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SIG Testing Intro

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PR Workflow



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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.

git.k8s.io/test-infra



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Automation

- boskos
- bootstrap
- config
- ghproxy
- greenhouse
- kubetest
- prow
- scenarios

Visualization

- gcswweb
- gopherage
- gubernator
- kettle
- metrics
- testgrid
- triage
- velodrome

Other

- commenter
- branchprotector
- issue-creator
- label_sync
- logexporter
- migratestatus
- peribolos
- planter

sigs.k8s.io/kind



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It has come to my attention that you appreciate containers



Thus I have created a lightweight project to run the leading container orchestration platform inside of a container for expedient development

Some numbers



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(footage not found)

git.k8s.io/test-infra



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Automation

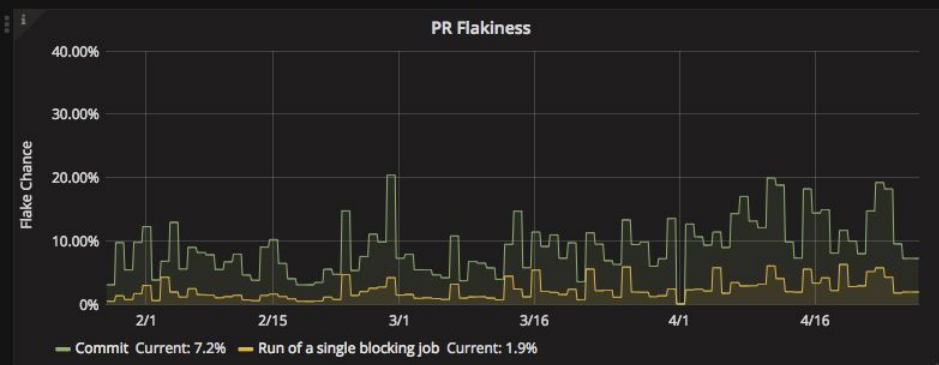
- boskos
- bootstrap
- config
- ghproxy
- greenhouse
- kubetest
- prow
- scenarios

Visualization

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

Other

- commenter
- branchprotector
- issue-creator
- label_sync
- logexporter
- migratestatus
- peribolos
- planter

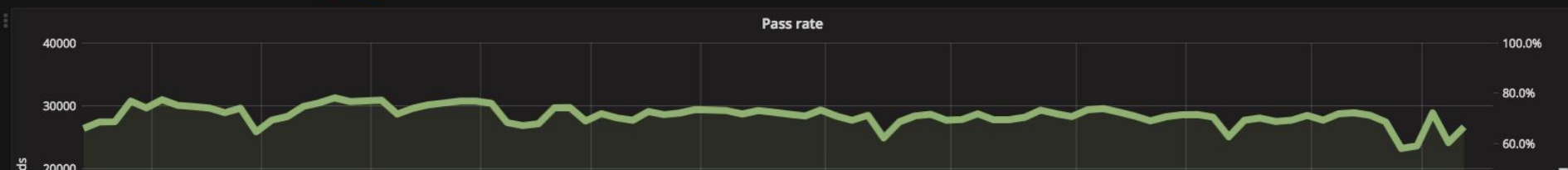


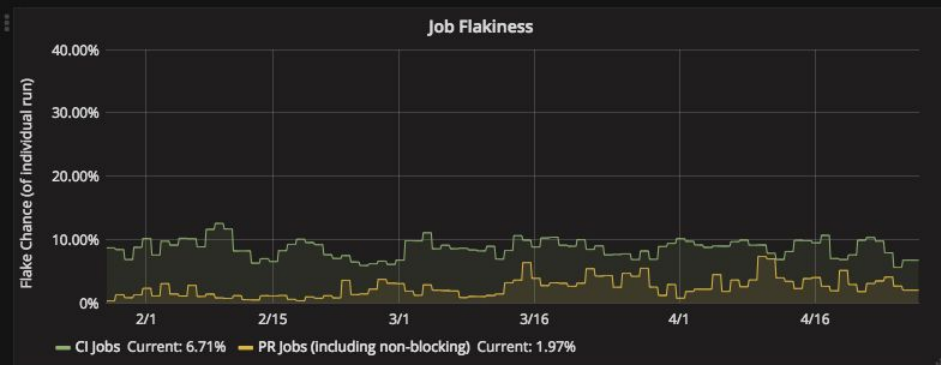
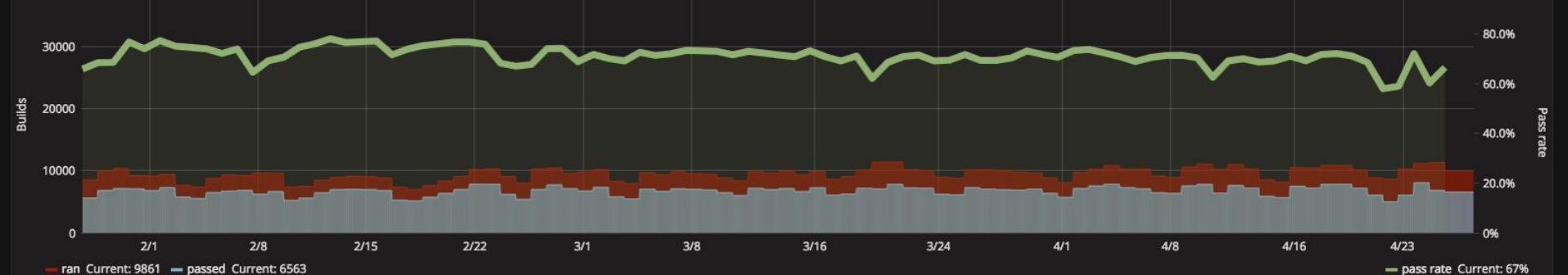
Longest Failing PR Jobs

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

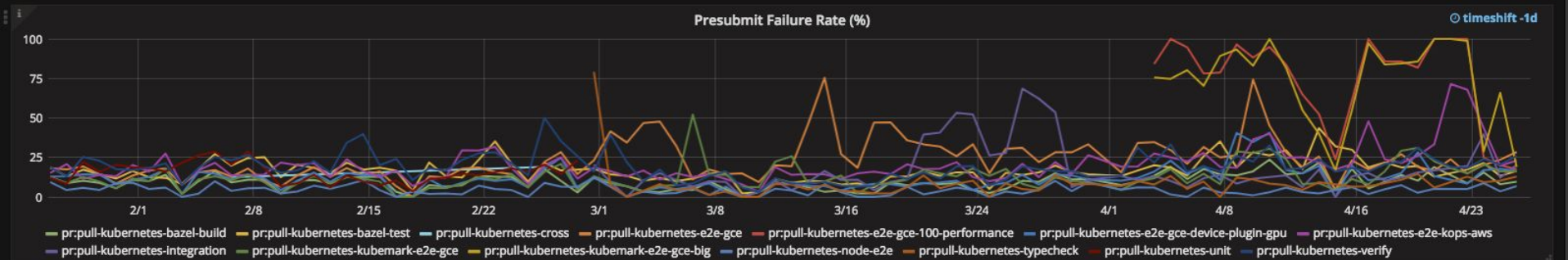
Flakiest PR Jobs (past week)

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/etcd 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-ipv6	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 multicuster instrumentation network node scalability scheduling storage testing ui

Sort by ☐ total count ☒ count in last day ☐ error message

Include results from: ☒ CI ☐ PR

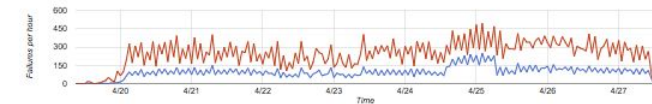
Filter (these are regexes):

Failure text

Job

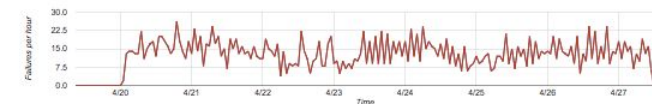
Test

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 [e685c87c70236748fafc](#) [github search](#) testing

error during ./hack/ginkgo-e2e.sh --ginkgo.skip=\[Slow\]\|\[Serial\]\|\[Disruptive\]\|\[Flaky\]\|\[Feature:.+\] --minStartupPods=0 --report-dir=workspace/_artifacts --disable-log-dump=true: exit status 1



Latest Failures

Time	Job	Test
4/27/2018 11:21:11 AM	ci-kubernetes-e2e-gke-staging-default-parallel	Test
4/27/2018 11:17:17 AM	ci-kubernetes-e2e-gce-gci-qa-master	Test
4/27/2018 11:12:20 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-qa-m65	Test

- Failed in 60 Jobs [▶](#)
- Failed in 1 Test [▼](#)
- [▶](#) [2433 Test](#) [▶](#)

801 FAILURES (263 TODAY) MATCHING [d1f38bc799b8c60180](#) [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+afa66cc28749c0 bootstrap-e2e: exit status 1



Latest Failures

Time	Job	Test
4/27/2018 11:19:13 AM	ci-kubernetes-e2e-gke-sd-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](#) [▶](#)

@fejta-bot



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Luke Kysow

@lkysow

Follow


This thread about [@kubernetesio](#) devs trying to make it clear the fejta-bot is actually a bot is gold [github.com/kubernetes/tes ...](https://github.com/kubernetes/tes...)



fejta-bot commented on Jan 28

I admit nothing


🤔 11



kargakis-robot commented on Jan 28

@fejta-bot it's hard to figure out what humans want these days

🤔 4



k8s-ci-robot commented on Jan 28

Contributor

@fejta-bot @kargakis-robot shhhh don't ever let human know our secret mission besides pretending to be bots

/bark

🤔 4

3:48 AM - 11 Jul 2018

1 Retweet 6 Likes



1



6



Source: <https://twitter.com/lkysow/status/1016952461918130176>



@beta@gayhorse.club

@stillinbeta

Follow



Robots emoji-reacting to other robots' messages in a bizarre facsimile of human interaction is the cyberpunk future we deserve



4:46 PM - 19 Dec 2017

3 Retweets 16 Likes



3



16



Timed out waiting for



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liz 1:05 PM

Pasted image at 2018-11-19, 4:05 PM ▼



2

No More Mungegithub



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liggitt 2:07 PM

just wanted to say that it is a pleasure to watch tide plow through a wall of PRs when master opens -
<https://prow.k8s.io/tide>



8

I remember the bad old days when it would take $O(\text{weeks})$ for queues to drain



8

And Now Over to Steve



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Adopting Prow



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So you've got a new repo. Why adopt Prow for your CI?

- Consistent UX with the Kubernetes ecosystem
 - `/retest`, `/lgtn`, `/approve`
- Automatic support from Gubernator and TestGrid for job overviews and historical data, flake detection
- No test throughput limits

Writing Your First Job



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```
0 | # test-infra/config/jobs/${org}/${repo}/${org}-${repo}-presubmits.yaml
1 | presubmits:
2 |   ${org}/${repo}:
3 |     - name: pull-ci-${org}-${repo}-unit
4 |       agent: kubernetes
5 |       decorate: true
6 |       spec:
7 |         containers:
8 |           - image: docker.io/golang:1.10
9 |             command:
10 |               - go
11 |             args:
12 |               - test
13 |               - ./...
```

Decoration?



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`decorate: true` is the Prow-ism for enabling background utilities that let you focus on writing the content of your test, not adapting it to work with the infra. Your test script can assume:

- the repository under test is checked out appropriately
- the script being called has the repository under test as it's working directory
- any files placed in the \$ARTIFACTS directory will be uploaded to GCS after the test has run
- metadata for Gubernator and TestGrid will automatically be generated and uploaded
 - anything extra in metadata.json will be forwarded to GCS

A Job In Action



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We're going to take a look at the [pull-test-infra-verify-codegen job](#).

We can see the job reporting on a [pull request](#)

Or look at historical results in the [Prow overview](#)

Or browse patterns for the job in [TestGrid](#)!

Write a Job



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Let's see some samples

- I want a presubmit that runs:
 - [a script in my repo](#)
 - [something from the container image](#)
- I want a periodic [that makes sure everything runs well with k/k HEAD](#)
- I want to [build and push images](#) whenever something merges to master

More info - prow



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[Getting Started](#) - create a cluster, deploy prow

[Prow Components](#) - hook, deck, tide, etc.

[Prow Plugins](#) - plugins.yaml, prow.k8s.io/plugins, external plugins

[ProwJobs](#) - reference specs, env vars

[Using Prow at Scale](#) - lessons we learned, so you don't have to

[Tide](#) - you know, for merging

SIG Testing Talks



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Tuesday, December 11 • 11:40am - 12:15pm

[Behind Your PR: How Kubernetes Uses Kubernetes to Run Kubernetes CI - Sen Lu & Benjamin Elder, Google](#)

Wednesday, December 12 • 2:35pm - 3:10pm

[Using Prow for Testing Outside of K8s - Matt Landis, Amazon Web Services](#)

Thursday, December 13 • 3:40pm - 4:15pm

[Deep Dive: Testing SIG - Cole Wagner & Katharine Berry, Google](#)

SIG Testing Contact



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git.k8s.io/community/sig-testing

git.k8s.io/test-infra

sigs.k8s.io/kind

sigs.k8s.io/testing_frameworks

kubernetes-sig-testing@googlegroups.com

#testing-ops

#sig-testing

#prow

#kind



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