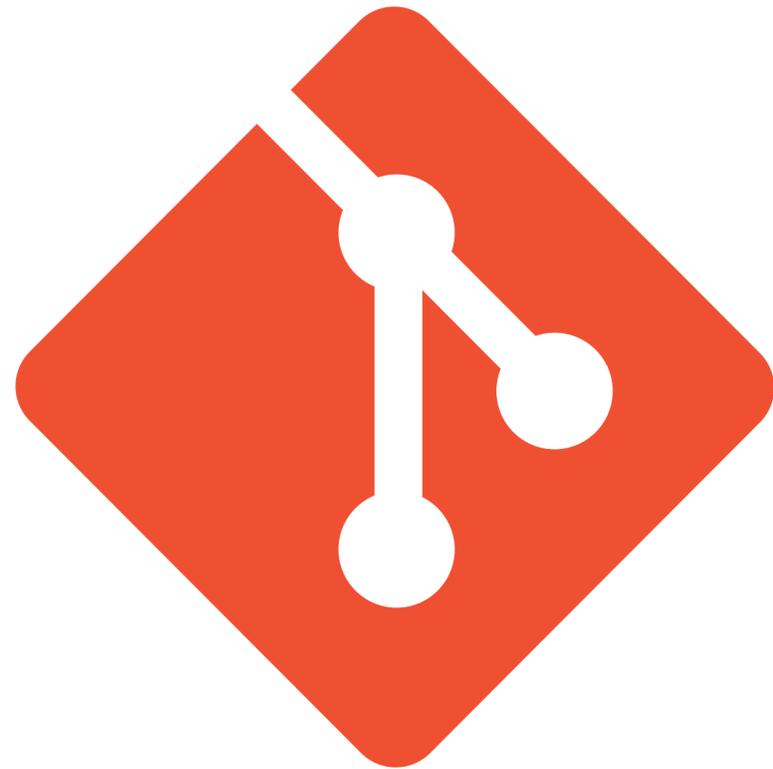


How GitHub makes GitHub

 @mwiesen -  mwiesen@github.com



git



- **Started by Linus Torvalds 2005 (search “torvalds git” on youtube)**
- **Easy branching and merging - content oriented, remembers origin**
- **Small and fast - local operations, smaller repos**
- **Distributed - VCS on my laptop, full copy incl. history**
- **Data assurance - sha1, gpg**
- **Staging area - crafted, meaningful commits**
- **Free and open source - did you read the first line of this slide?**

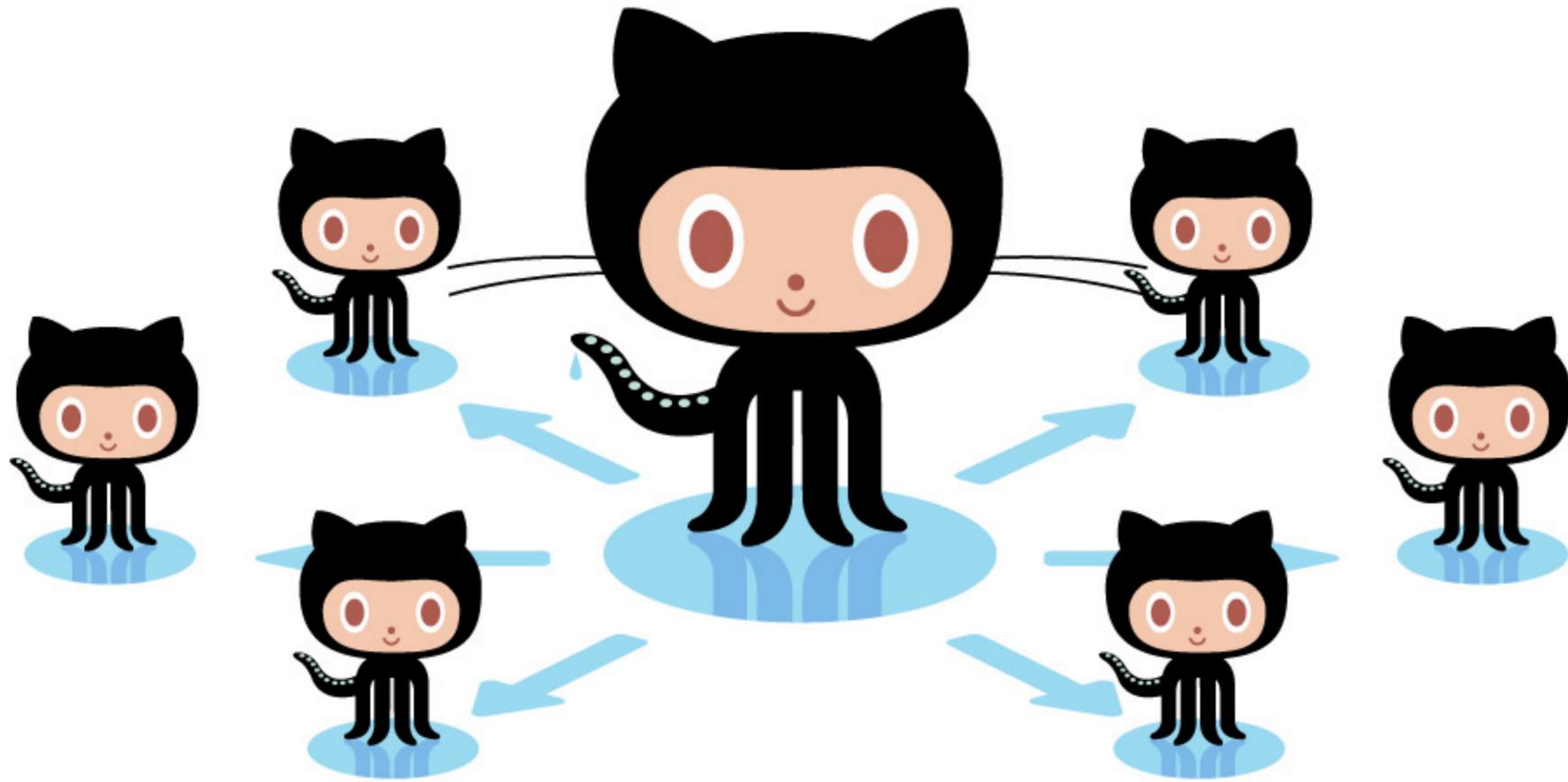


<http://www.wired.com/2012/02/github-2/>

Photo : Ariel Zambelich/Wired 



GitHub Social Coding



GitHub key facts



FOUNDED

2008

EMPLOYEES

486

TOTAL
REGISTERED
USERS

12M

PAYING
ORGANIZATIONS

>65,000

TOTAL
REPOSITORIES

36M

UNIVERSITIES
USING GITHUB

1,000+

GITHubBERS



382

REMOTE



206 / 53%

CURRENTLY IN SF

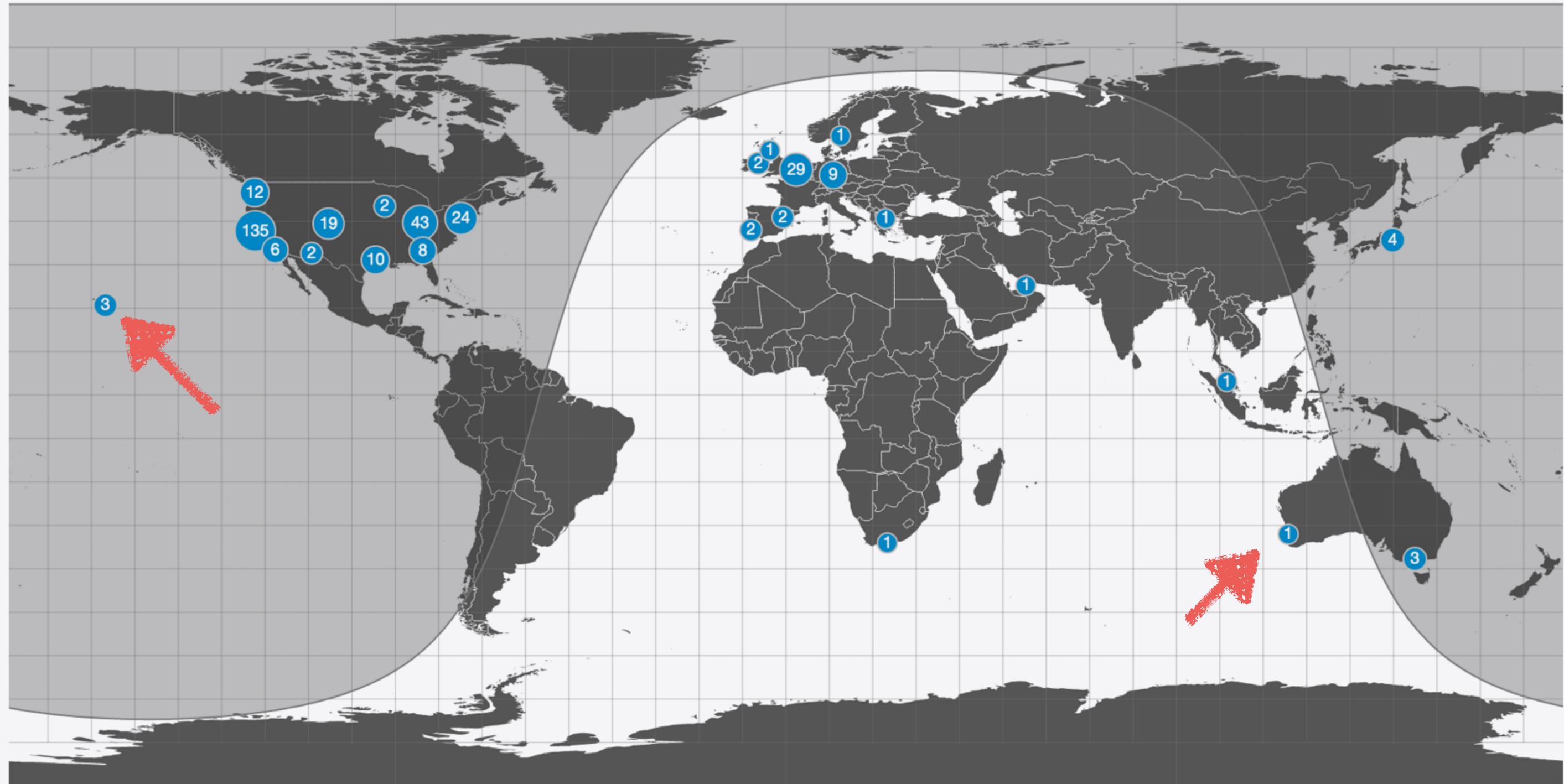


174 / 45%

NEW HIRES



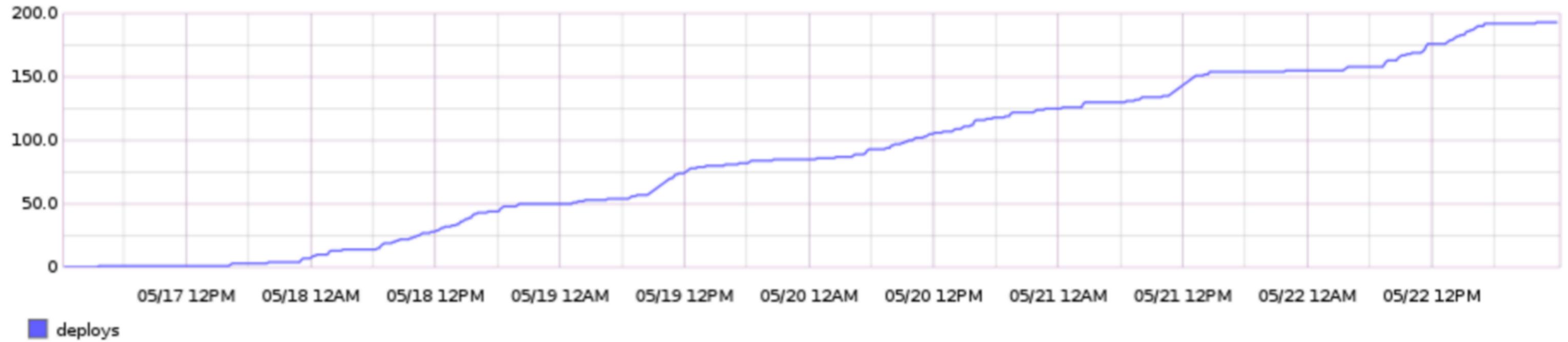
34 / 8%





Hubot

GitHub.com Deploys





**What's the
secret?**

The Zen of GitHub



- **Responsive is better than fast**
- **It's not fully shipped until it's fast**
- **Anything added dilutes everything else**
- **Practicality beats purity**
- **Approachable is better than simple**
- **Mind your words, they are important**
- **Speak like a human**
- **Half measures are as bad as nothing at all**
- **Encourage flow**
- **Non-blocking is better than blocking**
- **Favor focus over features**
- **Avoid administrative distraction**
- **Design for failure**
- **Keep it logically awesome**

```
[alain@octoalain ~]$ curl https://api.github.com/octocat
```

```
MMM.          .MMM
MMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMM
MMM::- -:::-- --:MMM
MM~::~ ~:::~ ~::~MM
.. MMMM::: .::+::: .::MMMM ..
  .MM::: ._. :::MM.
    MMM;:::;MMM
-MM      MMMMM
^ M+     MMMMMMM
MMMMMM MM MM MM
      MM MM MM MM
      MM MM MM MM
      ~MM~MM~MM~MM~.
      ~MM::~MM~MM~MM~MM~
      ~~~~~~
      ~~~~~~
      :~~~~~
```

```
| Keep it logically awesome. |
|                               |
|/                               |
```

The (very shorten) recipe



DEVOPS



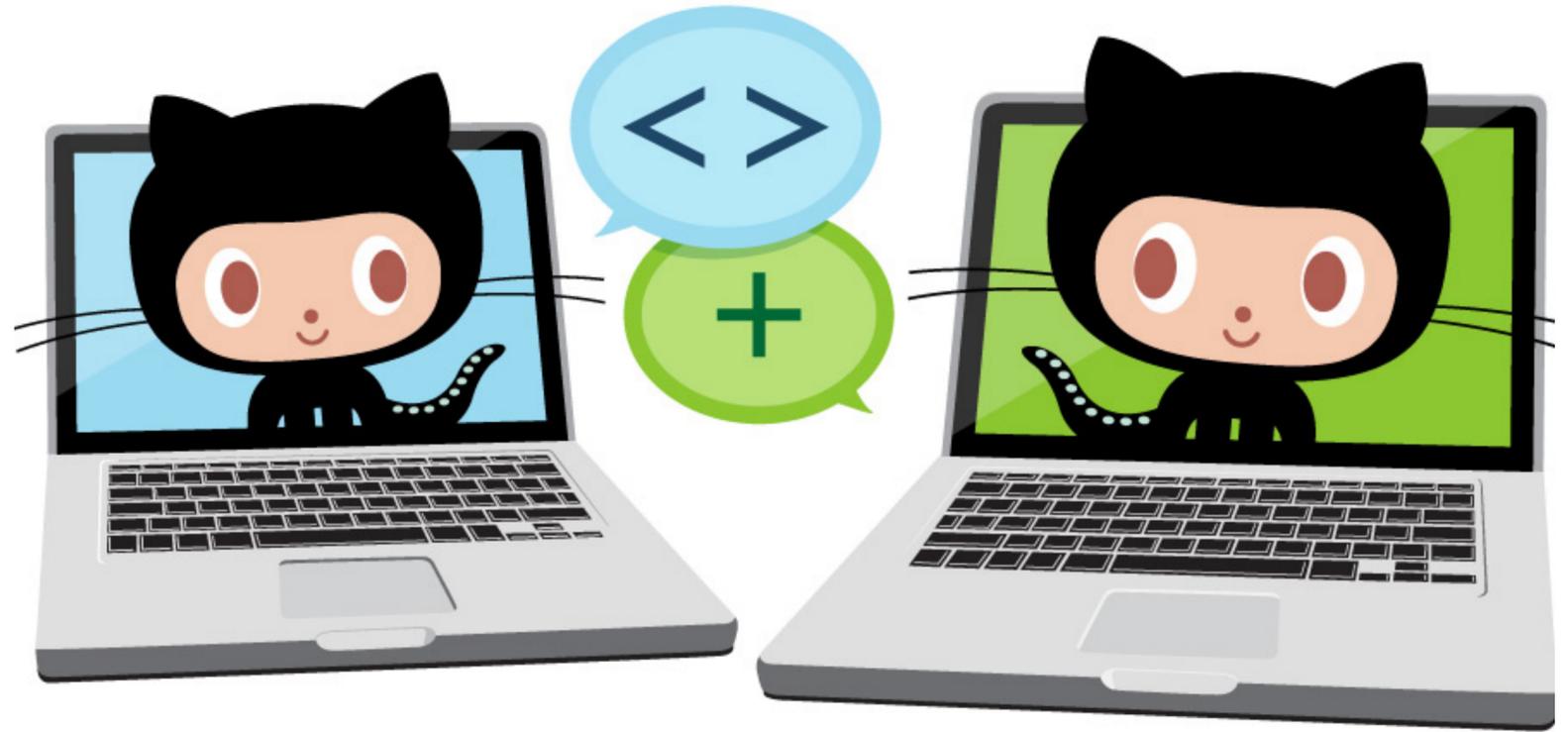
CONTINUOUS DELIVERY



ASYNCHRONOUS COMMUNICATION

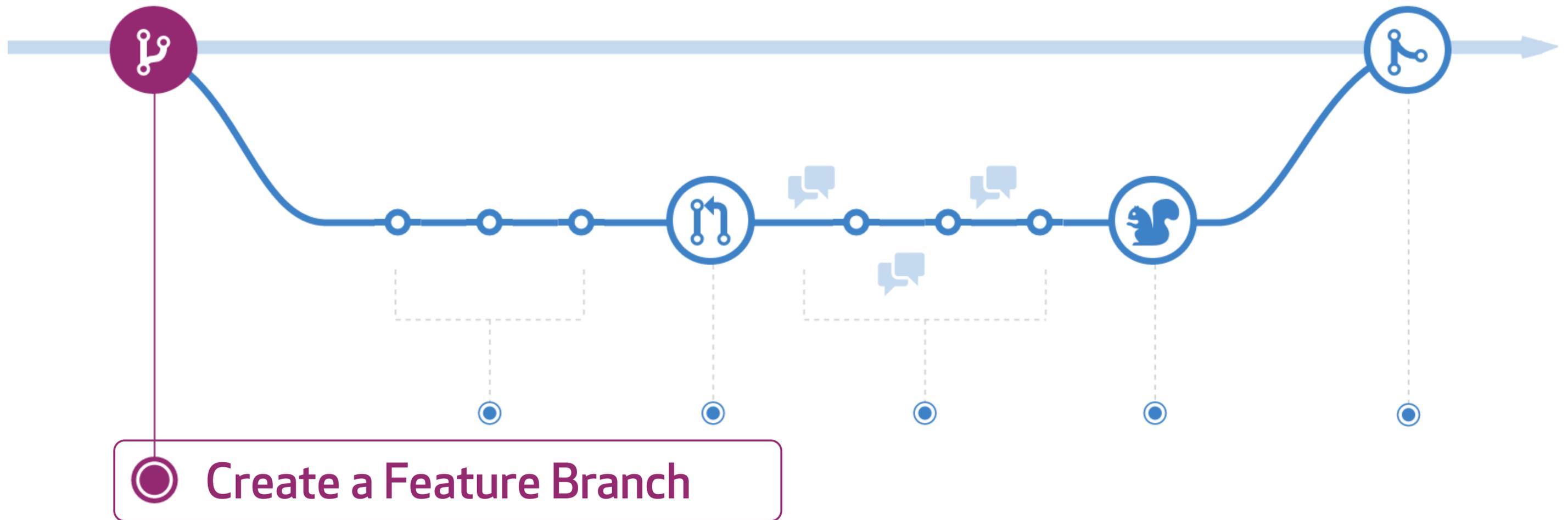


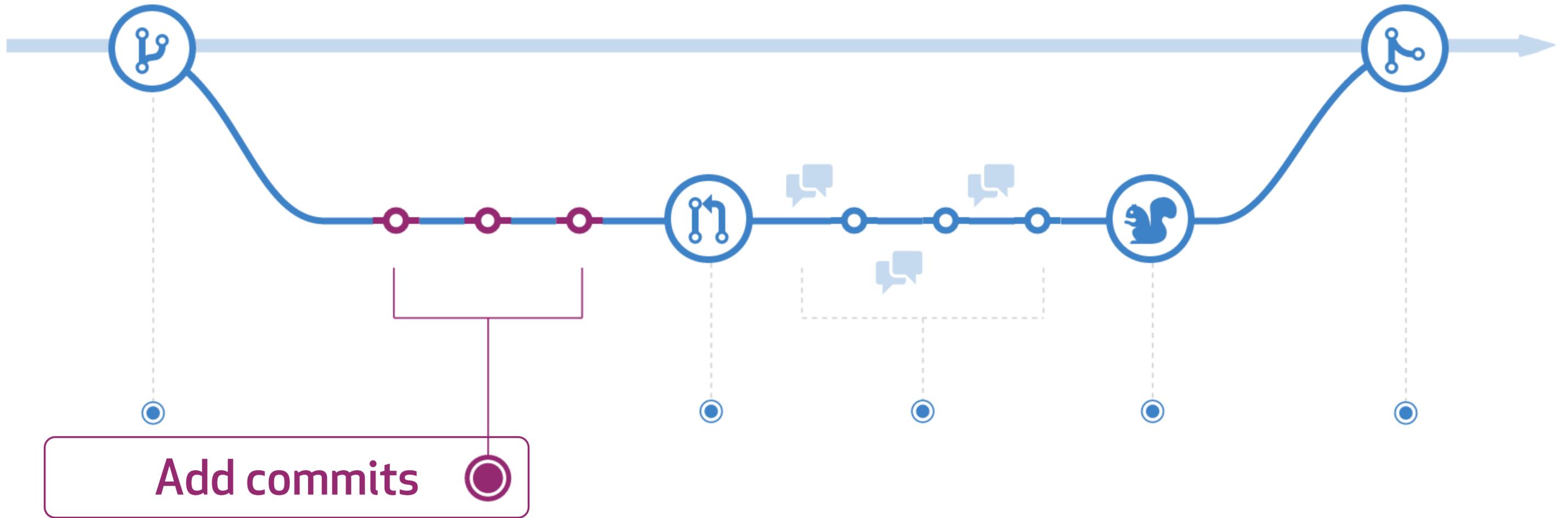
CHATOPS

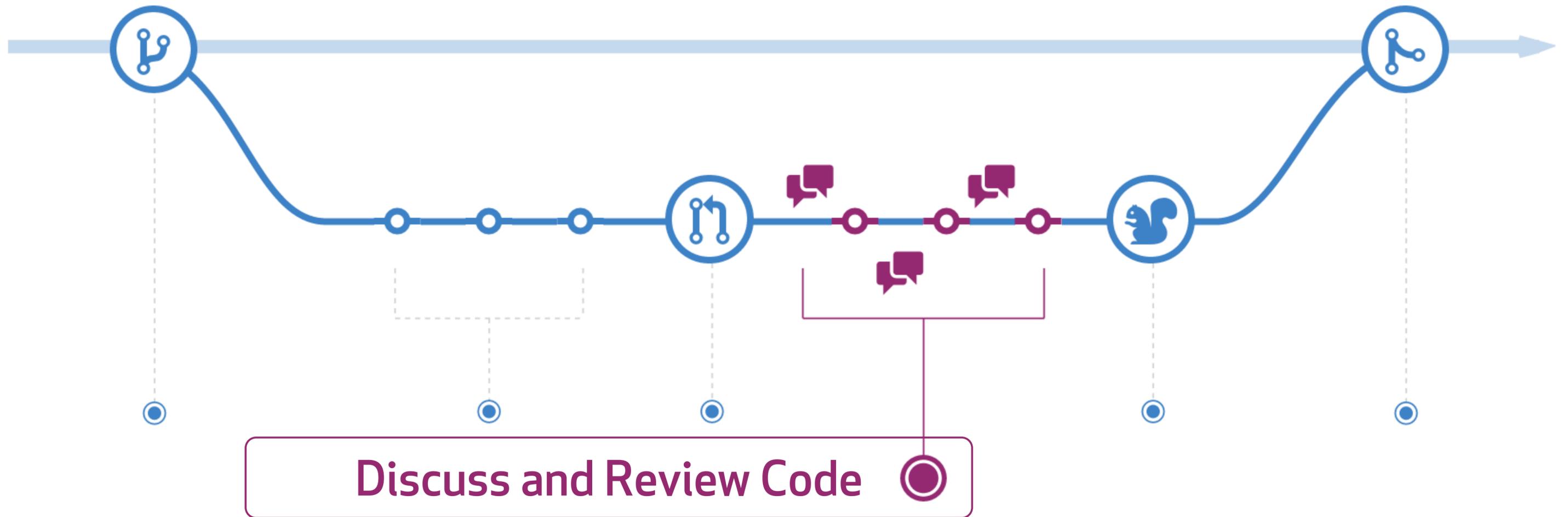


GitHub Flow









Better code #20

Edit

[Open](#) technical-lead wants to merge 1 commit into `master` from `code-cleaning`

Conversation 0 Commits 1 Files changed 1 +1 -0

technical-lead commented 2 minutes ago Owner

More comments, more happiness ✨
Should we 📺 ?

Added comments ✖ b5194e3

technical-lead added the **enhancement** label 2 minutes ago

helaili was assigned by **technical-lead** 2 minutes ago

helaili commented a minute ago Owner

Awesome 👍

Labels ⚙️

enhancement

Milestone ⚙️

No milestone

Assignee ⚙️

helaili

Notifications

Unsubscribe

You're receiving notifications because you authored the thread.

2 participants

helaili

Lock pull request

Add more commits by pushing to the `mocha-npm` branch on `github/github`.

All checks have passed Hide all checks
10 successful checks

- ✓ **enterprise** — Build #2508806 succeeded in 127s Required [Details](#)
- ✓ **enterprise-setup** — Build #2508807 succeeded in 182s [Details](#)
- ✓ **enterprise2-github** — Build #2508808 succeeded in 250s [Details](#)
- ✓ **github** — Build #2508809 succeeded in 150s Required [Details](#)
- ✓ **github-benchmarks** — Build #2508810 succeeded in 99s Required [Details](#)
- ✓ **github-dot** — Build #2508811 succeeded in 210s Required [Details](#)

This branch is out-of-date with the base branch Update branch
Merge the latest changes from `master` into this branch.

[Merge pull request](#) You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Statuses

- i. [Create a Status](#)
- ii. [List Statuses for a specific Ref](#)
- iii. [Get the combined Status for a specific Ref](#)

[▶ Overview](#)[▶ Activity](#)[▶ Gists](#)[▶ Git Data](#)

```
{  
  "state": "success",  
  "target_url": "https://example.com/build/status",  
  "description": "The build succeeded!",  
  "context": "continuous-integration/jenkins"  
}
```

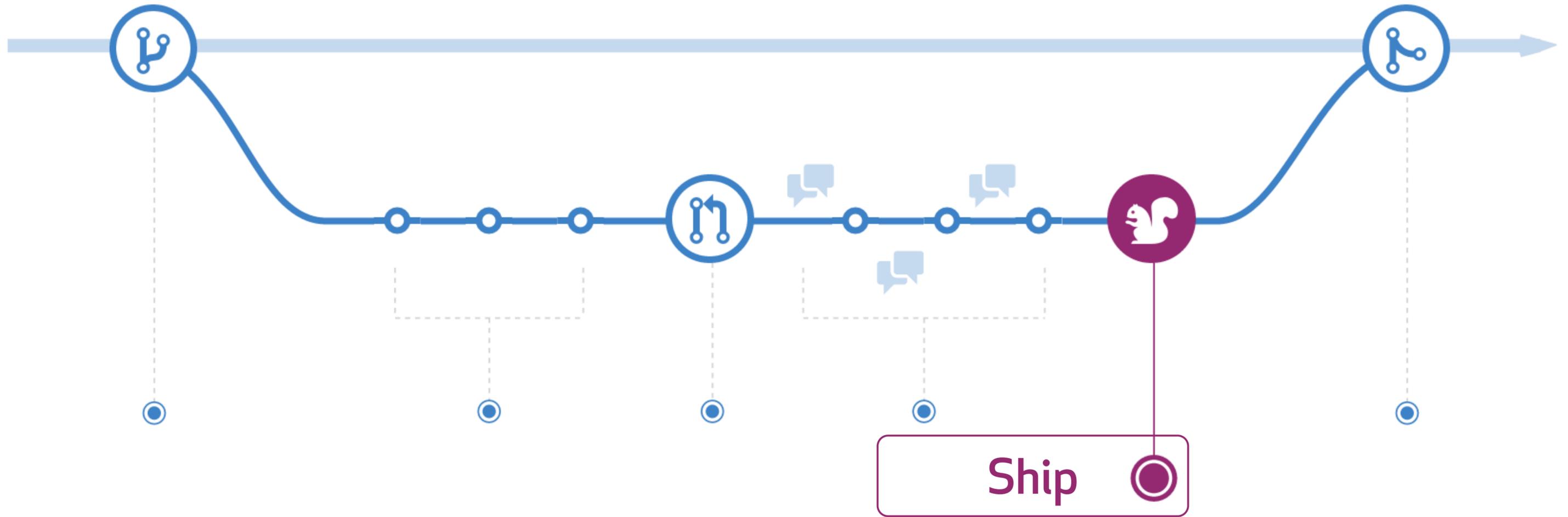
Create a Status

Users with push access can create commit statuses for a given ref:

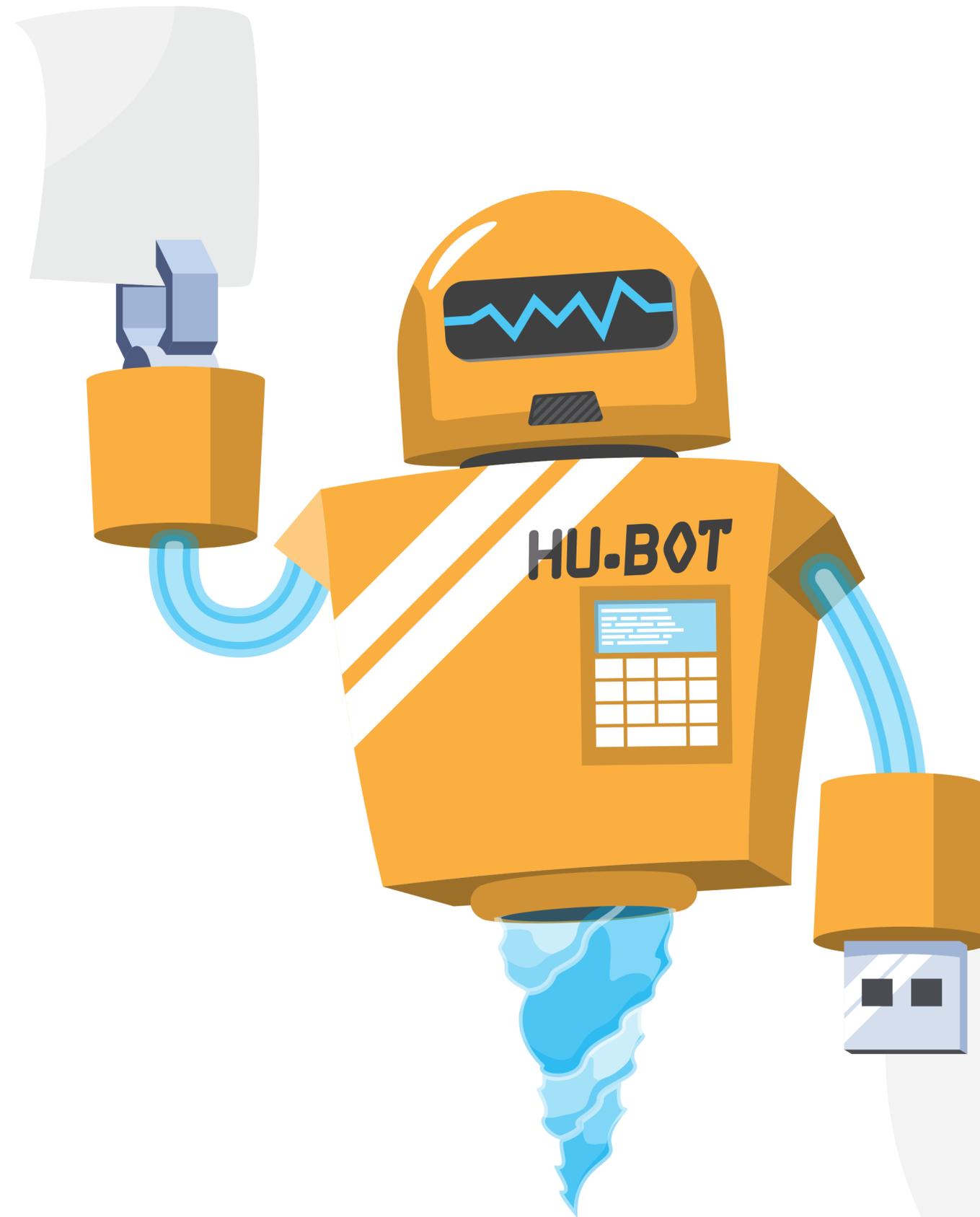
```
POST /repos/:owner/:repo/statuses/:sha
```

Note: there is a limit of 1000 statuses per `sha` and `context` within a Repository. Attempts to create more than 1000 statuses will result in a validation error.

[Downloads](#)[Forks](#)[Merging](#)[Pages](#)[Releases](#)[Statistics](#)[Statuses](#)



hubot





helaili 12:13 PM

.map me lille



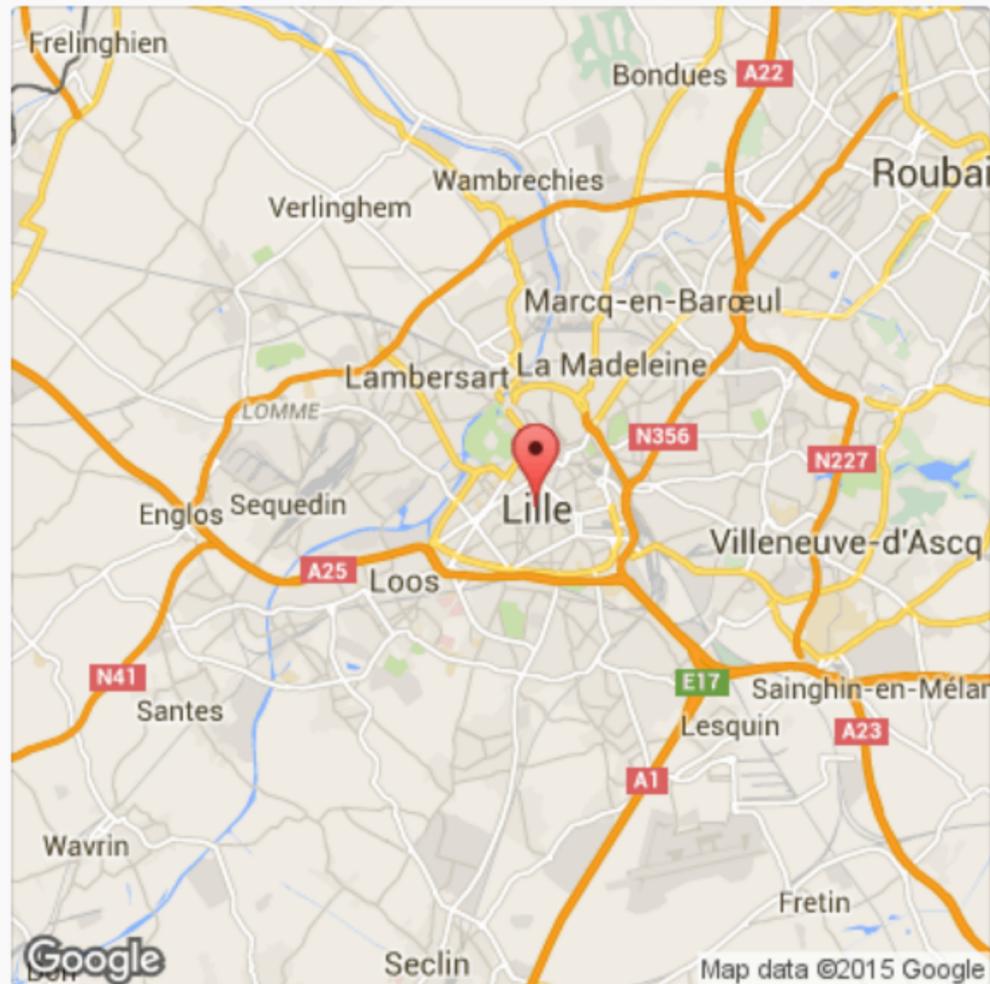
hubot BOT 12:13 PM

<http://maps.google.com/maps?q=lille&hl=en&sll=37.0625,-95.677068&sspn=73.579623,100.371094&vpsrc=0&hnear=lille&t=m&z=11>



12:13 ☆

(60KB) ▾



helaili

/img me marseille



Hubot





markostar

/animate me crazy



Hubot



bitches be crazy!

🔗 Added "#" to the TFS link – Brian Starr ([github/sales-engineering@ba3f284](#))

🕒 18 Nov, 2:35 AM

🔗 Sever = > Server in TFS Title – Brian Starr ([github/sales-engineering@68996b2](#))

🕒 18 Nov, 2:50 AM

🔗 Fix typos – Ryan Parks ([github/sales-engineering@cd6f049](#))

🕒 11:40 AM



tmm1

/deploy github/my-feature to **branch-lab**

tmm1 is **deploying** github/my-feature (**feedface**) to branch-lab. Review the **deployment checklist** before deploying to production.

tmm1's branch-lab deployment of github/my-feature (feedface) is done! (22s)

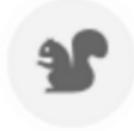


Hubot

tmm1: your branch-lab is available at <https://my-feature.branch.github.com>

 **tmm1** added some commits 8 days ago

-   truncate overflow
-   split on two lines
-   remove self-closing tag

  **tmm1** **deployed** to branch-lab 8 days ago

aecd061

 c683251

 4bbd8da

Deployments

- i. [List Deployments](#)
- ii. [Create a Deployment](#)
- iii. [Update a Deployment](#)
- iv. [List Deployment Statuses](#)
- v. [Create a Deployment Status](#)

Deployments are a request for a specific `ref(branch,sha,tag)` to be deployed. GitHub then dispatches deployment events that external services can listen for and act on. This enables developers and organizations to build loosely-coupled tooling around deployments, without having to worry about implementation details of delivering different types of applications (e.g., web, native).

Deployment Statuses allow external services to mark deployments with a 'success', 'failure', 'error', or 'pending' state, which can then be consumed by any system listening for `deployment_status` events.

Deployment Statuses can also include an optional `description` and `target_url`, and we highly recommend providing them as they make deployment statuses much more useful. The `target_url` would be the full URL to the deployment output, and the `description` would be the high level summary of what happened with the deployment.

[▶ Overview](#)[▶ Activity](#)[▶ Gists](#)[▶ Git Data](#)[▶ Issues](#)[▶ Miscellaneous](#)[▶ Organizations](#)[▶ Pull Requests](#)[▼ Repositories](#)[Collaborators](#)[Comments](#)[Commits](#)[Contents](#)[Deploy Keys](#)



tmm1

/deploy github/rails-6-upgrade to production/fe130,fe131



tmm1 is **deploying** github/rails-6-upgrade (**feedbeef**) to production (github-fe130-cp1-prd, github-fe131-cp1-prd).

tmm1's production deployment of github/rails-6-upgrade (feedbeef) is done! (46s)



Hubot

Exceptions have recently elevated on github (12 exceptions) in the last 3 minutes. tmm1 was the last person to deploy at 07:40 pm PDT (-0700). Care to check it out in haystack?



tmm1

/deploy github/my-feature to **production**

```
- Auto-merged master into my-feature on deployment - Aman Gupta ( github/github@feedface )  
Build #2077391 (feedface) of github/my-feature was successful (97s, queued 0s)  
Build #2077392 (feedface) of enterprise/my-feature was successful (106s, queued 0s)  
tmm1 is deploying github/my-feature (feedface) to production.  
tmm1's production deployment of github/my-feature (feedface) is done! (100s)
```



Hubot

tmm1, make sure you watch for exceptions [in haystack](#) and perf issues at [graphme](#)

Browser Response Time

Exceptions

10 AM

10:30

11 AM

11:30

12 PM

12:30

01 PM

01:30

02 PM

02:30

03 PM

Search...

Dashboard

Updated: November 17, 2015 3:16:41 PM 5m **30m** 1h 3h

- Overview
- Dashboard**
- Firehose
- Experienced by you

- Latest Deploys
- master**
deployed by mikemcquaid an hour ago
 - master**
deployed by mikemcquaid 4 hours ago
 - rsanheim/test-cache-tweak**
deployed by rsanheim 9 hours ago
 - rsanheim/test-cache-tweak**
deployed by rsanheim 9 hours ago
 - master**
deployed by rsanheim 10 hours ago

Searches
404 Errors

SlowQueryLogger::SlowQuery	last occurred 3 minutes ago — [9.37 sec] UPDATE sequences SET number = LAST_INSERT_ID(number + 1), updated_at = NOW() WHERE context_type = 'Repository' AND context_id = 46276404	229
GitHub::TimeoutMiddleware::RequestTimeout	last occurred 3 minutes ago — Issues POST /repositories/:repository_id/issues	70
GitRPC::Timeout	github/github#40538 github/nines#38882 github/nines#38878 github/nines#38874 github/nines#38883 last occurred 2 minutes ago — GitRPC::Timeout	32
GitRPC::Timeout	github/nines#38882 github/nines#38883 last occurred 5 minutes ago — GitRPC::Timeout	15
GitRPC::SpawnFailure	github/nines#38882 github/nines#38878 github/nines#38883 last occurred 2 minutes ago — GitRPC::Timer::Error: execution expired	12
SignalException	github/nines#38883 github/nines#38878 github/nines#38882 last occurred 2 minutes ago — SIGTERM	12
PrettyLights::TimeoutError	last occurred just now — timed out	7

Nagios (1168073) - github/haystack-exceptions-per-minute - 2015-11-02 11:53:24 -0800 #38882

Edit New Issue

Closed hubot opened this issue 15 days ago · 6 comments



hubot commented 15 days ago

github/haystack-exceptions-per-minute is WARNING

This is an early warning intended to give you time to fix it ahead of it going CRITICAL. Please prioritise work on this issue before it goes CRITICAL. If this has fired too soon or too late, please update the alert WARNING threshold appropriately.

Output

```
WARNING Haystack exceptions per minute: 25.80
```

```
Nagios check created by github/nagios
```

Notes

<https://ops.githubapp.com/docs/playbooks/github-haystack-exceptions.md>

/cc @github/github-haystack-oncall
Defined in [config/haystack/alerts.yml](#)

Next Steps

Resolve the incident

Using the above documentation as well as drawing from context and experience, work to resolve the alert as quickly as is reasonable.

Labels

missing-diagnose-service

missing-fix-service

nagios

OK

sev1

Milestone

No milestone

Assignee

technicalpickles

Notifications

Subscribe

You're not receiving notifications from this thread.

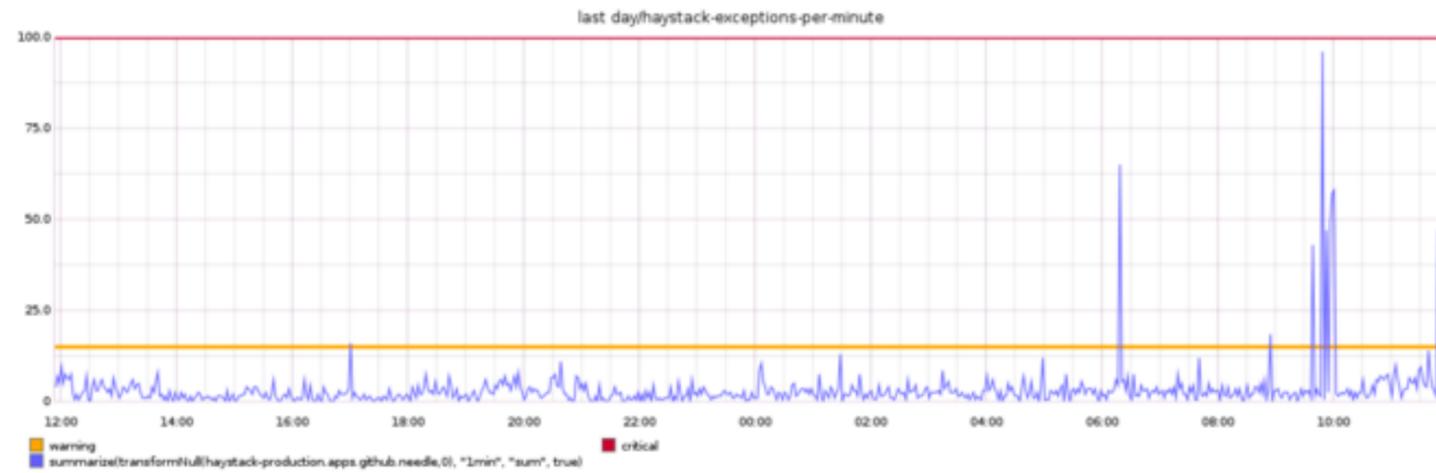
2 participants



Lock conversation



hubot commented 15 days ago

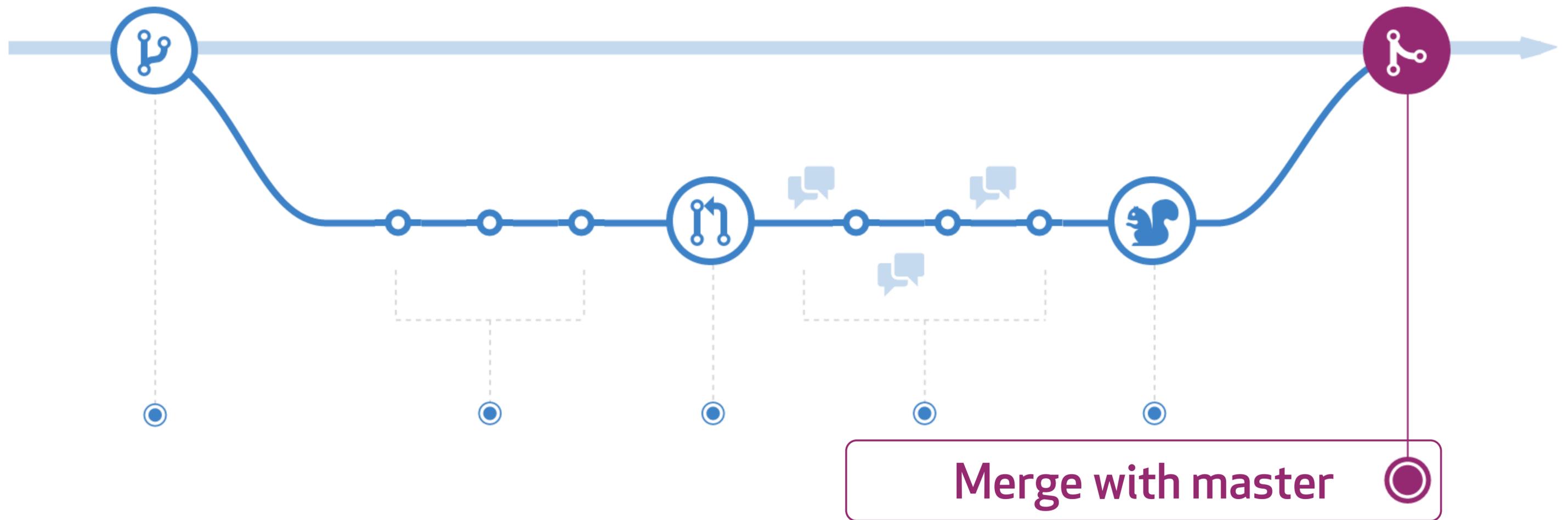


hubot commented 15 days ago



Relevant nagios.log entries

```
[Mon Nov 2 00:00:00 2015] CURRENT SERVICE STATE: github;haystack-exceptions-per-minute;OK;HARD;1;0
[Mon Nov 2 06:20:23 2015] SERVICE ALERT: github;haystack-exceptions-per-minute;WARNING;SOFT;1;WARN
[Mon Nov 2 06:20:23 2015] SERVICE EVENT HANDLER: github;haystack-exceptions-per-minute;WARNING;SOFT;1;WARN
[Mon Nov 2 06:21:23 2015] SERVICE ALERT: github;haystack-exceptions-per-minute;WARNING;HARD;2;WARN
[Mon Nov 2 06:21:23 2015] SERVICE NOTIFICATION: metrics-ninesapp-contact;github;haystack-exception
[Mon Nov 2 06:21:23 2015] SERVICE NOTIFICATION: metrics-ninesapp-contact;github;haystack-exception
[Mon Nov 2 06:21:23 2015] SERVICE EVENT HANDLER: github;haystack-exceptions-per-minute;WARNING;HARD;2;WARN
[Mon Nov 2 06:25:23 2015] SERVICE ALERT: github;haystack-exceptions-per-minute;OK;HARD;2;OK Haysta
[Mon Nov 2 06:25:23 2015] SERVICE NOTIFICATION: metrics-ninesapp-contact;github;haystack-exception
```



OBJECT ACQUISITION DEVICE

3,000,000 PSI
"DEATH PROOF" CLAW ARM

VISUAL ACQUISITION SENSOR

1M DPI RETINAL TRANSDUCER WITH
HIGH FIDELITY SQUIGGLY LINE OUTPUT

LOGIC CENTER

UNSALTED

VIOLENCE INHIBITOR

"BETA"

PLASMA GENERATOR

REQUIRES 2 D BATTERIES

PLASMA M

EXTERNAL CUT TERM

PREDICTIVE
MINI-QUERTY

USB 12 NANO CONNECTOR

HIGH EFFICIENCY
INSERT/RETRACT POLYMER

Questions?





- <http://githubengineering.com/runnable-documentation/>
- <http://githubengineering.com/scripts-to-rule-them-all/>
- <http://githubengineering.com/exception-monitoring-and-response/>
- <http://githubengineering.com/deploying-branches-to-github-com/>