
	pull-kubernetes-e2e-gke — Skipped	
	pull-kubernetes-e2e-kops-aws — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-integration — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-kubemark-e2e-gce — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-local-e2e — Skipped	
	pull-kubernetes-node-e2e — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-typecheck — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-verify — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	<b>This branch has no conflicts with the base branch</b>	
Merging can be performed automatically.		

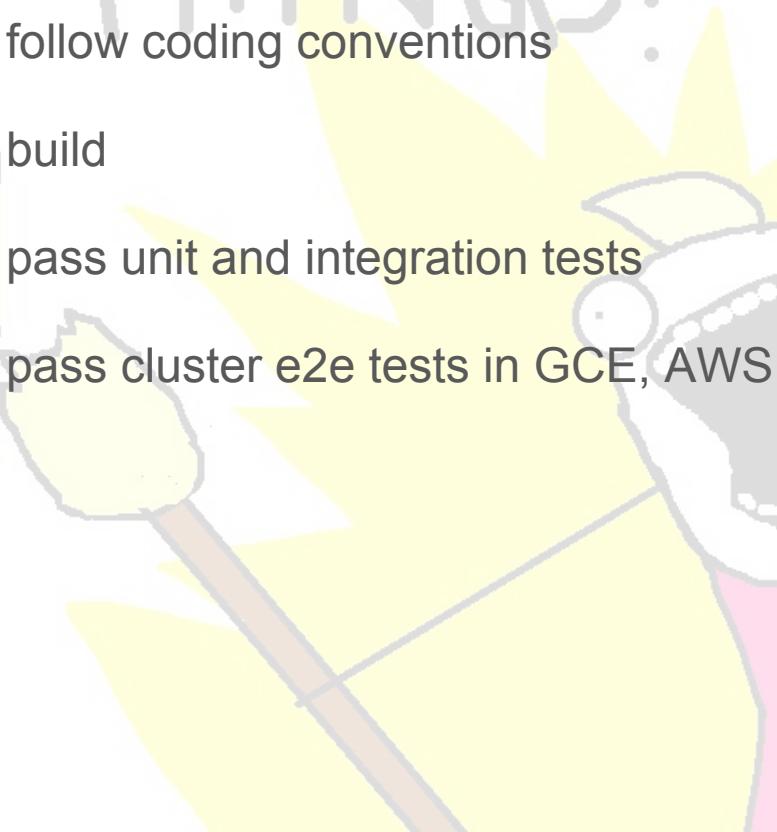
# TEST ALL THINGS!

Does it follow coding conventions

Does it build

Does it pass unit and integration tests

Does it pass cluster e2e tests in GCE, AWS



A GitHub pull request interface showing test results. The top status bar indicates "Review requested" and "Some checks haven't completed yet". A prominent yellow flower graphic is overlaid on the left side of the interface.

**Review requested**  
Review has been requested on this pull request. It is not required to merge. Learn more.

**Some checks haven't completed yet**  
1 pending and 14 successful checks

**Submit Queue** Pending — PR does not have approved label.

**cla/linuxfoundation** — msau42 authorized **Required** Details

**pull-kubernetes-bazel-build** — Job succeeded. **Required** Details

**pull-kubernetes-bazel-test** — Job succeeded. **Required** Details

**pull-kubernetes-cross** — Skipped

**pull-kubernetes-e2e-gce** — Job succeeded. **Required** Details

**pull-kubernetes-e2e-gce-device-plugin-gpu** — Job succeeded. **Required** Details

**pull-kubernetes-e2e-gke** — Skipped

**pull-kubernetes-e2e-kops-aws** — Job succeeded. **Required** Details

**pull-kubernetes-integration** — Job succeeded. **Required** Details

**pull-kubernetes-kubemark-e2e-gce** — Job succeeded. **Required** Details

**pull-kubernetes-local-e2e** — Skipped

**pull-kubernetes-node-e2e** — Job succeeded. **Required** Details

**pull-kubernetes-typecheck** — Job succeeded. **Required** Details

**pull-kubernetes-verify** — Job succeeded. **Required** Details

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# TEST ALL THINGS!

Does it follow coding conventions

Does it build

Does it pass unit and integration tests

Does it pass cluster e2e tests in GCE, AWS

Does it pass node e2e tests

Review requested  
Review has been requested on this pull request. It is not required to merge. Learn more.

Some checks haven't completed yet  
1 pending and 14 successful checks

Submit Queue Pending — PR does not have approved label.

cla/linuxfoundation — msau42 authorized

pull-kubernetes-bazel-build — Job succeeded.

pull-kubernetes-bazel-test — Job succeeded.

pull-kubernetes-cross — Skipped

pull-kubernetes-e2e-gce — Job succeeded.

pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded.

pull-kubernetes-e2e-gke — Skipped

pull-kubernetes-e2e-kops-aws — Job succeeded.

pull-kubernetes-integration — Job succeeded.

pull-kubernetes-kubemark-e2e-gce — Job succeeded.

pull-kubernetes-local-e2e — Skipped

pull-kubernetes-node-e2e — Job succeeded.

pull-kubernetes-typecheck — Job succeeded.

pull-kubernetes-verify — Job succeeded.

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# TEST ALL THINGS!

Does it follow coding conventions

Does it build

Does it pass unit and integration tests

Does it pass cluster e2e tests in GCE, AWS

Does it pass node e2e tests

Does it pass simulated perf tests

	<b>Review requested</b>	Show all reviewers
	<b>Some checks haven't completed yet</b> 1 pending and 14 successful checks	<a href="#">Hide all checks</a>
	<b>Submit Queue</b> Pending — PR does not have approved label.	<a href="#">Details</a>
	cla/linuxfoundation — msau42 authorized	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-bazel-build — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-bazel-test — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-cross — Skipped	
	pull-kubernetes-e2e-gce — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded.	<a href="#">Details</a>
	pull-kubernetes-e2e-gke — Skipped	
	pull-kubernetes-e2e-kops-aws — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-integration — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-kubemark-e2e-gce — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-local-e2e — Skipped	
	pull-kubernetes-node-e2e — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-typecheck — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	pull-kubernetes-verify — Job succeeded.	<b>Required</b> <a href="#">Details</a>
	This branch has no conflicts with the base branch Merging can be performed automatically.	

# TEST ALL THINGS!

Does it follow coding conventions

Does it build

Does it pass unit and integration tests

Does it pass cluster e2e tests in GCE, AWS

Does it pass node e2e tests

Does it pass simulated perf tests

Optional tests

Review requested  
Review has been requested on this pull request. It is not required to merge. Learn more.

Some checks haven't completed yet  
1 pending and 14 successful checks

Submit Queue Pending — PR does not have approved label.

cla/linuxfoundation — msau42 authorized

pull-kubernetes-bazel-build — Job succeeded. Required Details

pull-kubernetes-bazel-test — Job succeeded. Required Details

pull-kubernetes-cross — Skipped

pull-kubernetes-e2e-gce — Job succeeded. Required Details

pull-kubernetes-e2e-gce-device-plugin-gpu — Job succeeded. Details

pull-kubernetes-e2e-gke — Skipped

pull-kubernetes-e2e-kops-aws — Job succeeded. Required Details

pull-kubernetes-integration — Job succeeded. Required Details

pull-kubernetes-kubemark-e2e-gce — Job succeeded. Required Details

pull-kubernetes-local-e2e — Skipped

pull-kubernetes-node-e2e — Job succeeded. Required Details

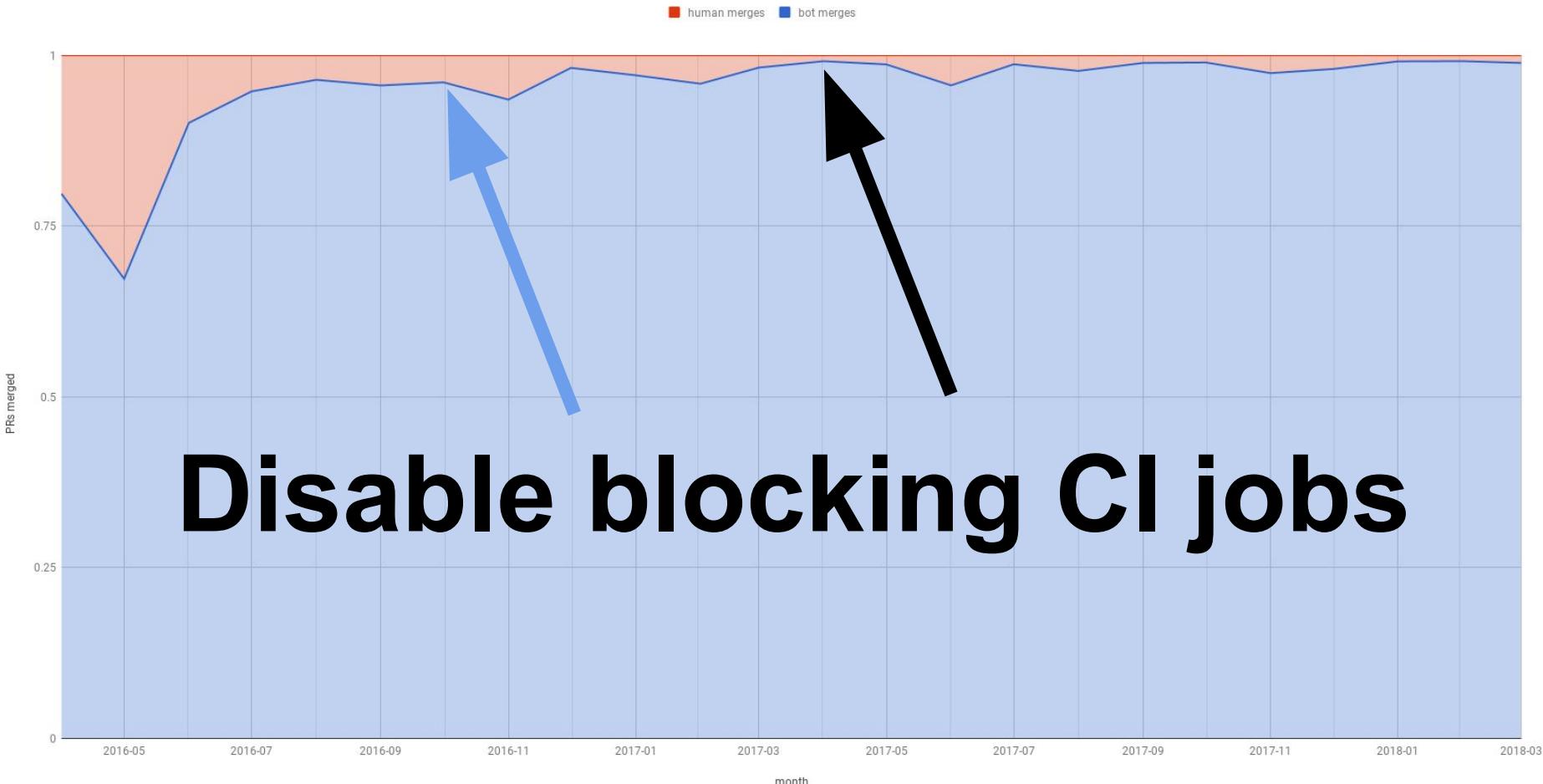
pull-kubernetes-typecheck — Job succeeded. Required Details

pull-kubernetes-verify — Job succeeded. Required Details

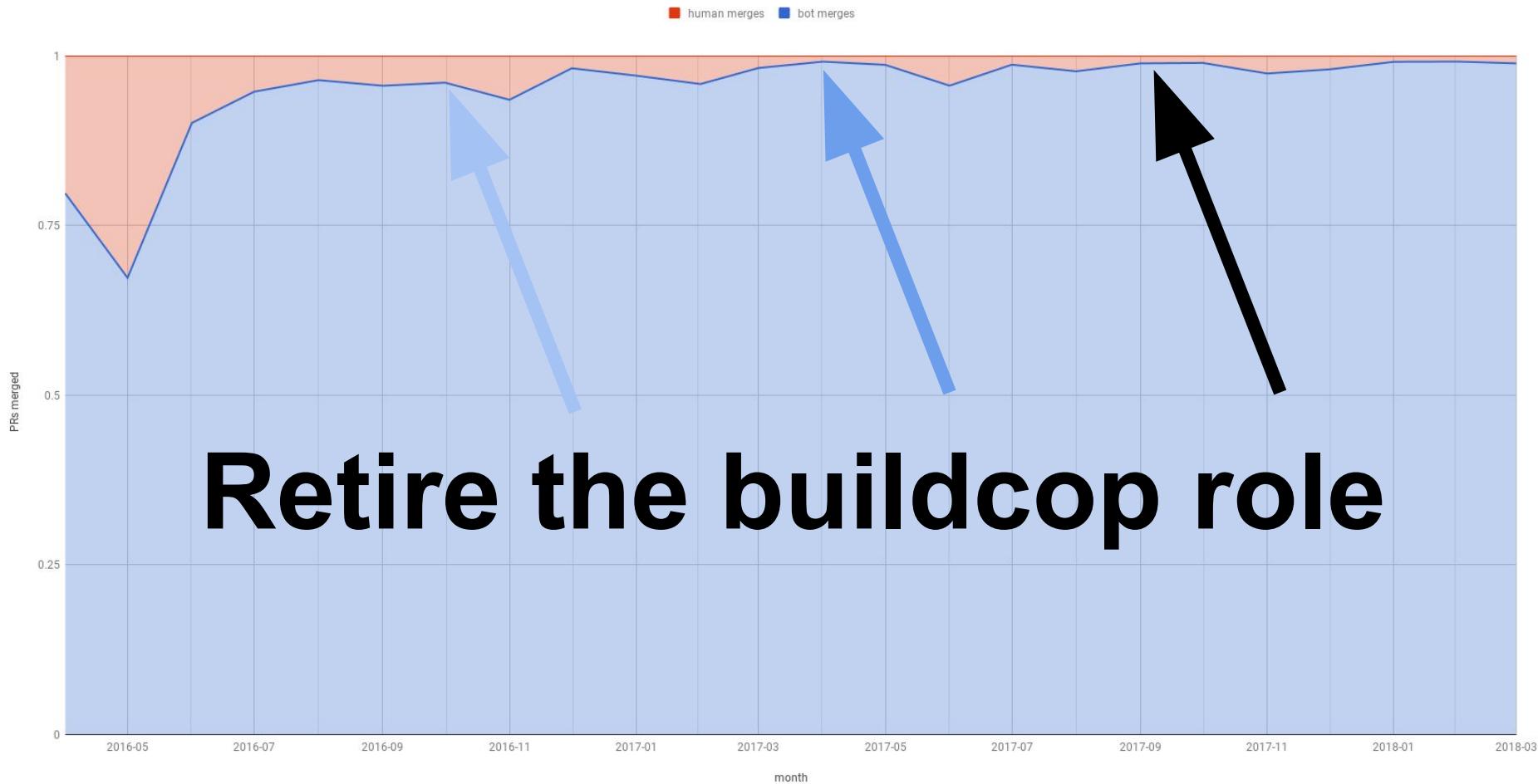
This branch has no conflicts with the base branch  
Merging can be performed automatically.



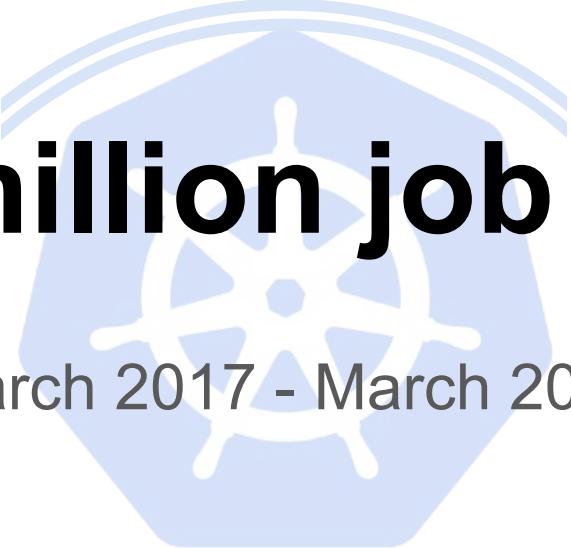
Source: git log



Source: git log

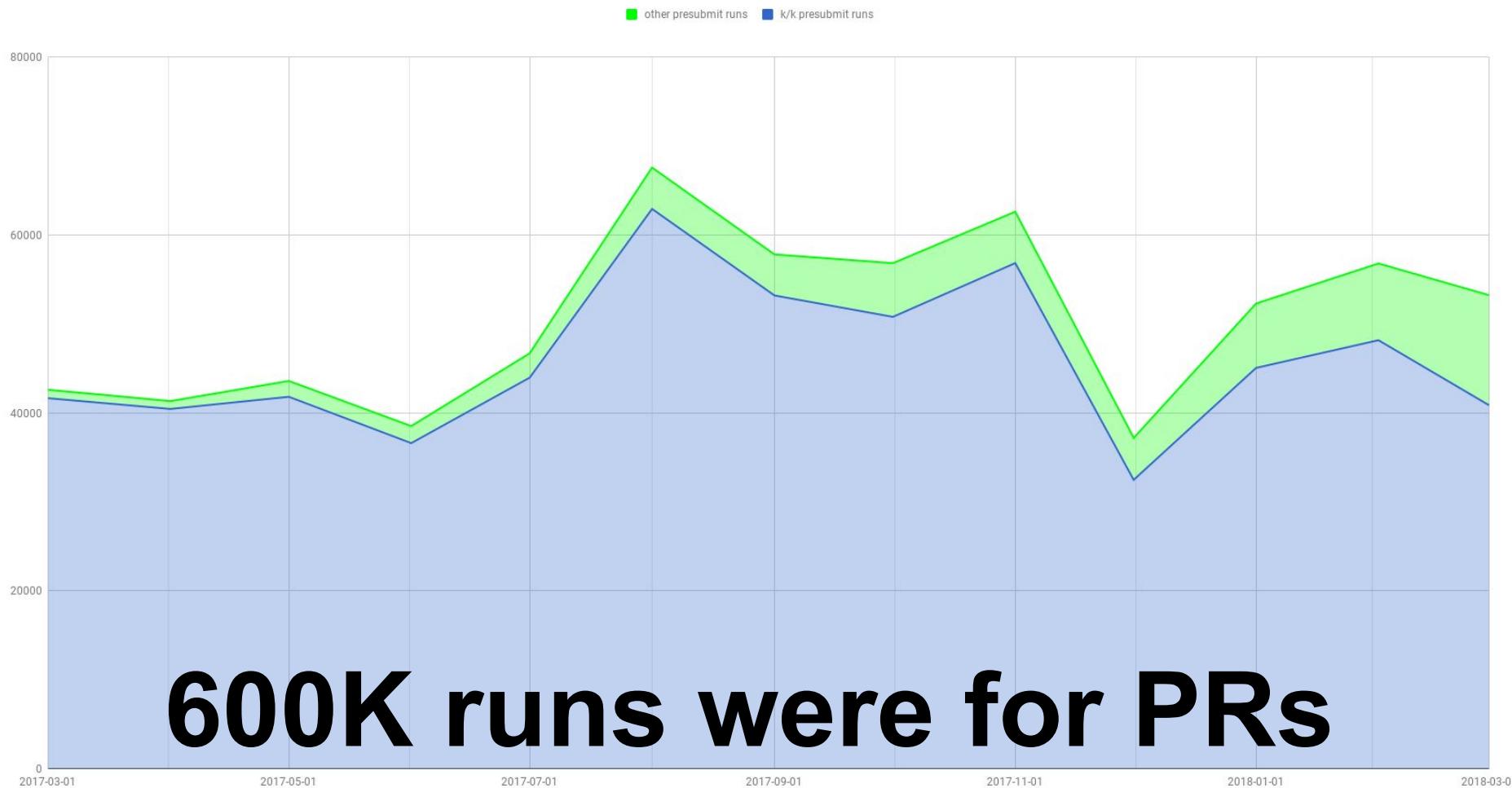


Source: git log

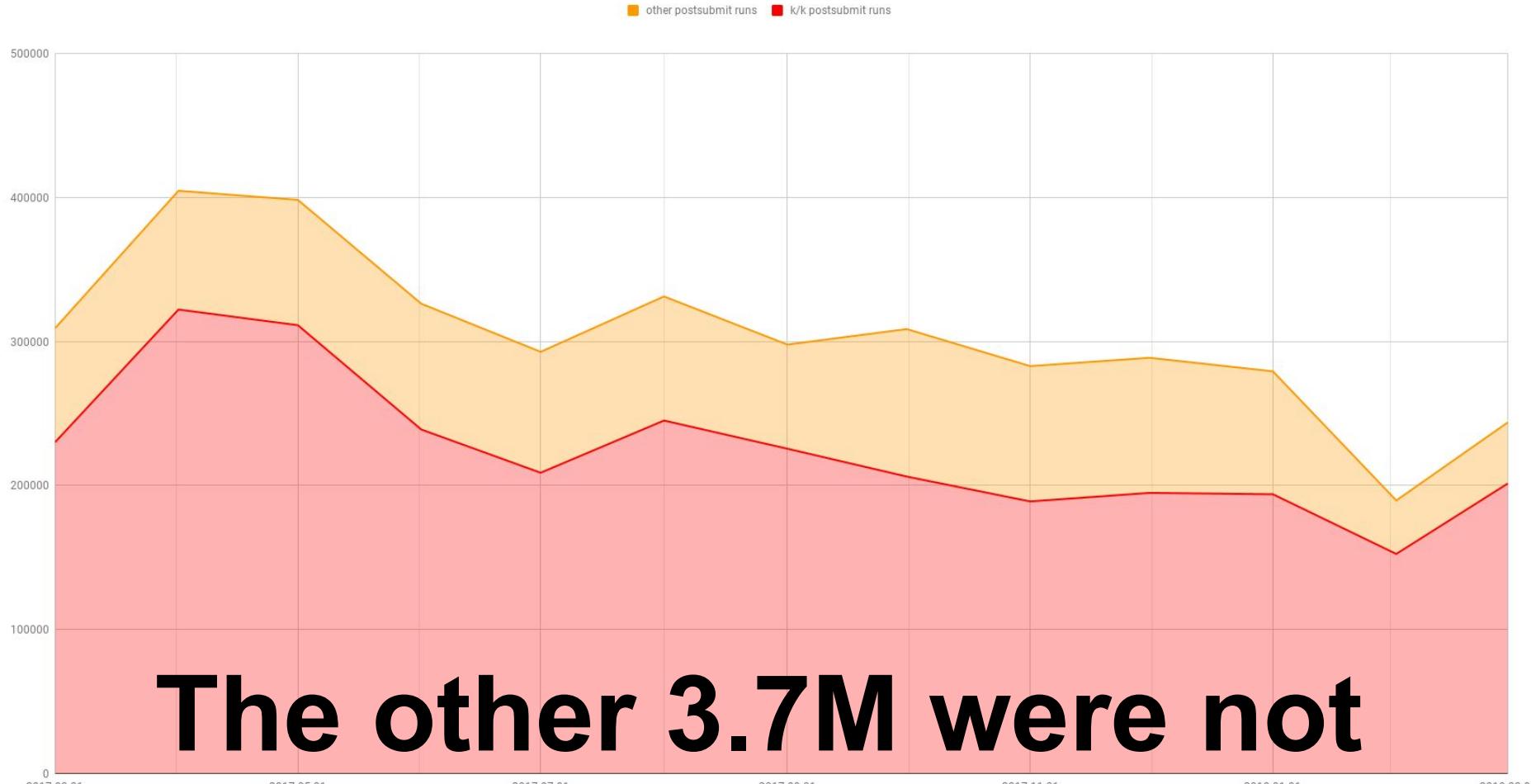


# **4.3 million job runs**

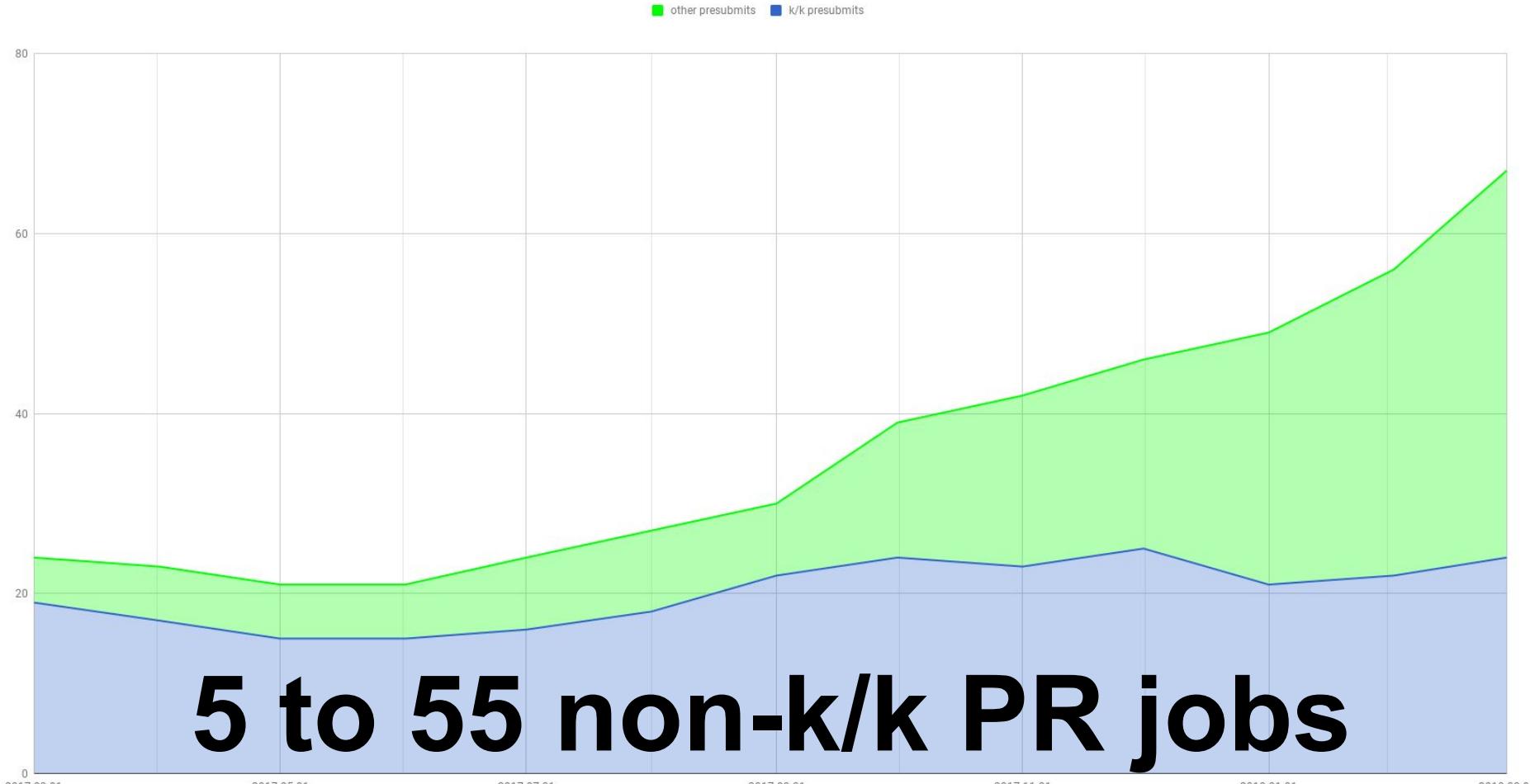
March 2017 - March 2018



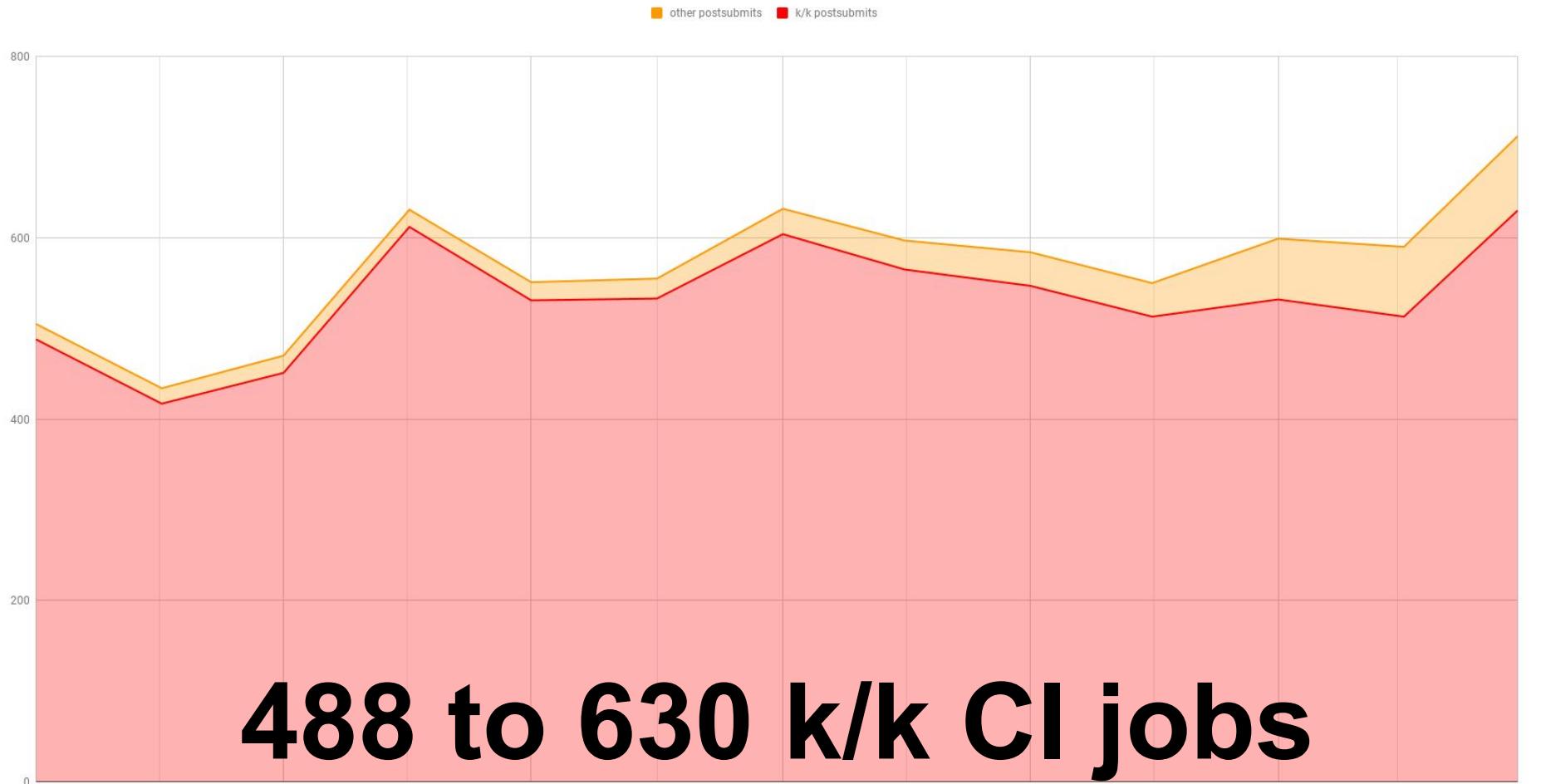
Source: BigQuery



**The other 3.7M were not**



**5 to 55 non-k/k PR jobs**



**488 to 630 k/k CI jobs**

# PR Workflow

PR author must have signed CLA

PR must pass tests

PR must be approved

PR must be mergeable

Merge commit must pass tests

Review requested [Show all reviewers](#)  
Review has been requested on this pull request. It is not required to merge. [Learn more](#).

Some checks haven't completed yet [Hide all checks](#)  
1 pending and 14 successful checks

- Submit Queue Pending — PR does not have approved label. [Details](#)
- cla/linuxfoundation msau42 authorized [Required](#) [Details](#)
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- pull-kubernetes-e2e-gke Skipped
- pull-kubernetes-e2e-kops-aws Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-integration Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-kubemark-e2e-gce Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-local-e2e Skipped
- pull-kubernetes-node-e2e Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-typecheck Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-verify Job succeeded. [Required](#) [Details](#)

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# Code Review

I need someone to review this PR

I need the right person to review this PR

How do I find out who the right person is

How do I notify the right person to review my code

How do I know when the right people have reviewed my code

# Code Review - What we tried

Wait for someone to review

Use GitHub notifications to ask for reviews

Assign PRs to ask for reviews

Use GitHub CODEOWNERS to assign

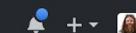
Only accept reviews from people with repo write access



This repository

Search

Pull requests Issues Marketplace Explore



+

[kubernetes / community](#)[Watch](#) 364[Star](#) 1,779[Fork](#) 1,135[Code](#)[Issues 99](#)[Pull requests 119](#)[Projects 0](#)[Insights](#)[Settings](#)

Branch: master ▾

[community / contributors / guide /](#)[Create new file](#)[Upload files](#)[Find file](#)[History](#)

k8s-ci-robot Merge pull request #1970 from spzala/triagelabels ...

Latest commit 668e18c 12 days ago

..

[OWNERS](#)

Add some labels to directory OWNERS files

3 months ago

[README.md](#)

update issue triage doc url

21 days ago

[coding-conventions.md](#)

Change 'Mac OS X' and OS X' to 'macOS'

26 days ago

[community-expectations.md](#)

Fix a typo

26 days ago

[contributor-cheatsheet.md](#)

Add a link to @dims profile

26 days ago

[git\\_workflow.png](#)

moved Github workflow and diagram to contributors/guide folder and re...

4 months ago

[github-workflow.md](#)

Merge pull request #1761 from guineveresaenger/pullrequests

2 months ago

[issue-triage.md](#)

Describe new labels in triage guidelines

15 days ago

[owners.md](#)

Move owners file to the contributor guide

3 months ago

[pull-requests.md](#)

Change k8s-merge-robot to k8s-ci-robot

2 months ago

[release-notes.md](#)

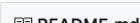
Release Notes: Title added; minor cleanup. Faster reviews tombstone a...

2 months ago

[scalability-good-practices.md](#)

Hate it when I miss a tiny error.

a month ago

[README.md](#)

## Kubernetes Contributor Guide

### Disclaimer

# OWNERS

reviewers:

- castrojo
- guineveresaenger
- idvoretskyi
- tpepper

approvers:

- castrojo
- parispittman

labels:

- sig/contributor-experience
- area/contributor-guide

# OWNERS

reviewers:

- castrojo
- guineveresaenger
- idvoretskyi
- tpepper

approvers:

- castrojo
- parispittman

labels:

- sig/contributor-experience
- area/contributor-guide

**Qualitative**

**“is it written well”**

# OWNERS

reviewers:

- castrojo
- guineveresaenger
- idvoretskyi
- tpepper

approvers:

- castrojo
- parispittman

labels:

- sig/contributor-experience
- area/contributor-guide

## Holistic

**“is it doing the right thing”**

# OWNERS

reviewers:

- castrojo
- guineveresaenger
- idvoretskyi
- tpepper

approvers:

- castrojo
- parispittman

labels:

- sig/contributor-experience
- area/contributor-guide

# Triage

# Code Review - OWNERS

Use OWNERS files in the tree to apply to siblings and children (filtered by regex)

Reviewers and approvers must be org members or collaborators

Request review from those closest to the code, accept from others (/lgtm)

Require approval from those closest to the code (/approve)

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

# GitHub Labels

<https://go.k8s.io/github-labels>

## Labels



approved

area/platform/gce

cherrypick-candidate

cncf-cla: yes

kind/bug

kind/upgrade-test-failure

lgtm

priority/critical-urgent

priority/failing-test

release-note-none

sig/cluster-lifecycle

size/S

status/approved-for-milesto...

status/in-progress

THEY'RE MY INDUSTRIAL  
STRENGTH GITHUB LABELS



## Labels that apply to only PRs

Name	Description	Added By	Prow Plugin
<a href="#">approved</a>	Indicates a PR has been approved by an approver from all required OWNERS files.	approvers	<a href="#">approve</a>
<a href="#">cherrypick-approved</a>	Indicates a cherrypick PR into a release branch has been approved by the release branch manager. Consumed by the kubernetes/kubernetes cherrypick-queue.	humans	
<a href="#">cherrypick-candidate</a>	Denotes a PR to master as a candidate for cherry picking into a release branch.	humans	
<a href="#">cla: human-approved</a>	REMOVING. This will be deleted after 2018-04-16 00:00:00 +0000 UTC  This is a holdover from when we had difficulties getting either the google or cncf CLA bots to behave. It can only be manually applied and is consumed by the submit-queue. It has seen very little use lately.	humans	
<a href="#">cncf-cla: no</a>	Indicates the PR's author has not signed the CNCF CLA according to the CNCF CLA bot.	prow	<a href="#">cla</a>
<a href="#">cncf-cla: yes</a>	Indicates the PR's author has signed the CNCF CLA according to the CNCF CLA bot.	prow	<a href="#">cla</a>
<a href="#">do-not-merge</a>	DEPRECATED. Indicates that a PR should not be merged. The label can only be manually applied/removed. Please use do-not-merge/hold instead.	humans	
<a href="#">do-not-merge/blocked-paths</a>	Indicates that a PR should not be merged because it touches files in blocked paths.	prow	<a href="#">blockade</a>
<a href="#">do-not-merge/cherry-pick-not-present</a>	Indicates that a PR should not be merged into a release branch because the cherrypick-approved label is not present.	mungegithub-cherrypick-label-unapproved	

# GitHub Labels

These denote merge requirements

Prow approve plugin: /approve -> approved

Prow lgmt plugin: /lgmt -> lgmt

Prow cla plugin: CNCF CLA signed -> cncf-cla: yes

Labels



approved

area/platform/gce

cherrypick-candidate

cncf-cla: yes

kind/bug

kind/upgrade-test-failure

lgmt

priority/critical-urgent

priority/failing-test

release-note-none

sig/cluster-lifecycle

size/S

status/approved-for-milesto...

status/in-progress

# GitHub Labels

These are for triage / categorization

Can be auto-applied via OWNERS files

Prow label plugin: /area, /priority, /kind, /sig

Prow size plugin: auto-determine size

Labels



area/platform/gce

cherrypick-candidate

cncf-cla: yes

kind/bug

kind/upgrade-test-failure

lgtm

priority/critical-urgent

priority/failing-test

release-note-none

sig/cluster-lifecycle

size/S

status/approved-for-milesto...

status/in-progress

# GitHub Labels

These help the release team track ongoing work

Being deprecated: cherrypick-candidate

Prow release note plugin: release-note-none

Prow status plugin: /status

## Labels



approved

area/platform/gce

cherrypick-candidate

cncf-cla: yes

kind/bug

kind/upgrade-test-failure

lgtm

priority/critical-urgent

priority/failing-test

release-note-none

sig/cluster-lifecycle

size/S

status/approved-for-milesto...

status/in-progress

# GitHub Labels

labels:

- color: 00ff00  
name: lgtm
  - color: ff0000  
name: priority/P0
- previously:
- name: P0
- name: dead-label  
deleteAfter:2017-01-01T13:00:00Z

[https://git.k8s.io/test-infra/label\\_sync](https://git.k8s.io/test-infra/label_sync)

# GitHub Labels

is:open

is:pr

org:kubernetes

-repo:kubernetes/charts

label:needs-ok-to-test



Screenshot of a GitHub search results page for the query "is:open is:pr org:kubernetes -repo:kubernetes/charts label:needs-ok-to-test". The results show a list of pull requests, each with a title, author, creation date, and a "needs-ok-to-test" label. The results are paginated with 2 pages shown.

Created	Author	Title	Labels	Comments
97 Open	✓ 875 Closed	kubernetes/kubernetes Improve unit test coverage	cncf-clc:yes needs-ok-to-test	2
96 Open	✓ 876 Closed	kubernetes/kubernetes KEP: security conformance proposal	cncf-clc:yes k8sdesign needs-ok-to-test	18
95 Open	✓ 877 Closed	kubernetes/community Remove contributor page	cncf-clc:yes needs-ok-to-test	9
94 Open	✓ 878 Closed	kubernetes/release Change KUBE_PATCH from 0 to 7 in rpm/kubelet.spec	cncf-clc:yes	3
93 Open	✓ 879 Closed	kubernetes/test-infra Some type fixes	cncf-clc:yes needs-ok-to-test	3
92 Open	✓ 880 Closed	kubernetes/heptcast Correct the format	cncf-clc:yes needs-ok-to-test	4
91 Open	✓ 881 Closed	kubernetes/kubernetes Set the default operational state for dummy interfaces to up	cncf-clc:yes needs-ok-to-test release-note	5
90 Open	✓ 882 Closed	kubernetes/examples Add CASSANDRA_TRICKLE_FSYNC config to the Cassandra docker image	cncf-clc:yes needs-ok-to-test	3
89 Open	✓ 883 Closed	kubernetes/community Add SIG VMware subproject proposal for cloud provider transition	cncf-clc:yes needs-ok-to-test	3
88 Open	✓ 884 Closed	kubernetes/kops Type fix defaults->defaults	cncf-clc:yes needs-ok-to-test	4

<http://not.oktotest.com/>

# PR Workflow

PR author must have signed CLA

PR must pass tests

PR must be approved

PR must be mergeable

Merge commit must pass tests

Review requested [Show all reviewers](#)  
Review has been requested on this pull request. It is not required to merge. [Learn more](#).

Some checks haven't completed yet [Hide all checks](#)  
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- Submit Queue Pending — PR does not have approved label. [Details](#)
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- pull-kubernetes-typecheck Job succeeded. [Required](#) [Details](#)
- pull-kubernetes-verify Job succeeded. [Required](#) [Details](#)

This branch has no conflicts with the base branch  
Merging can be performed automatically.

# Merging

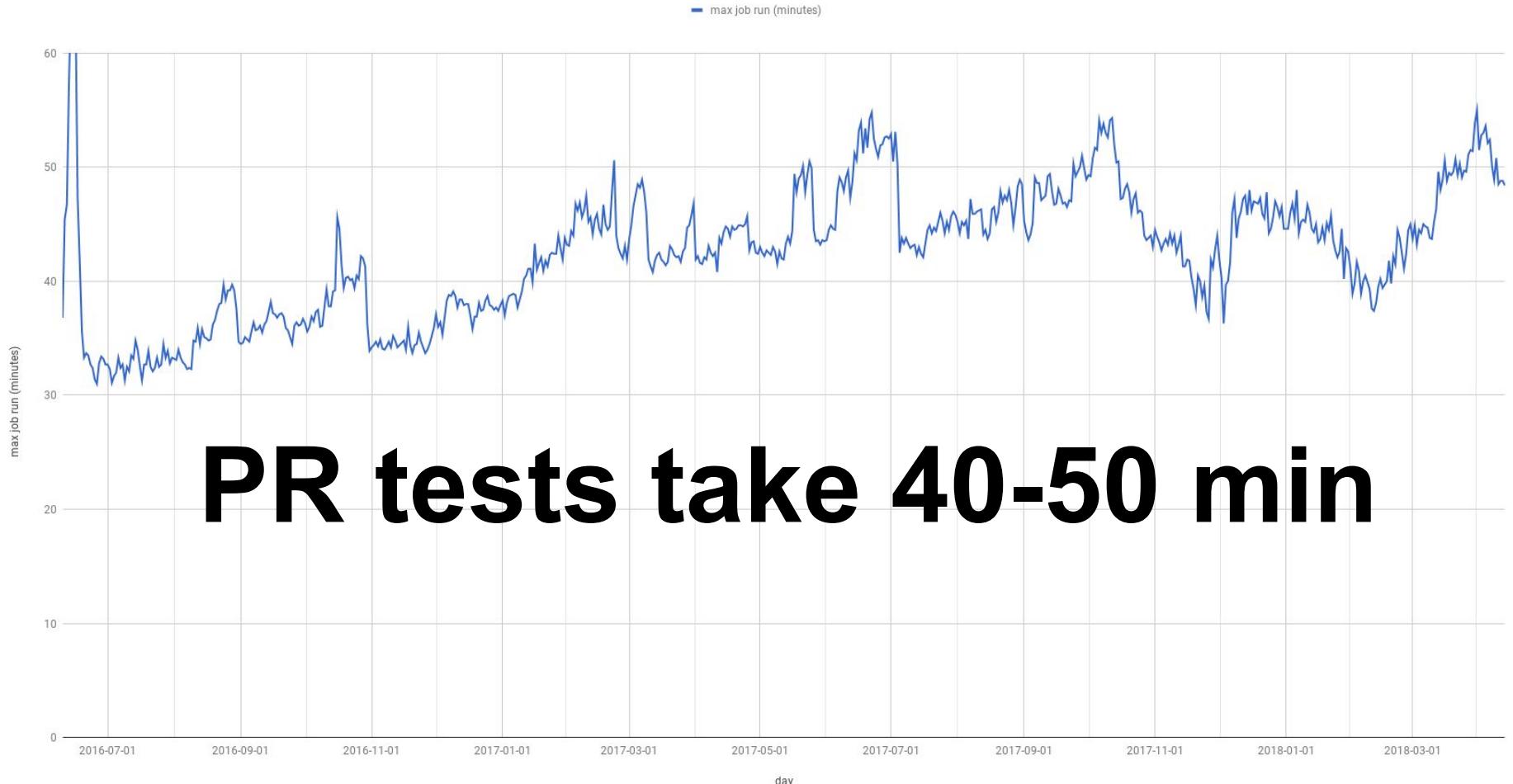
A always

B be

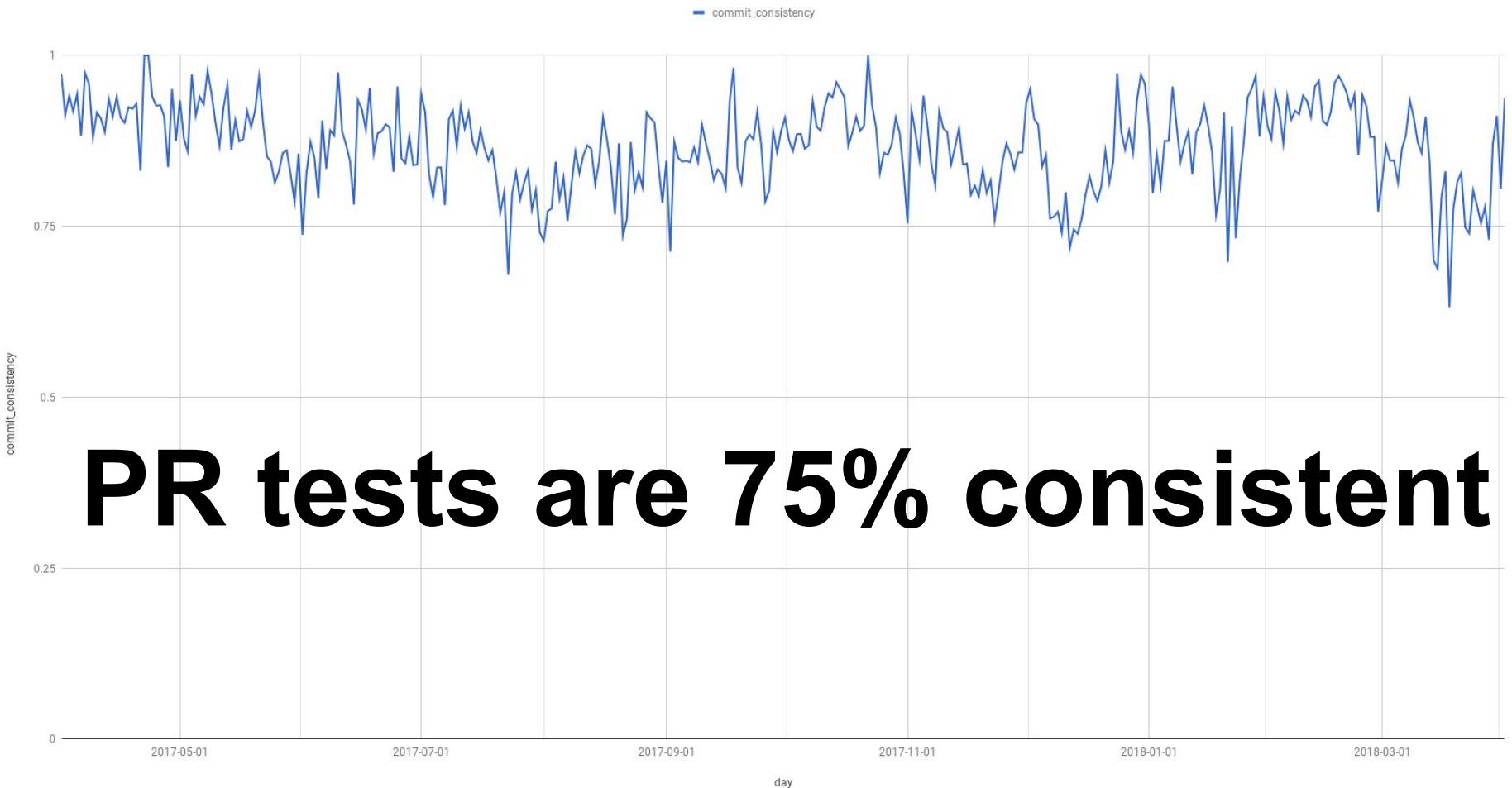
C



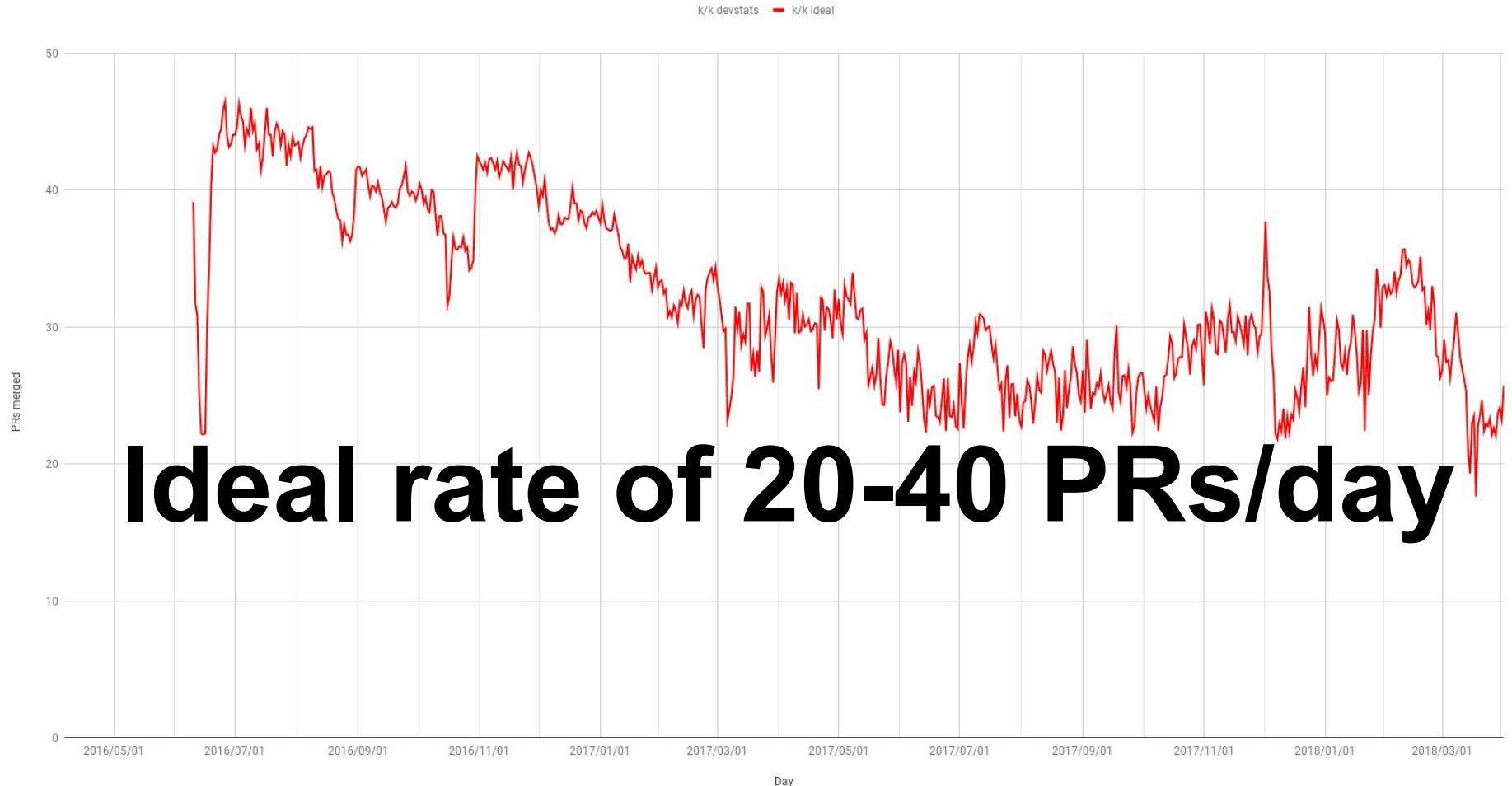
A ntion



Source: BigQuery k8s-gubernator.build

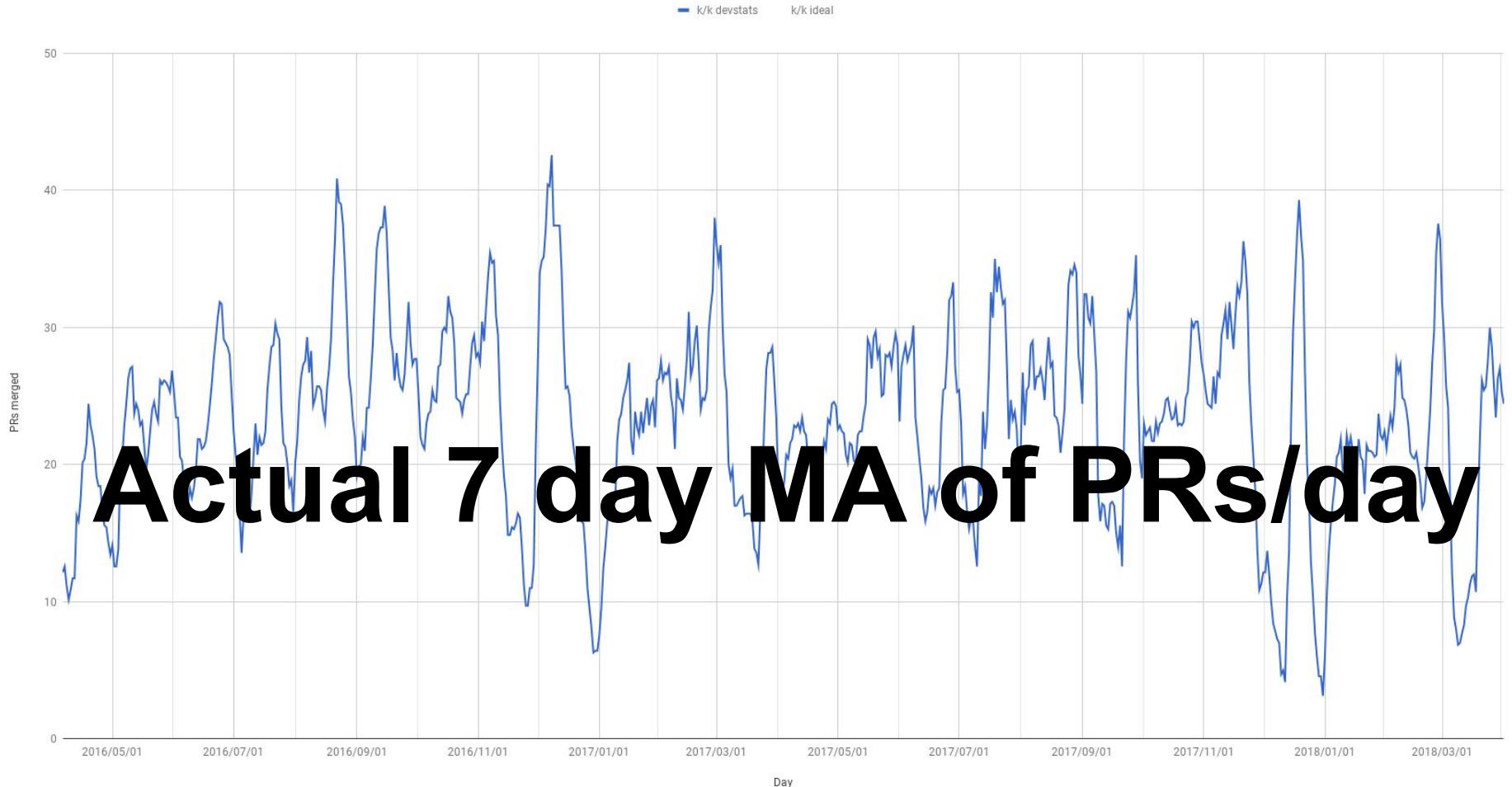


Source: BigQuery k8s-gubernator.build

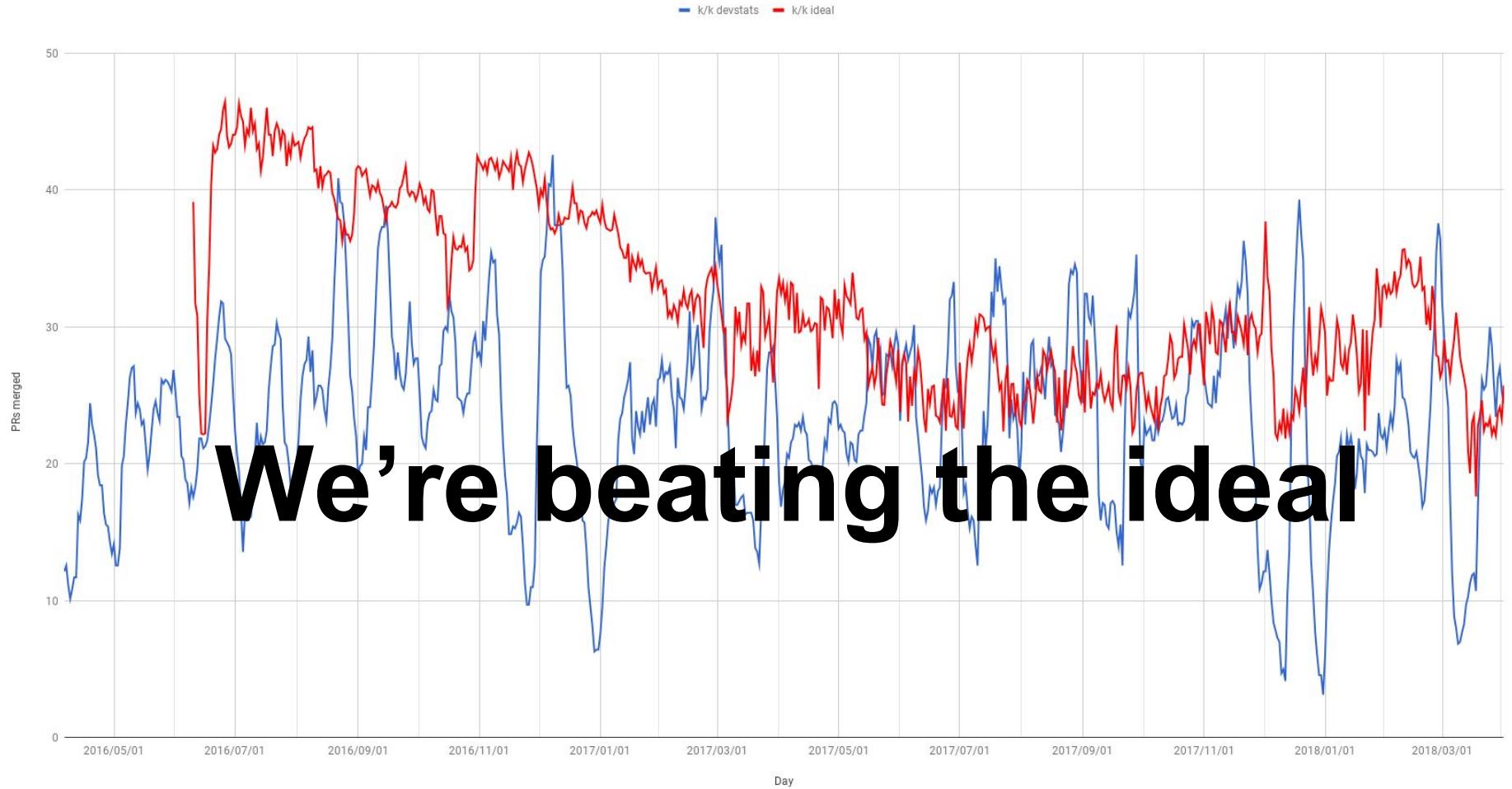


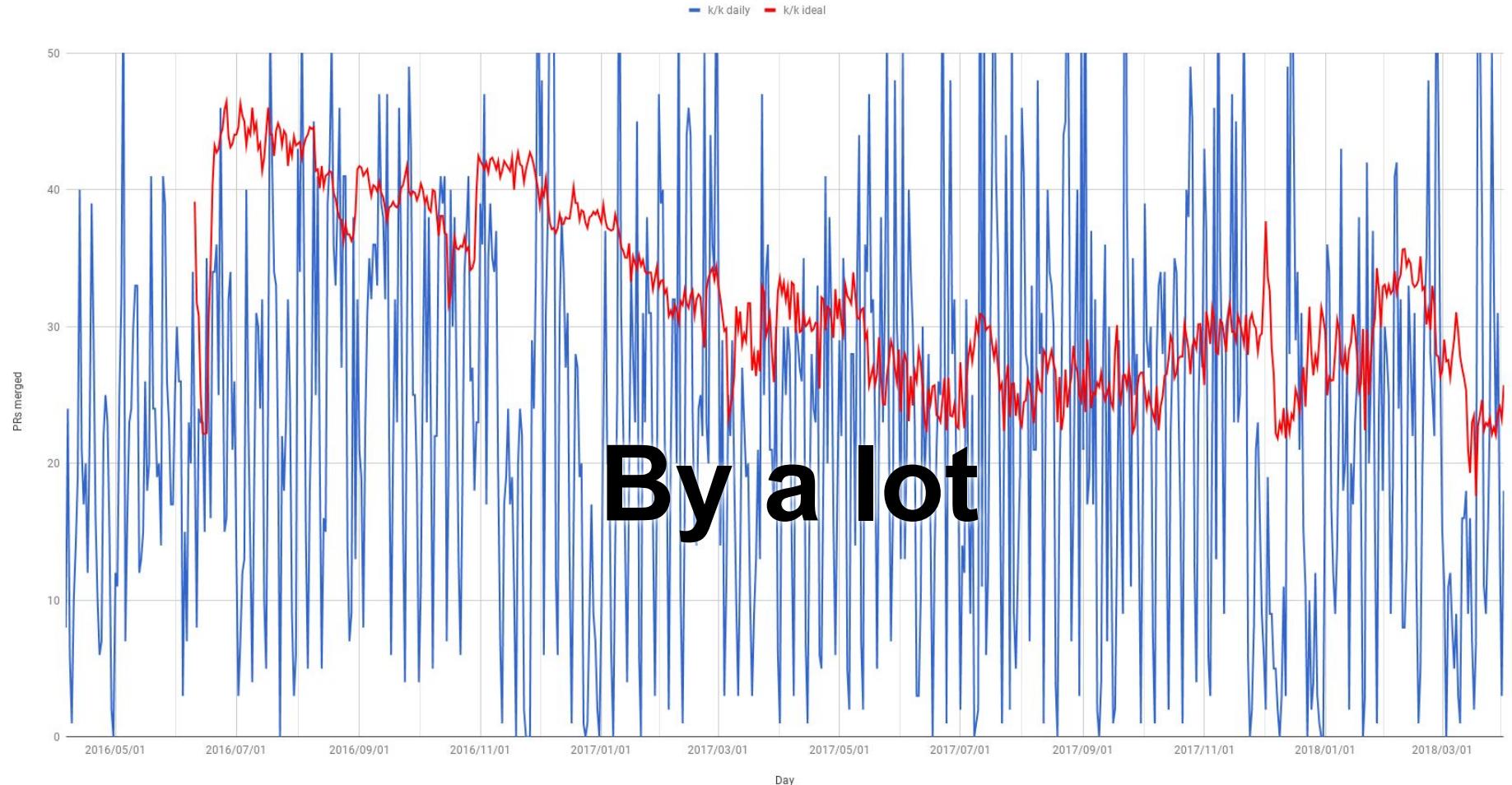
Source: PR rate =  $P(\text{success}) * \text{day} / E(\text{duration})$

$E(\text{duration}) = P(\text{success}) * \text{pass\_duration} + P(1 - \text{success}) * \text{fail\_duration}$

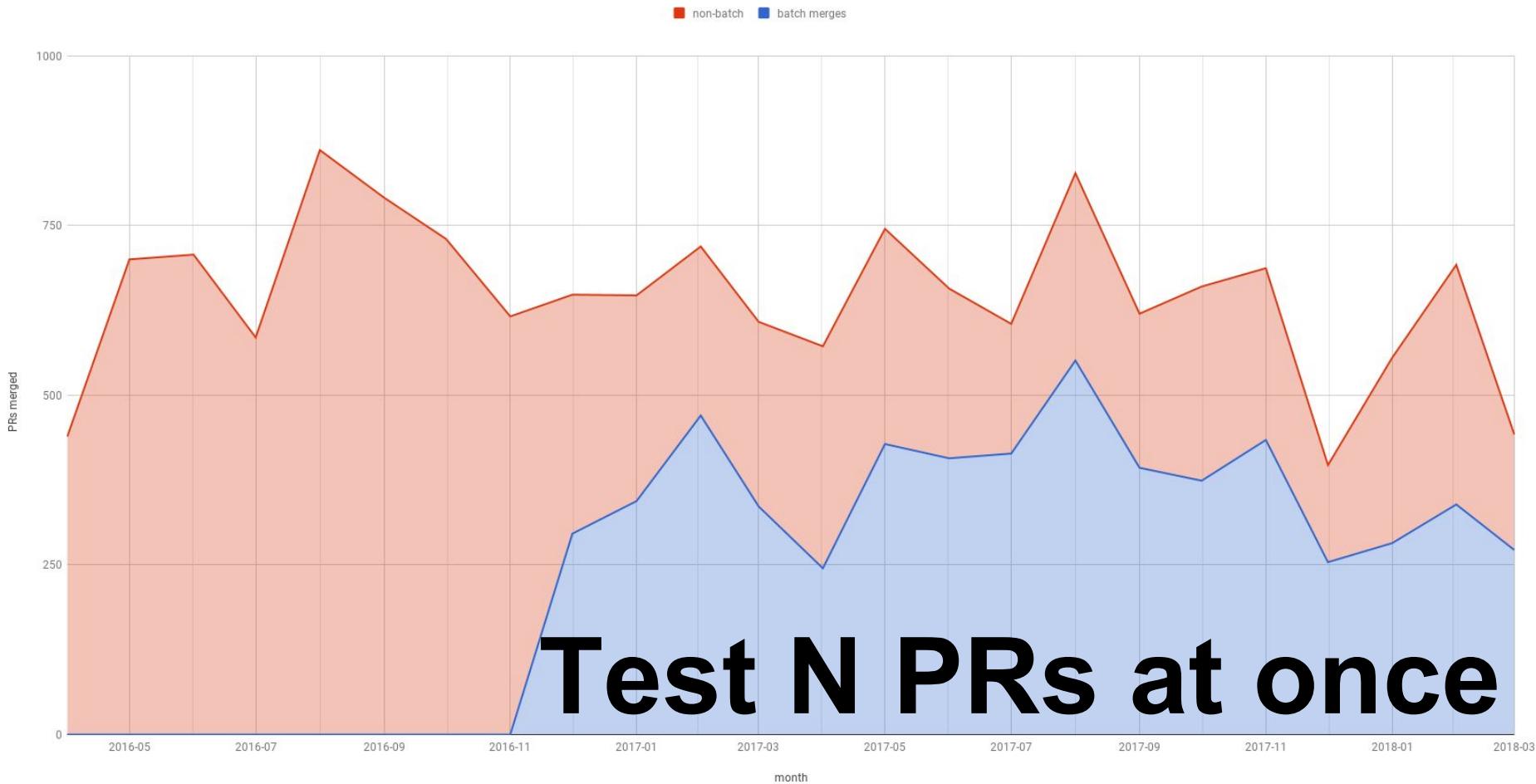


Source: k8s.devstats.cncf.io, PRs merged repos dashboard

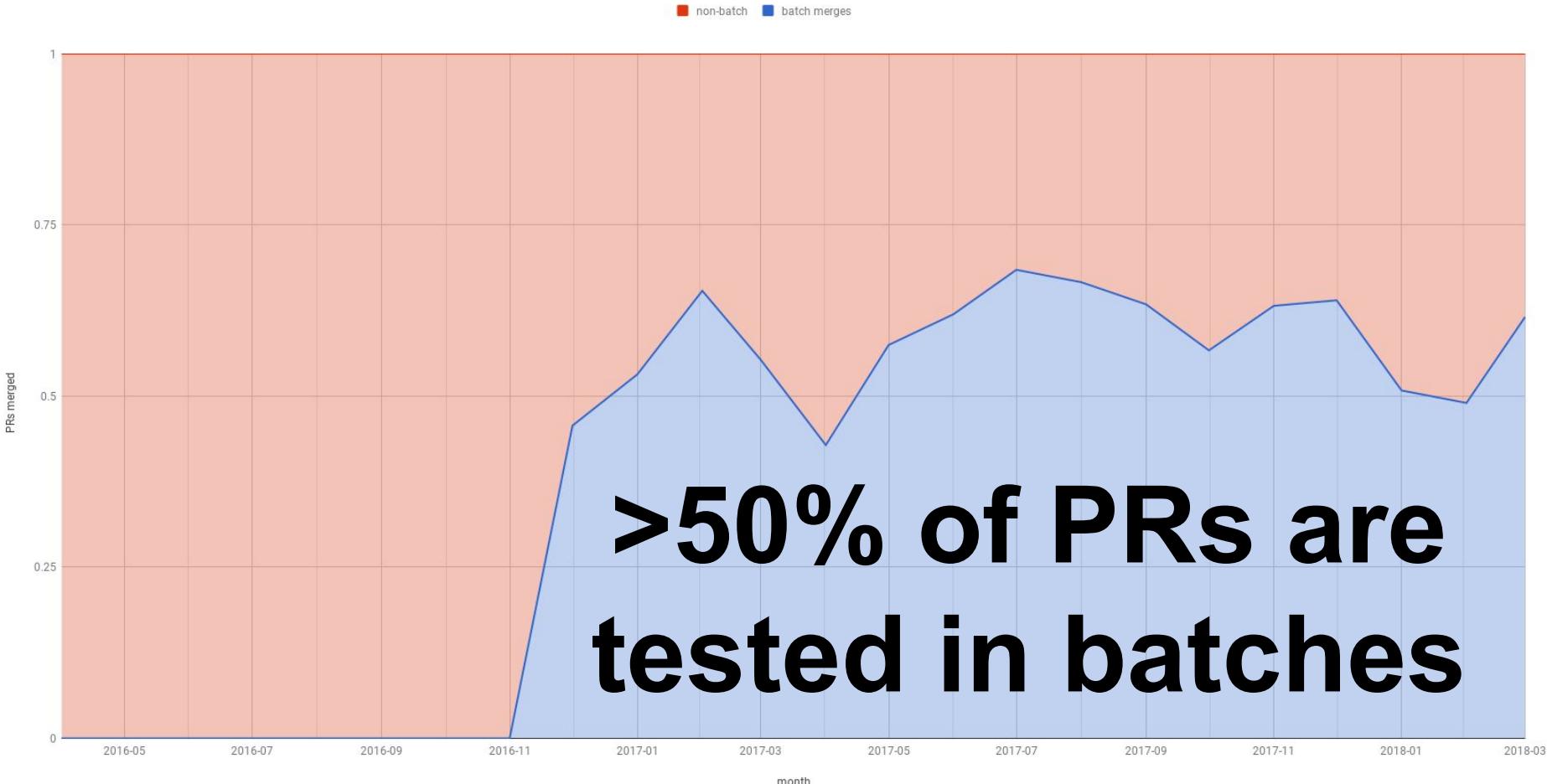




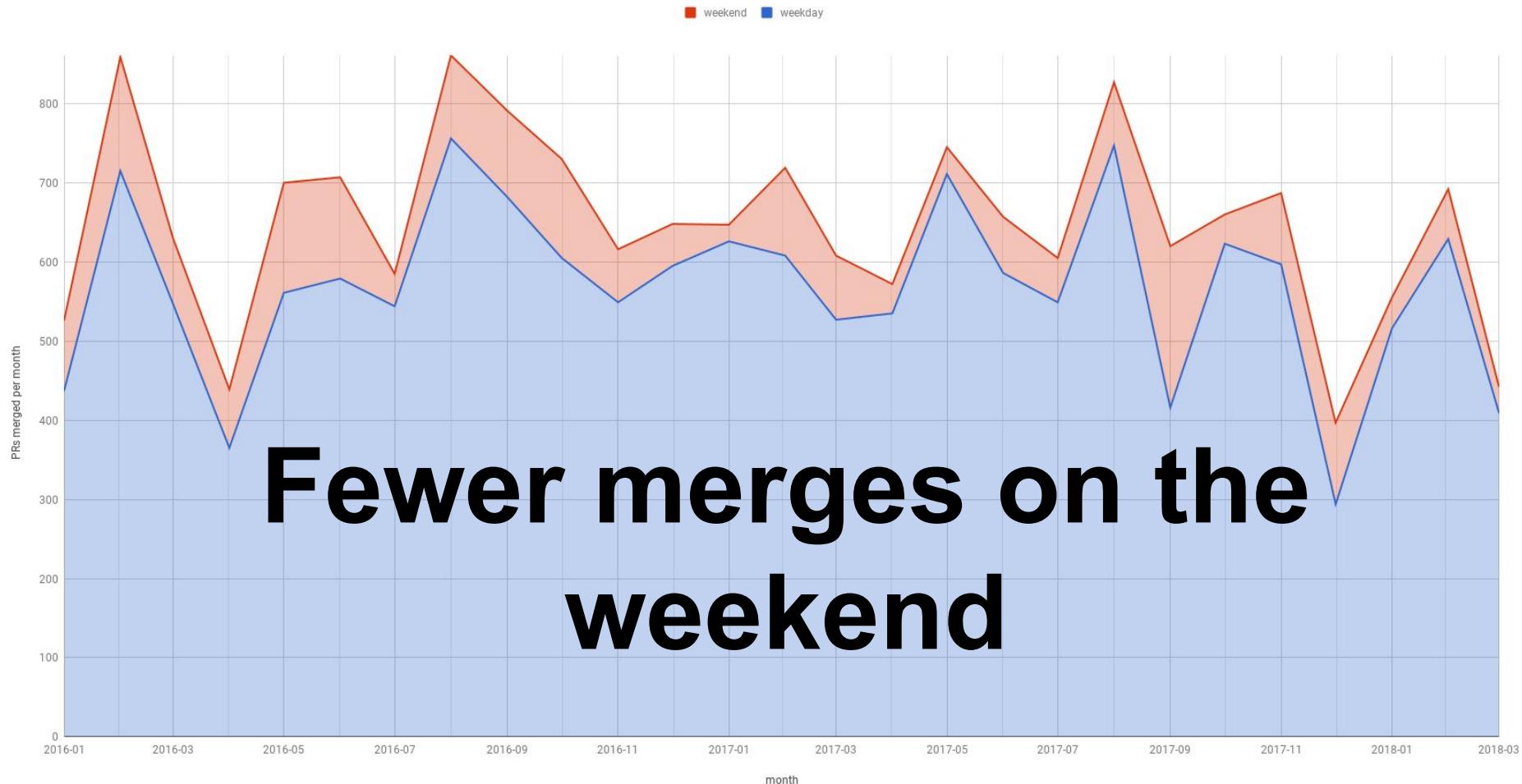
Source: [k8s.devstats.cncf.io](https://k8s.devstats.cncf.io), PRs merged repos dashboard



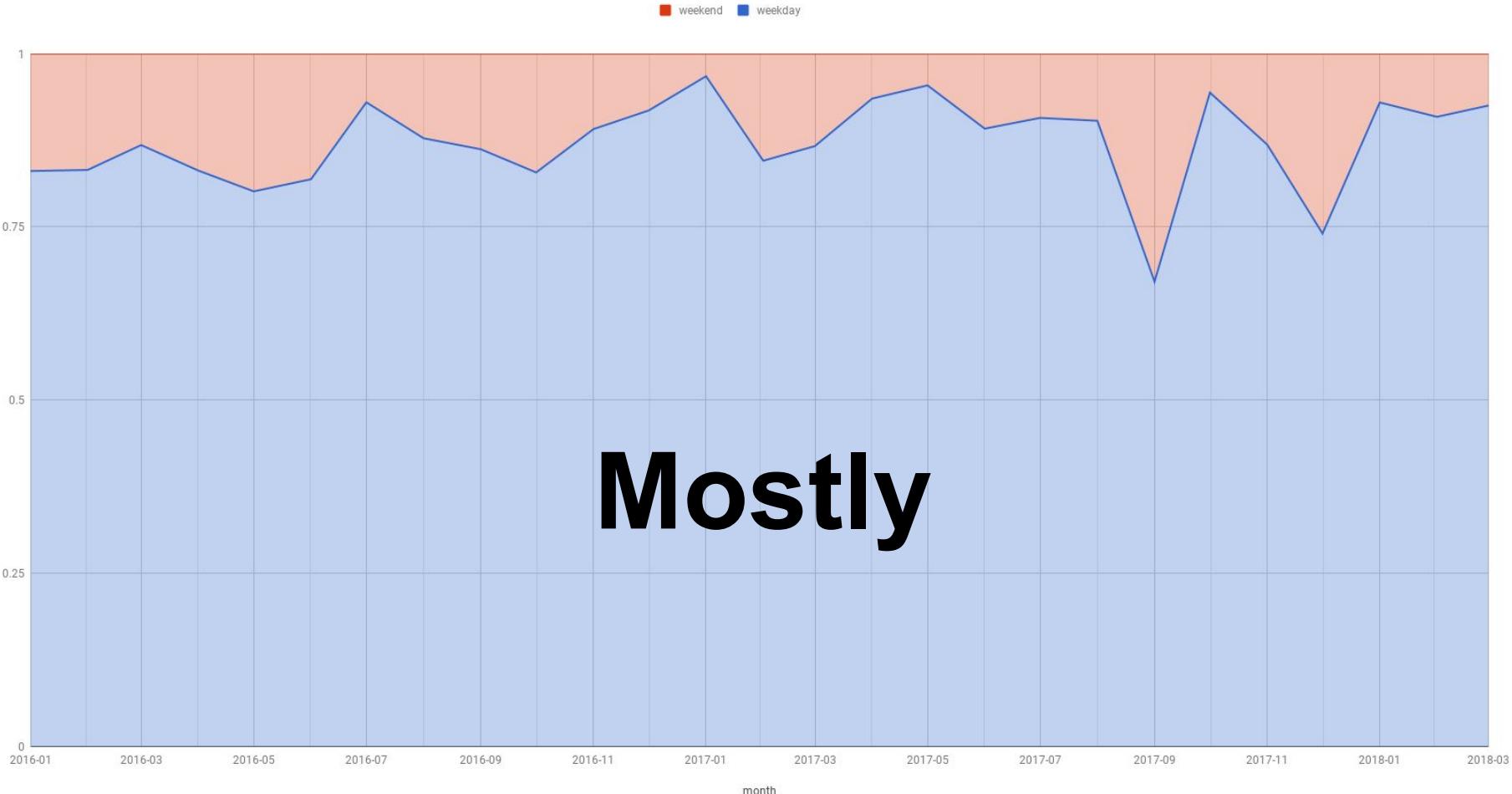
Source: git log



Source: git log



# Fewer merges on the weekend



Source: git log

# The Work

Implement PR workflow (review, test, merge)

Facilitate triage workflow (categorize, route, close)

Configure and run jobs

Provide insights into project health



 k8s-ci-bot added **kind/bug** **sig/scalability** labels on Dec 1, 2017



fejta-bot commented on Mar 1

+  ...

Issues go stale after 90d of inactivity.

Mark the issue as fresh with `/remove-lifecycle stale`.

Stale issues rot after an additional 30d of inactivity and eventually close.

If this issue is safe to close now please do so with `/close`.

Send feedback to sig-testing, kubernetes/test-infra and/or [fejta](#).  
`/lifecycle stale`

 k8s-ci-bot added the **lifecycle/stale** label on Mar 1



fejta-bot commented on Mar 31

+  ...

Stale issues rot after 30d of inactivity.

Mark the issue as fresh with `/remove-lifecycle rotten`.

Rotten issues close after an additional 30d of inactivity.

If this issue is safe to close now please do so with `/close`.

Send feedback to sig-testing, kubernetes/test-infra and/or [fejta](#).  
`/lifecycle rotten`  
`/remove-lifecycle stale`

 k8s-ci-bot added **lifecycle/rotten** and removed **lifecycle/stale** labels on Mar 31



fejta-bot commented 2 days ago

+  ...

Rotten issues close after 30d of inactivity.

Reopen the issue with `/reopen`.

Mark the issue as fresh with `/remove-lifecycle rotten`.

Send feedback to sig-testing, kubernetes/test-infra and/or [fejta](#).  
`/close`

 k8s-ci-bot closed this 2 days ago

# Use `cmp.Equal` instead of DeepEqual? #55722

[Edit](#)[New issue](#)[Open](#)

thockin opened this issue on Nov 14, 2017 · 2 comments



thockin commented on Nov 14, 2017

[Owner](#) + <https://github.com/google/go-cmp/>

I wonder if this can replace our semantic DeepEqual?

@lavalamp

@kubernetes/sig-api-machinery-bugs

 k8s-ci-robot added **sig/api-machinery** **kind/bug** labels on Nov 14, 2017 liggett added **kind/cleanup** and removed **kind/bug** labels on Jan 15

fejta-bot commented 17 days ago

+

Issues go stale after 90d of inactivity.

Mark the issue as fresh with `/remove-lifecycle stale`.

Stale issues rot after an additional 30d of inactivity and eventually close.

If this issue is safe to close now please do so with `/close`.Send feedback to sig-testing, kubernetes/test-infra and/or [fejta](#).`/lifecycle stale` k8s-ci-robot added the **lifecycle/stale** label 17 days ago

thockin commented 2 days ago

[Owner](#) + `/lifecycle frozen``/remove-lifecycle stale`

## Assignees

No one—assign yourself

## Labels

**help wanted****kind/cleanup****lifecycle/frozen****sig/api-machinery**

## Projects

None yet

## Milestone

No milestone

## Notifications

**Subscribe**

You're not receiving notifications from this thread.

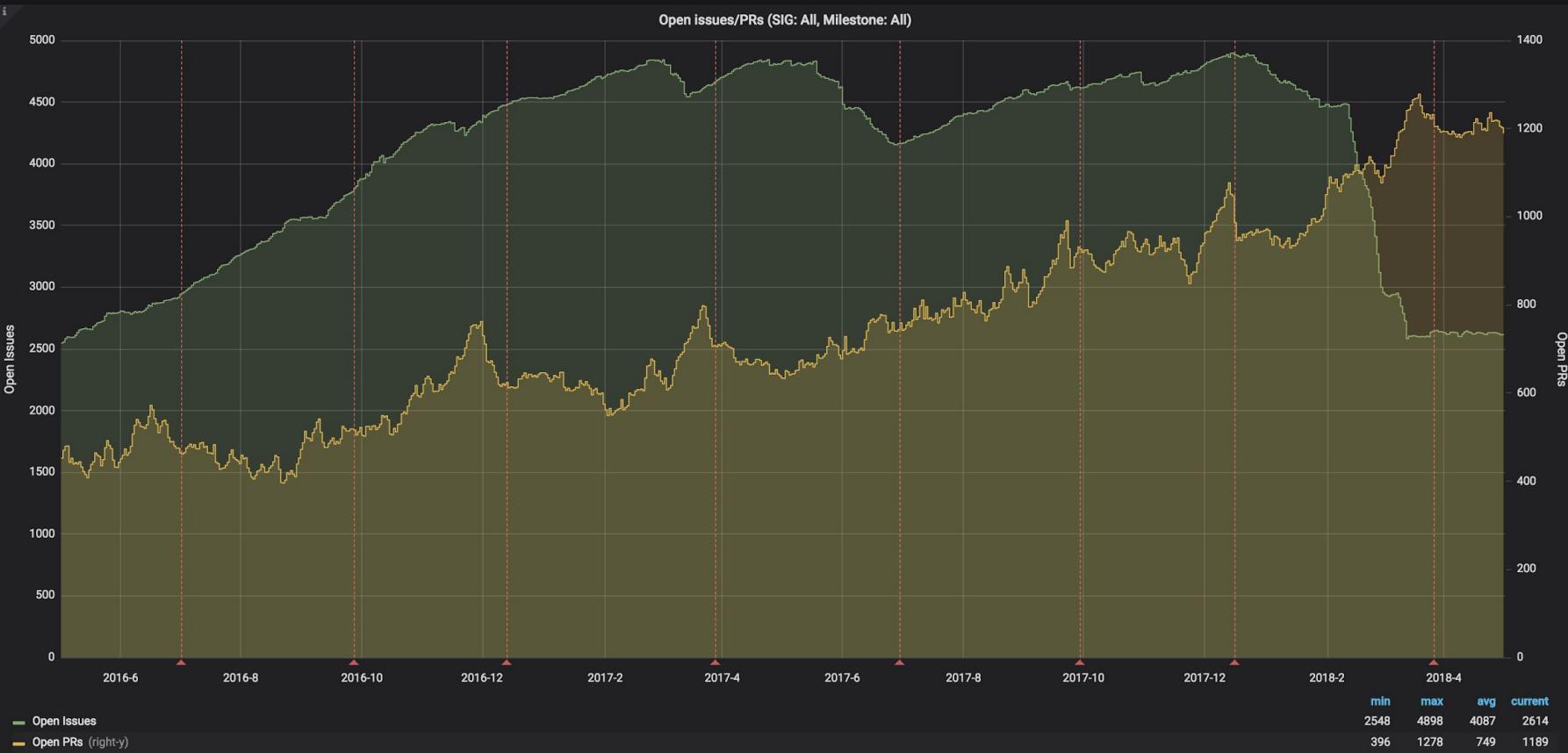
## 4 participants



Lock conversation



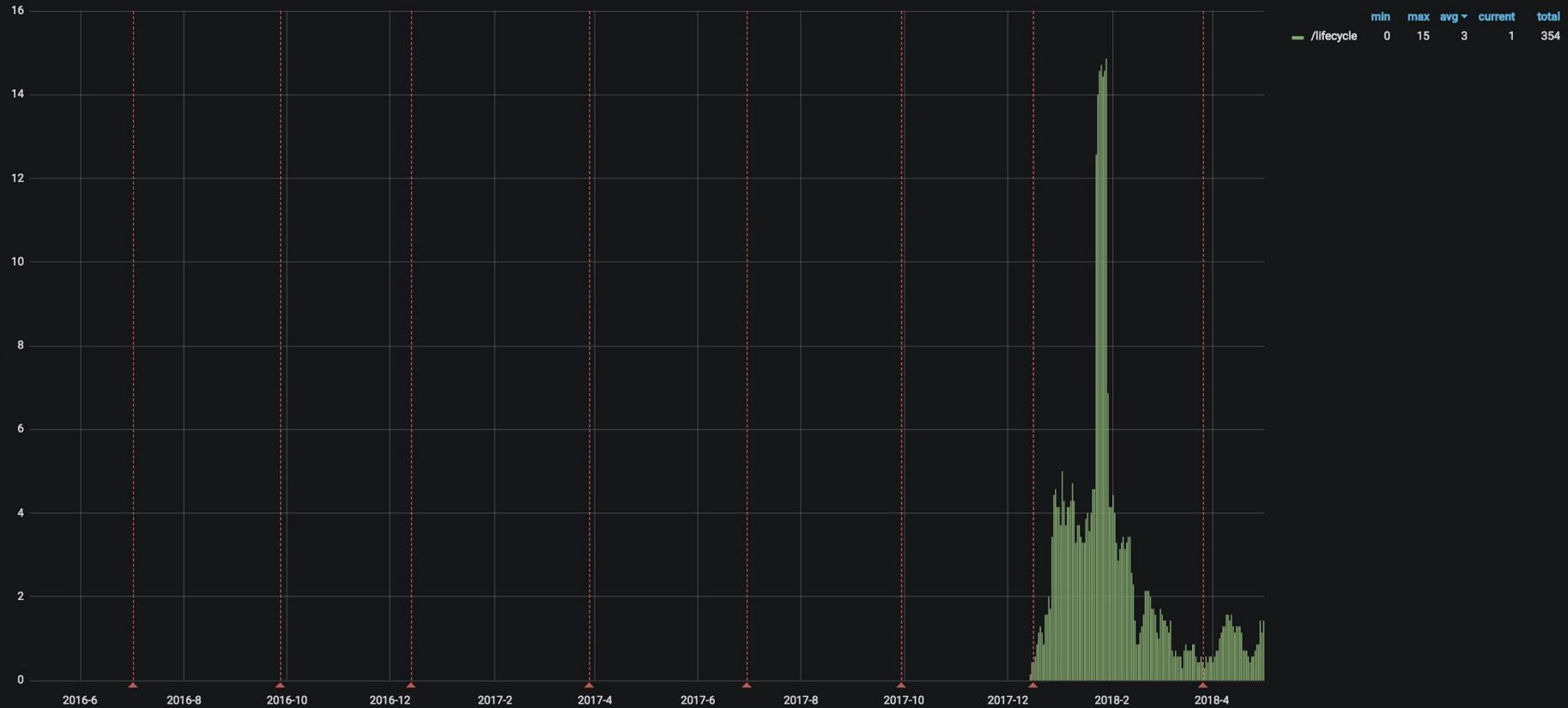
SIG All ▾ Milestone All ▾ Repository kubernetes/kubernetes ▾ Releases





Period 7 days MA ▾ Repository group Kubernetes ▾ Commands lifecycle ▾ Releases

Bot commands usage (Kubernetes, 7 days MA)



```
15689 - name: periodic-test-infra-rotten
15690   interval: 1h
15691   agent: kubernetes
15692   spec:
15693     containers:
15694       - image: gcr.io/k8s-testimages/commenter:v20170808-abf66782
15695         args:
15696           - |-
15697             --query=org:kubernetes
15698             -label:lifecycle/frozen
15699             label:lifecycle/stale
15700             -label:lifecycle/rotten
15701             - --updated=720h
15702             - --token=/etc/token/bot-github-token
15703             - |-
15704               --comment=Stale issues rot after 30d of inactivity.
15705               Mark the issue as fresh with `/remove-lifecycle rotten`.
15706               Rotten issues close after an additional 30d of inactivity.
15707
15708     If this issue is safe to close now please do so with `close`.
15709
15710   Send feedback to sig-testing, kubernetes/test-infra and/or [fejta](https://github.com/fejta).
15711   /lifecycle rotten
15712   /remove-lifecycle stale
15713   --template
15714   --ceiling=10
15715   --confirm
15716   volumeMounts:
15717     - name: token
15718       mountPath: /etc/token
15719   volumes:
15720     - name: token
15721       secret:
15722         secretName: fejta-bot-token
15723
15724   - name: periodic-test-infra-stale
15725     interval: 1h
15726     agent: kubernetes
15727     spec:
15728       containers:
15729         - image: gcr.io/k8s-testimages/commenter:v20170808-abf66782
15730         args:
15731           - |-
15732             --query=org:kubernetes
15733             -label:lifecycle/frozen
```



k8s-ci-robot commented 25 days ago • edited ▾

Owner



...

@liggitt: The following test **failed**, say `/retest` to rerun them all:

Test name	Commit	Details	Rerun command
pull-kubernetes-e2e-gce-100-performance	<a href="#">7b5118f</a>	<a href="#">link</a>	<code>/test pull-kubernetes-e2e-gce-100-performance</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.

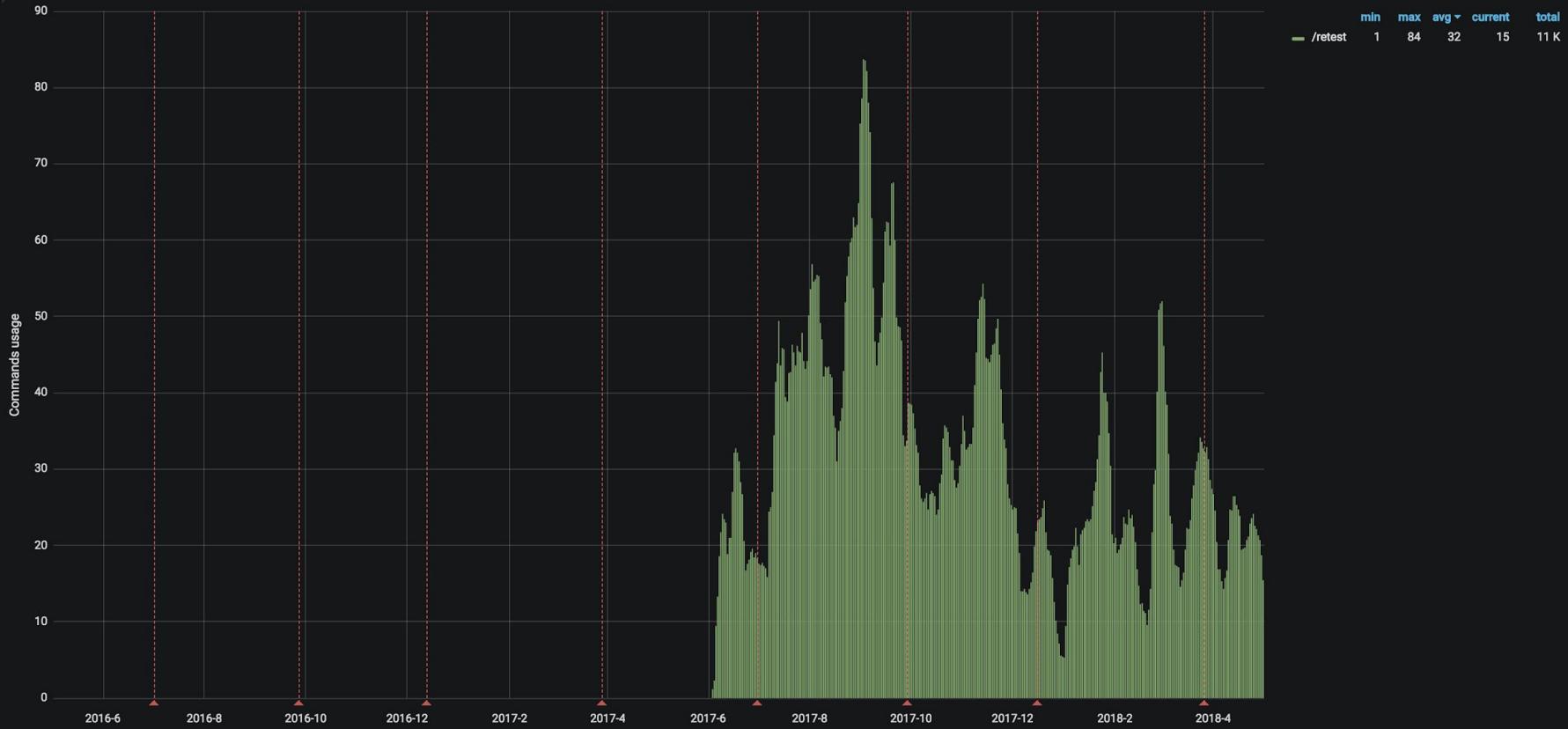
► Details

Period  
7 days MA ▾Repository group  
Kubernetes ▾Commands  
retest ▾

Releases



Bot commands usage (Kubernetes, 7 days MA)





talclair commented on Mar 26

Member + ...

Lock conversation

/lgtm



k8s-ci-robot assigned **talclair** on Mar 26



k8s-ci-robot added the **lgtm** label on Mar 26



fejta-bot commented on Mar 27

+ ...

/retest

This bot automatically retries jobs that failed/flaked on approved PRs (send feedback to [fejta](#)).

Review the [full test history](#) for this PR.

Silence the bot with an `/lgtm cancel` comment for consistent failures.



fejta-bot commented on Mar 27

+ ...

/retest

This bot automatically retries jobs that failed/flaked on approved PRs (send feedback to [fejta](#)).

Review the [full test history](#) for this PR.

Silence the bot with an `/lgtm cancel` comment for consistent failures.



fejta-bot commented on Mar 27

+ ...

/retest

This bot automatically retries jobs that failed/flaked on approved PRs (send feedback to [fejta](#)).

Review the [full test history](#) for this PR.

Silence the bot with an `/lgtm cancel` comment for consistent failures.



fejta-bot commented on Mar 27

+ ...

```
15646
15647 - name: periodic-test-infra-retester
15648   interval: 20m # Retest at most 1 PR per 20m, which should not DOS the queue.
15649   agent: kubernetes
15650
15651   spec:
15652     containers:
15653       - image: gcr.io/k8s-testimages/commenter:v20170808-abf66782
15654         args:
15655           - |-
15656             --query=is:pr
15657             -label:do-not-merge
15658             -label:do-not-merge/blocked-paths
15659             -label:do-not-merge/cherry-pick-not-approved
15660             -label:do-not-merge/hold
15661             -label:do-not-merge/release-note-label-needed
15662             -label:do-not-merge/work-in-progress
15663             label:lgtm
15664             label:approved
15665             status:failure
15666             -label:needs-rebase
15667             -label:needs-ok-to-test
15668             -label:"cncf-cla: no"
15669             repo:kubernetes/kubernetes
15670             - --token=/etc/token-bot-github-token
15671             - |-
15672               --comment=/retest
15673               This bot automatically retries jobs that failed/flaked on approved PRs (send feedback to [fejta](https://github.com/fejta))
15674
15675               Review the [full test history](https://k8s-governator.appspot.com/pr/{{.Number}}) for this PR.
15676
15677               Silence the bot with an `/lgtm cancel` comment for consistent failures.
15678
15679   - --template
15680   - --ceiling=1
15681   - --confirm
15682   volumeMounts:
15683     - name: token
15684       mountPath: /etc/token
15685   volumes:
15686     - name: token
15687       secret:
15688         secretName: fejta-bot-token
15689
15690   - name: periodic-test-infra-rotten
15691     interval: 1h
```

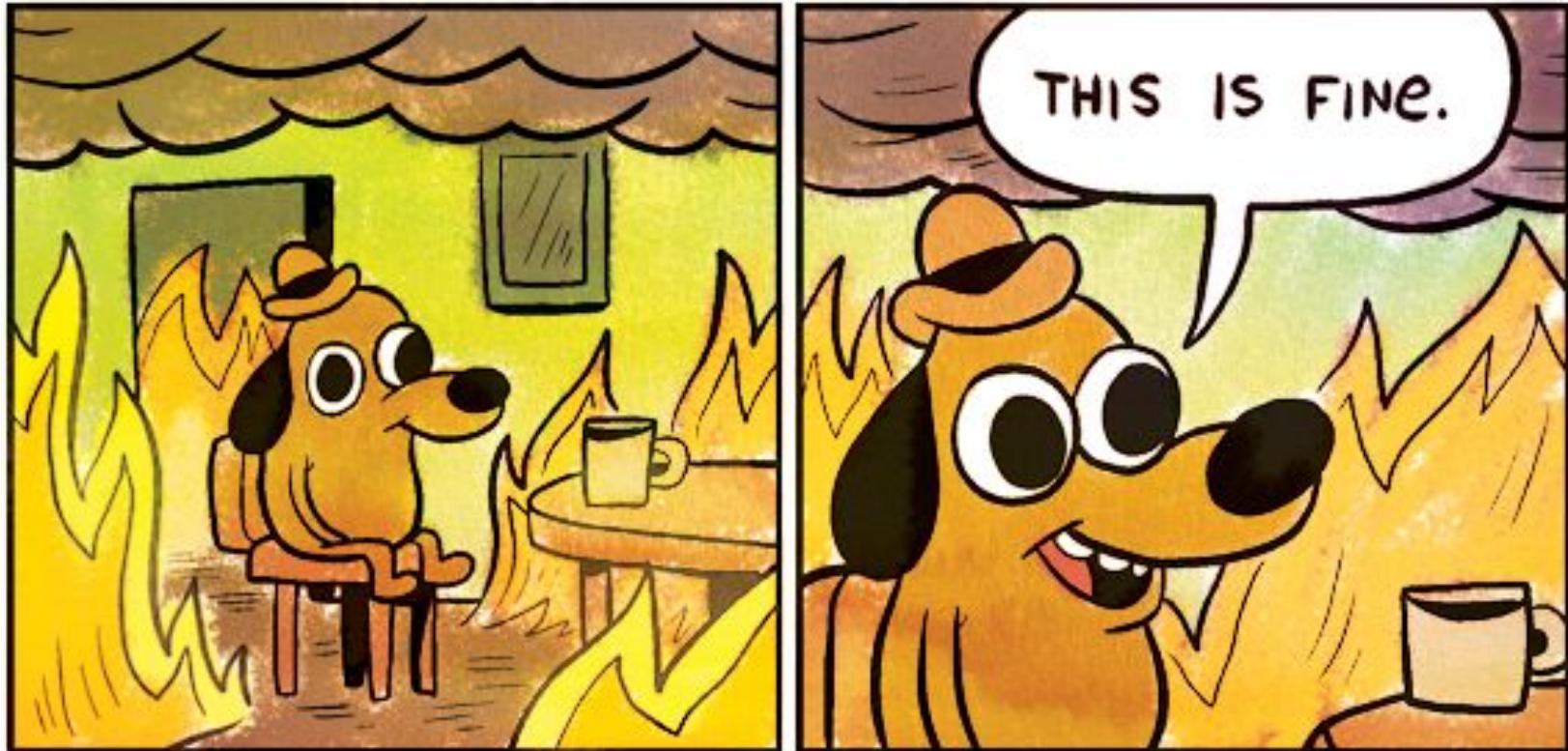
# The Work

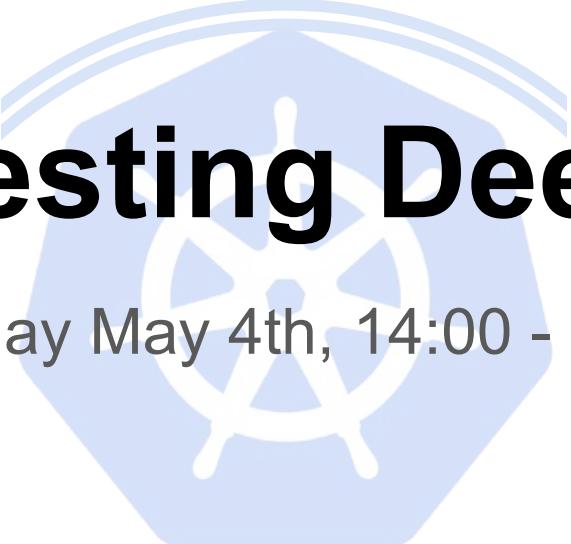
Implement PR workflow (review, test, merge)

Facilitate triage workflow (categorize, route, close)

Configure and run jobs

Provide insights into project health

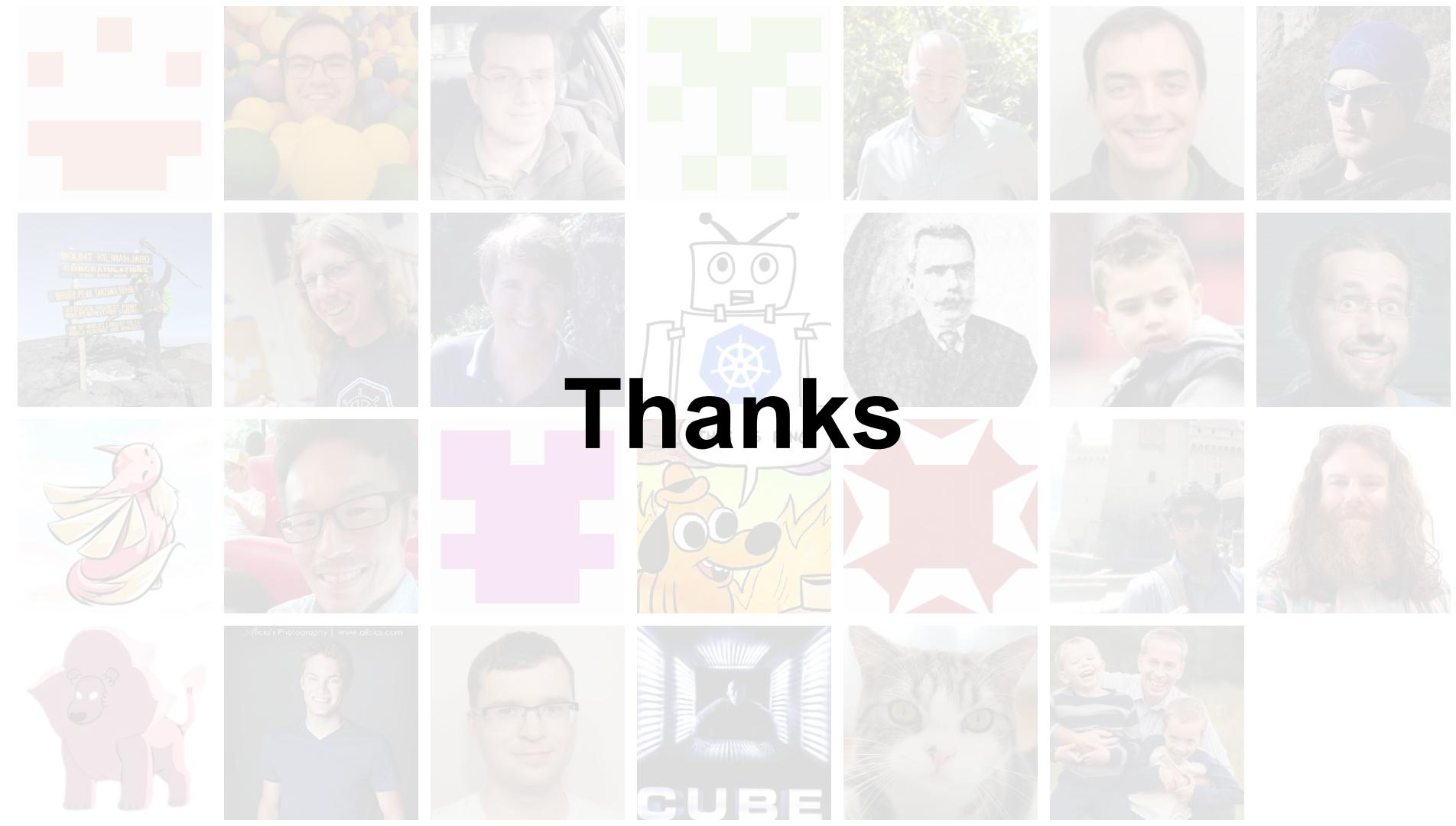




# SIG Testing Deep Dive

Friday May 4th, 14:00 - 14:35

# Thanks



# Used for kubernetes

<https://prow.k8s.io>

<https://prow.k8s.io/pr>

<https://prow.k8s.io/plugins>

<https://prow.k8s.io/command-help.html> (<https://go.k8s.io/bot-commands>)

# Used for kubernetes

<https://go.k8s.io/github-labels>

<https://go.k8s.io/triage>

<https://k8s-gubernator.appspot.com/>

<https://testgrid.k8s.io/>

<http://velodrome.k8s.io/dashboard/db/bigquery-metrics?orgId=1>

# Used for CNCF projects

<https://k8s.devstats.cncf.io/>

<https://github.com/cncf/devstats>

# Use on your own project

<https://git.k8s.io/test-infra/prow>

- OWNERS-based code review plugins: approve / blunderbuss / lgtm
- Helpful PR plugins: blockade / golint / needs-rebase / hold
- Tide: use labels and retests to merge in batches
- Issue triage plugins: assign / labels / lifecycle / milestone

[https://git.k8s.io/test-infra/label\\_sync](https://git.k8s.io/test-infra/label_sync)

# The Work

Implement PR workflow (review, test, merge)

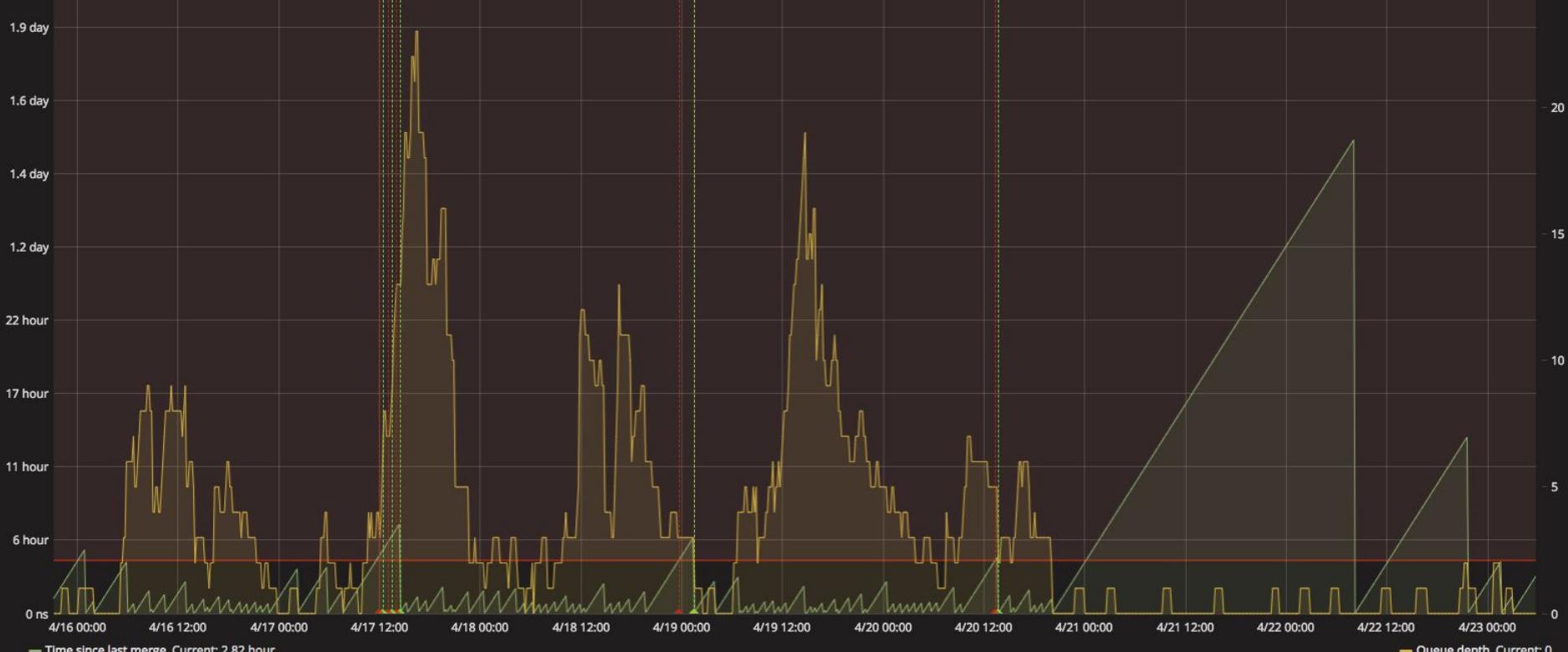
Facilitate triage workflow (categorize, route, close)

Configure and run jobs

Provide insights into project health



## Time since last merge



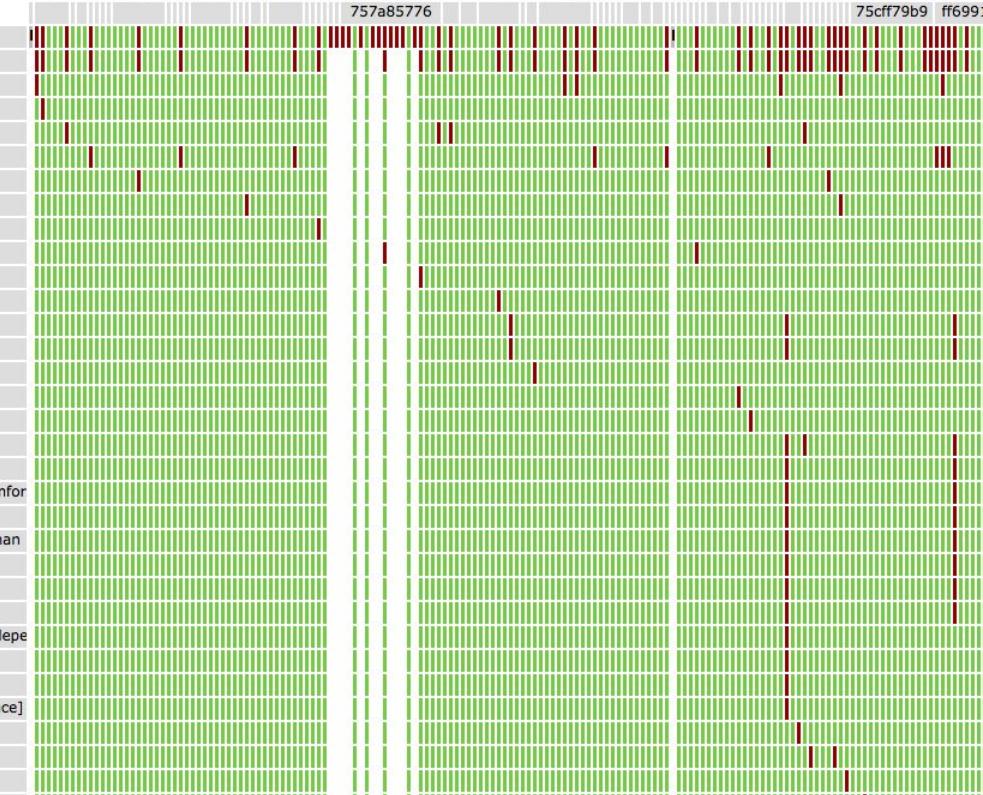
<a href="#">sig-release-master-blocking</a>	<a href="#">sig-release-master-kubectl-skew</a>	<a href="#">sig-release-master-upgrade</a>	<a href="#">sig-release-master-upgrade-optional</a>	<a href="#">sig-release-1.11-all</a>	<a href="#">sig-release-1.11-blocking</a>	<a href="#">sig-release-1.10-all</a>	<a href="#">sig-release-1.10-blocking</a>				
<a href="#">sig-release-etcd-upgrades</a>	<a href="#">sig-release-1.9-all</a>	<a href="#">sig-release-1.9-blocking</a>	<a href="#">sig-release-1.8-all</a>	<a href="#">sig-release-1.8-blocking</a>	<a href="#">sig-release-misc</a>						
<a href="#">Summary</a>	<a href="#">build-1.10</a>	<a href="#">verify-1.10</a>	<a href="#">integration-1.10</a>	<a href="#">bazel-build-1.10</a>	<a href="#">bazel-test-1.10</a>	<a href="#">periodic-bazel-build-1.10</a>	<a href="#">periodic-bazel-test-1.10</a>	<a href="#">gce-kubeadm-1.9-on-1.10</a>	<a href="#">ci-gce-kubeadm-1.10</a>	<a href="#">gci-gce-1.10</a>	<a href="#">gci-gce-slow-1.10</a>
<a href="#">gci-gce-serial-1.10</a>	<a href="#">gci-gce-alpha-features-1.10</a>	<a href="#">gci-gce-scalability-1.10</a>	<a href="#">gci-gce-ingress-1.10</a>	<a href="#">gci-gce-reboot-1.10</a>	<a href="#">gci-gke-1.10</a>	<a href="#">gci-gke-slow-1.10</a>	<a href="#">gci-gke-serial-1.10</a>	<a href="#">gci-gke-ingress-1.10</a>	<a href="#">gci-gke-reboot-1.10</a>	<a href="#">kops-aws-1.10</a>	
<a href="#">kubelet-1.10</a>	<a href="#">gce-gpu-1.10</a>	<a href="#">gce-device-plugin-gpu-1.10</a>	<a href="#">gke-device-plugin-gpu-1.10</a>								
<a href="#">Overall</a>											
Test											
[sig-storage] Volumes PD should be mountable with ext3											
[sig-apps] DisruptionController evictions: enough pods, replicaSet, percentage => should allow an eviction											
[sig-auth] Advanced Audit should audit API calls [DisabledForLargeClusters]											
[sig-storage] Volumes PD should be mountable with ext4											
[sig-instrumentation] Cluster level logging implemented by Stackdriver should ingest logs											
[sig-cli] Kubectl client [k8s.io] Kubectl apply apply set/view last-applied											
[sig-apps] CronJob should replace jobs when ReplaceConcurrent											
[sig-api-machinery] AdmissionWebhook Should mutate pod and apply defaults after mutation											
[sig-storage] Subpath [Volume type: hostPathSymlink] should support existing directory											
[sig-cli] Kubectl Port forwarding [k8s.io] With a server listening on 0.0.0.0 should support forwarding over websockets											
[sig-api-machinery] Garbage collector should delete RS created by deployment when not orphaning [Conformance]											
[sig-apps] Deployment test Deployment ReplicaSet orphaning and adoption regarding controllerRef											
[sig-apps] DisruptionController evictions: maxUnavailable allow single eviction, percentage => should allow an eviction											
[sig-instrumentation] Cluster level logging implemented by Stackdriver should ingest events											
[k8s.io] [sig-node] Pods Extended [k8s.io] Pods Set QOS Class should be submitted and removed [Conformance]											
[sig-api-machinery] Garbage collector should support cascading deletion of custom resources											
[sig-api-machinery] Garbage collector should delete jobs and pods created by cronjob											
[sig-api-machinery] Garbage collector should keep the rc around until all its pods are deleted if the deleteOptions says so [Confor											
[sig-api-machinery] Garbage collector should not be blocked by dependency circle [Conformance]											
[sig-api-machinery] Garbage collector should orphan RS created by deployment when deleteOptions.PropagationPolicy is Orphan											
[sig-cli] Kubectl client [k8s.io] Kubectl rolling-update should support rolling-update to same image [Conformance]											
[sig-scheduling] ResourceQuota should create a ResourceQuota and capture the life of a replica set.											
[sig-scheduling] ResourceQuota should create a ResourceQuota and capture the life of a replication controller.											
[sig-api-machinery] Garbage collector should not delete dependents that have both valid owner and owner that's waiting for depe											
[sig-cli] Kubectl client [k8s.io] Simple pod should return command exit codes											
[sig-storage] EmptyDir volumes volume on default medium should have the correct mode [Conformance]											
[sig-storage] Projected should be consumable from pods in volume as non-root with defaultMode and fsGroup set [Conformance]											
[sig-api-machinery] Aggregator Should be able to support the 1.7 Sample API Server using the current Aggregator											
[sig-auth] ServiceAccounts should allow opting out of API token automount [Conformance]											
[sig-cli] Kubectl client [k8s.io] Simple pod should support inline execution and attach											

About ▾ Size ▾ Options ▾ Graph ▾

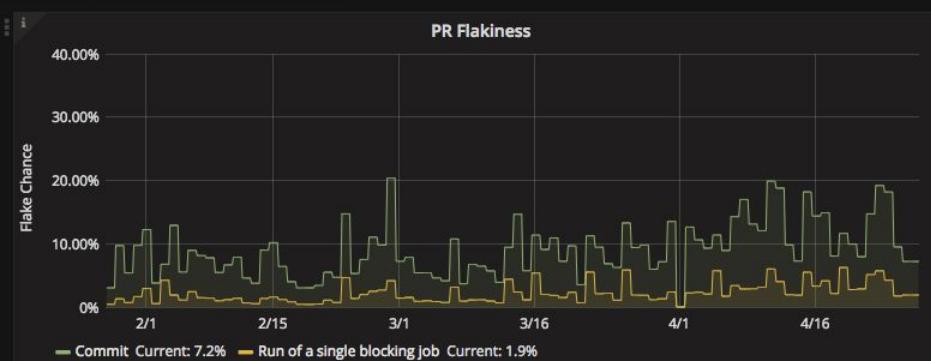
04-27 12:49 @1992 -- 04-13 14:04 @1826; Served from cache in 0.09 seconds

04-26 04-25 04-24 04-23 04-22 04-21 04-20 04-19 04-18 04-17 04-16 04-15 04-14

81753b10	7195f798	7195f7987	d79570ee:	efe3d3af	baab39921
	757a85776				75cff79b9 ff6991



<a href="#">sig-release-etcfd-upgrades</a>	<a href="#">sig-release-1.9-all</a>	<a href="#">sig-release-1.9-blocking</a>	<a href="#">sig-release-1.8-all</a>	<a href="#">sig-release-1.8-blocking</a>	<a href="#">sig-release-misc</a>											
<a href="#">Summary</a>	<a href="#">build</a>	<a href="#">integration</a>	<a href="#">bazel-build</a>	<a href="#">bazel-test</a>	<a href="#">verify</a>	<a href="#">kubebuilder</a>	<a href="#">gci-gce</a>	<a href="#">gci-gke</a>	<a href="#">aws</a>	<a href="#">gce-device-plugin-gpu</a>	<a href="#">gke-device-plugin-gpu</a>	<a href="#">gke-device-plugin-gpu-p100</a>	<a href="#">gci-gce-slow</a>	<a href="#">gci-gke-slow</a>	<a href="#">gci-gce-serial</a>	<a href="#">gci-gke-serial</a>
<a href="#">gci-gce-alpha-features</a>	<a href="#">gci-gce-100</a>	<a href="#">gce-scale-correctness</a>	<a href="#">gce-scale-performance</a>	<a href="#">gci-gce-ingress</a>	<a href="#">gci-gke-ingress</a>	<a href="#">gci-gce-reboot</a>	<a href="#">gci-gke-reboot</a>	<a href="#">kubeadm-gce</a>	<a href="#">kubeadm-gce-selfhosting</a>							
<span>✓</span> <a href="#">build: PASSING</a>															Last green run: 24783 Tests last ran on: 04-27 12:46 Last update: 04-27 12:53	
3 of 1511 tests (0.2%) and 3 of 1511 runs (0.2%) failing in the past week																
<span>✓</span> <a href="#">integration: PASSING</a>															Last green run: 1901 Tests last ran on: 04-27 12:03 Last update: 04-27 12:45	
64 of 46860 tests (0.1%) and 32 of 165 runs (19.4%) failing in the past week																
<span>✓</span> <a href="#">bazel-build: PASSING</a>															Last green run: 238256 Tests last ran on: 04-27 12:51 Last update: 04-27 12:54	
12 of 1614 tests (0.7%) and 12 of 1614 runs (0.7%) failing in the past week																
<span>✓</span> <a href="#">bazel-test: PASSING</a>															Last green run: 23705 Tests last ran on: 04-27 12:45 Last update: 04-27 12:47	
9 of 1085276 tests (0.0%) and 9 of 1499 runs (0.6%) failing in the past week																
<span>⊕</span> <a href="#">verify: FLAKY</a>															Last green run: 20211 Tests last ran on: 04-27 12:29 Last update: 04-27 12:38	
40 of 5412 tests (0.7%) and 20 of 164 runs (12.2%) failing in the past week																
<span>⊕</span> <a href="#">kubebuilder: FLAKY</a>															Last green run: 12368 Tests last ran on: 04-27 12:14 Last update: 04-27 12:37	
97 of 123004 tests (0.1%) and 33 of 161 runs (20.5%) failing in the past week																
<span>⊕</span> <a href="#">gci-gce: FLAKY</a>															Last green run: 24682 Tests last ran on: 04-27 12:37 Last update: 04-27 12:52	
231 of 129015 tests (0.2%) and 109 of 305 runs (35.7%) failing in the past week																
<span>⚠</span> <a href="#">gci-gke: FAILING</a>															Last green run: 25619 Tests last ran on: 04-27 12:30 Last update: 04-27 12:53	
358 of 2440 tests (14.7%) and 138 of 305 runs (45.2%) failing in the past week																
Test Name	# Fails	Failure Messages	First Failed	Last Passed	Bugs	Regression										
Overall	73		04-25 14:11	04-25 13:41												
Up	73		04-25 14:11	04-25 13:41												
<span>✓</span> <a href="#">aws: PASSING</a>						Last green run: 27149 Tests last ran on: 04-27 12:23 Last update: 04-27 12:41										
172 of 117530 tests (0.1%) and 85 of 322 runs (26.4%) failing in the past week																
<span>✓</span> <a href="#">gce-device-plugin-gpu: PASSING</a>						Last green run: 3059 Tests last ran on: 04-27 10:48 Last update: 04-27 12:42										
24 of 1660 tests (1.4%) and 16 of 83 runs (19.3%) failing in the past week																
<span>⚠</span> <a href="#">gke-device-plugin-gpu: FAILING</a>						Last green run: 2521 Tests last ran on: 04-27 10:48 Last update: 04-27 12:46										
97 of 664 tests (14.6%) and 37 of 83 runs (44.6%) failing in the past week																
Test Name	# Fails	Failure Messages	First Failed	Last Passed	Bugs	Regression										
Overall	22		04-25 16:27	04-25 14:27		Changes										
Deferred TearDown	22		04-25 16:27	04-25 14:27		Changes										
Up	22		04-25 16:27	04-25 14:27		Changes										
<span>⚠</span> <a href="#">gke-device-plugin-gpu-p100: FAILING</a>						Last green run: 335 Tests last ran on: 04-27 05:21 Last update: 04-27 12:32										
39 of 204 tests (6.8%) and 8 of 14 runs (57.1%) failing in the past week																



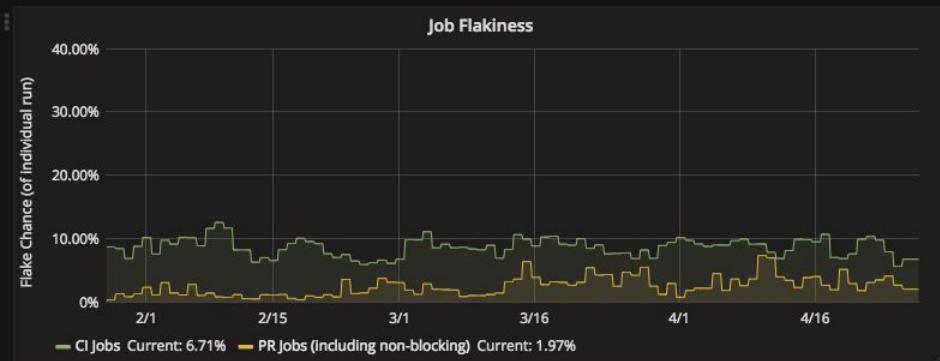
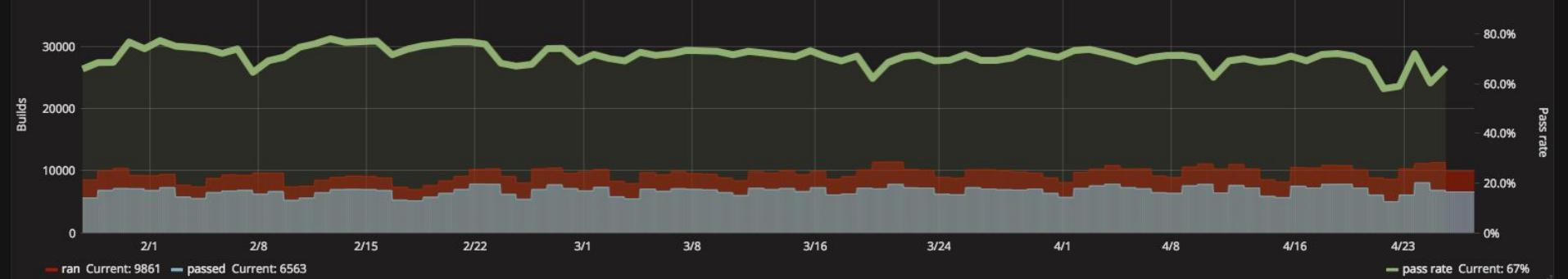
### Longest Failing PR Jobs

Job	Failing Days
pr:pull-kubernetes-e2e-gce-big-performance	37
pr:kubeflow-hp-tuning-presubmit	7
pr:pull-cadvisor-e2e	5
pr:pull-cloud-provider-azure-lint	4
pr:pull-test-infra-verify-labels	4
pr:pull-cloud-provider-azure-unit	4
pr:kubeflow-testing-presubmit	3

### Flakiest PR Jobs (past week)

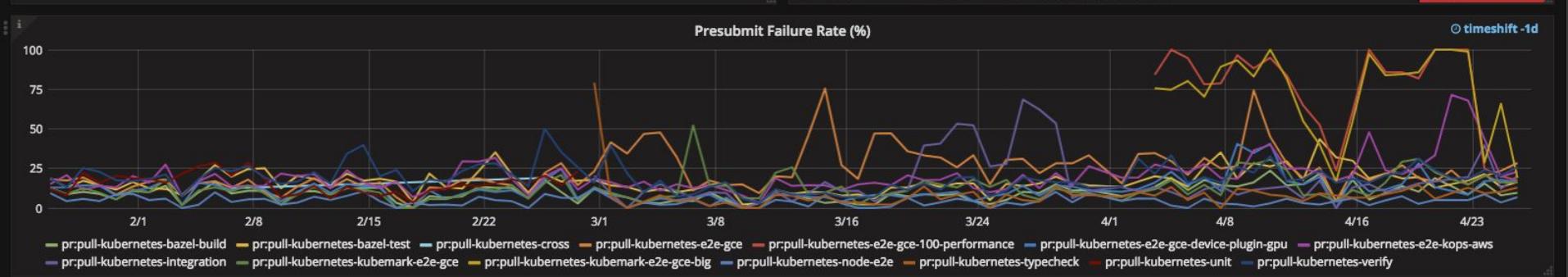
Job	Flakes	Flakiest Test	2nd Flakiest Test
pr:pull-kubernetes-e2e-kops-aws	79	67 flakes: Up	8 flakes: Timeout
pr:pull-kubernetes-kubemark-e2e-gce-big	62	66 flakes: Up	4 flakes: Timeout
pr:pull-kubernetes-integration	60	50 flakes: k8s.io/kubernetes/test/integration/etc TestEtcdStoragePath	9 flakes: k8s.io/kubernetes/test/integration/garbagecollector TestCustomResourceCascadingDeletion
pr:pull-kubernetes-e2e-gce-100-performance	57	52 flakes: Up	9 flakes: [sig-scalability] Density [Feature:Performance] should allow starting 30 pods per node using {ReplicationController} with 0 secrets, 0 configmaps and 0 daemons
pr:pull-kubernetes-e2e-gce	35	12 flakes: [sig-api-machinery] Aggregator Should be able to support the 1.7 Sample API Server using the current Aggregator	9 flakes: Up
pr:pull-kubernetes-kubemark-e2e-gce	31	21 flakes: Up	6 flakes: Build
pr:pull-kubernetes-e2e-gce-device-plugin-gpu	24	16 flakes: Up	10 flakes: Build





### Longest Failing Jobs

Job	Failing Days
ci-kubernetes-soak-cos-docker-validation	184
ci-kubernetes-e2e-gci-gce-ipvs	164
ci-kubernetes-e2e-kops-aws-ena-nvme	145
ci-kubernetes-e2e-gke-gci-stable3-gci-stable1-upgrade-master	142
ci-kubernetes-e2e-gke-gci-stable3-gci-stable1-upgrade-cluster	142
ci-kubernetes-e2e-gke-gci-new-gci-master-upgrade-master	129
ci-kubernetes-e2e-gke-gci-new-gci-master-upgrade-cluster	129



## Kubernetes Aggregated Failures from today

Show clusters for SIG: [api-machinery](#) [apps](#) [autoscaling](#) [big-data](#) [cli](#) [cluster-lifecycle](#) [multicluster](#) [instrumentation](#) [network](#) [node](#) [scalability](#) [scheduling](#) [storage](#) [testing](#) [ui](#)

Sort by  total count  count in last day  error message

Include results from:  CI  PR

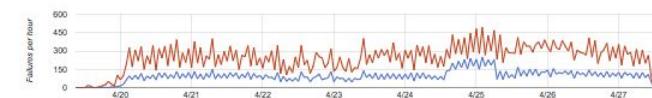
Filter (these are regexes):

Failure text

Job

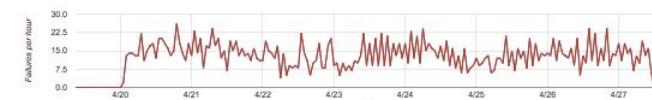
Test

982 clusters of 48383 failures (6535 in last day) out of 74969 builds from 4/19/2018, 9:03:57 AM to 4/27/2018, 12:01:34 PM.



### 2433 FAILURES (336 TODAY) MATCHING [e685c87c70236748fafe](#) [github search](#) [testing]

error during ./hack/ginkgo-e2e.sh --ginkgo.skip=\\$(Slow\)|\[Serial\]|\[Disruptive\]|\[Flaky\]|\[Feature:.+\] --minStartupPods=8 --report-dir=/workspace/\_artifacts --disable-log-dump=true: exit status 1



#### Latest Failures

Time	Job	Test
4/27/2018, 11:12:11 AM	ci-kubernetes-e2e-gke-staging-default-parallel	Test
4/27/2018, 11:17:17 AM	ci-kubernetes-e2e-gce-gci-qu-master	Test
4/27/2018, 11:17:20 AM	ci-kubernetes-e2e-gke-staging-stable1-parallel	Test
4/27/2018, 11:12:14 AM	ci-kubernetes-e2e-gce-ubuntu1-k8stable1-default	Test
4/27/2018, 11:08:12 AM	ci-kubernetes-e2e-gce-gci-qu-m65	Test

- Failed in 60 Jobs
- Failed in 1 Test
- 2433 Test

### 801 FAILURES (263 TODAY) MATCHING [d1f08hc7ff9hb8c60180](#) [github search](#) [testing]

error creating cluster: error during gcloud container clusters create --quiet --project=k8s-e2e-gke-prod-parallel --zone=us-central1-f --machine-type=n1-standard-2 --image-type=gci --num-nodes=3 --network=bootstrap-e2e --cluster-version=1.11.0-alpha.1.82+afa68cc28749c0 bootstrap-e2e: exit status 1



#### Latest Failures

Time	Job	Test
4/27/2018, 11:19:13 AM	ci-kubernetes-e2e-gke-td-logging-gci-latest	Up
4/27/2018, 11:18:12 AM	ci-kubernetes-e2e-gke-stackdriver	Up
4/27/2018, 11:14:13 AM	ci-kubernetes-e2e-gke-master-new-gci-kubectl-skew-serial	Up
4/27/2018, 11:02:15 AM	ci-kubernetes-e2e-gke-regional-serial	Up
4/27/2018, 11:02:13 AM	ci-kubernetes-e2e-gke-master-new-gci-kubectl-skew	Up

- Failed in 26 Jobs
- Failed in 1 Test
- 801 Up

Github search query [i](#)

is:pr state:open author:spiffxp



#7653 kubernetes/test-infra

Needs to Resolve Labels

Stop using the cherrypick-auto-approve munger for k/k

No test found [?](#)! Does not meet merge requirements [?](#)

PR's Labels

[approved](#) [cncf-cla: yes](#) [do-not-merge/hold](#) [lgtm](#) [size/XS](#)

Required Labels (Missing)

Forbidden Labels (Shouldn't have)

[do-not-merge/hold](#)

#6071 kubernetes/test-infra

Needs to Resolve Labels

Remove some unused mungers

No test found [?](#)

# kubernetes/test-infra

## Automation

- boskos
- bootstrap
- jenkins
- jobs
- kubetest
- mungegithub
- prow
- scenarios

## Visualization

- gcsweb
- gubernator
- kettle
- metrics
- testgrid
- triage
- velodrome

## Other

- commenter
- issue-creator
- label\_sync
- logexporter
- migratestatus
- planter
- queue\_health