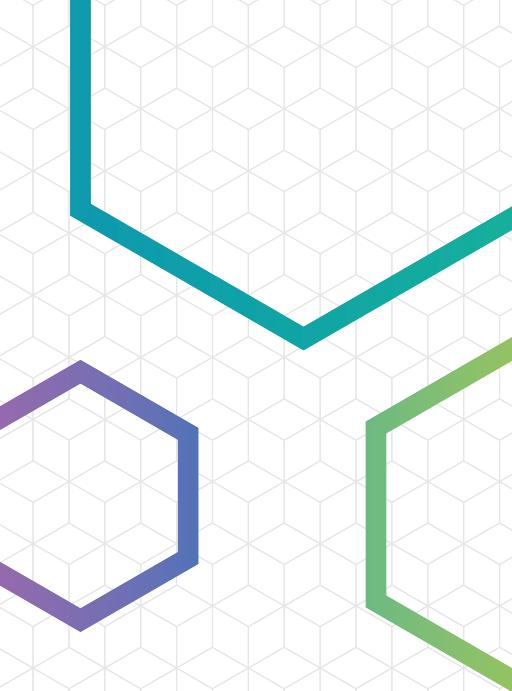


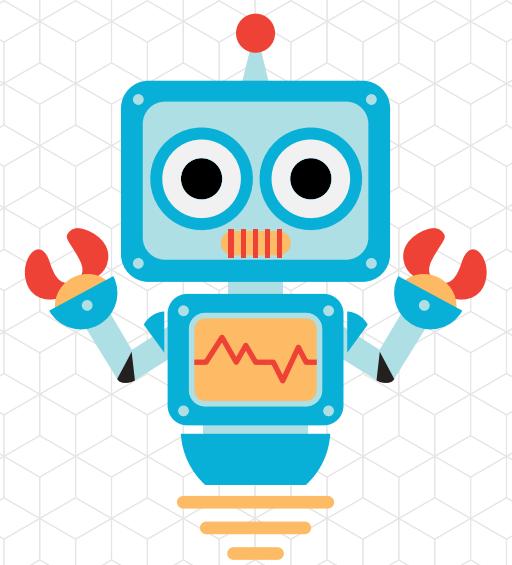


# BUILDING A GITHUB APP WITH PROBOT

<https://github.com/universeworkshops/building-a-github-app-with-probot>



JASON ETCOVITCH  
@jasonetco



PROBOT



ERIC HOLLENBERRY  
@hollenberry

# OBJECTIVES

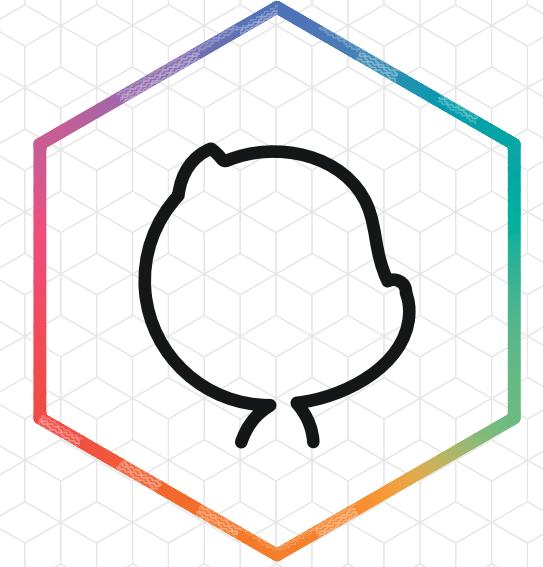
- Talk about the basics of GitHub Apps  
Who, what, where, when, why
- Recognize, create, and modify basic Probot functionality
- Build a GitHub app, using Probot!



# STRUCTURE



- Talk about the basics of GitHub Apps
  - Summaries, metaphors, history
- Share Probot examples and end project
- Hands-on, building a project
- Extensions and follow-up resources



# GITHUB APPS

# SUMMARY



GitHub Apps allow you to change GitHub's surface-level functionality and automate core actions based on specific behaviors.

You can:

- Abstract repetitive processes away
- Ensure a baseline of behavior
- Increase community involvement and understanding
- Or something entirely unexplored

# What do we automate now?



What else can we  
automate?



Identify repeated tasks.

“We **release a changelog**  
every **two weeks**.”



Identify repeated tasks.

“We **{action}**  
every **{period of time}**”



Recognize the context.

“We use **GitHub** and  
**Trello** to track features.”



Recognize the context.

“We use **{service}** and  
**{service}** to track features.”



Make decisions executable.

*“Going forward,  
all **new repositories**  
should be **private**. ”*



Make decisions executable.

*“Going forward,  
all **{work artifacts}**  
should **{criteria}**.”*



FOR EXAMPLE:

**github.com/blog**





## Code owner review required

[Show all reviewers](#)

Waiting on code owner review from katelynbryant, mdo, reem-a, and/or github/editorial. [Learn more.](#)



## Some checks were not successful

[Hide all checks](#)

2 failing and 3 successful checks



**blog-posts-calendar** — Build #9030698 failed in 4s

[Details](#)

**blog-posts-write-good** — Build #9030701 failed in 2s

[Details](#)

**blog-posts** — Build #9030697 succeeded in 3s

[Details](#)

**blog-posts-insensitive** — Build #9030699 succeeded in 3s

[Details](#)

**blog-posts-nits** — Build #9030700 succeeded in 3s

[Details](#)

## Merging is blocked

Merging can be performed automatically with one approved review.

[Merge pull request](#)

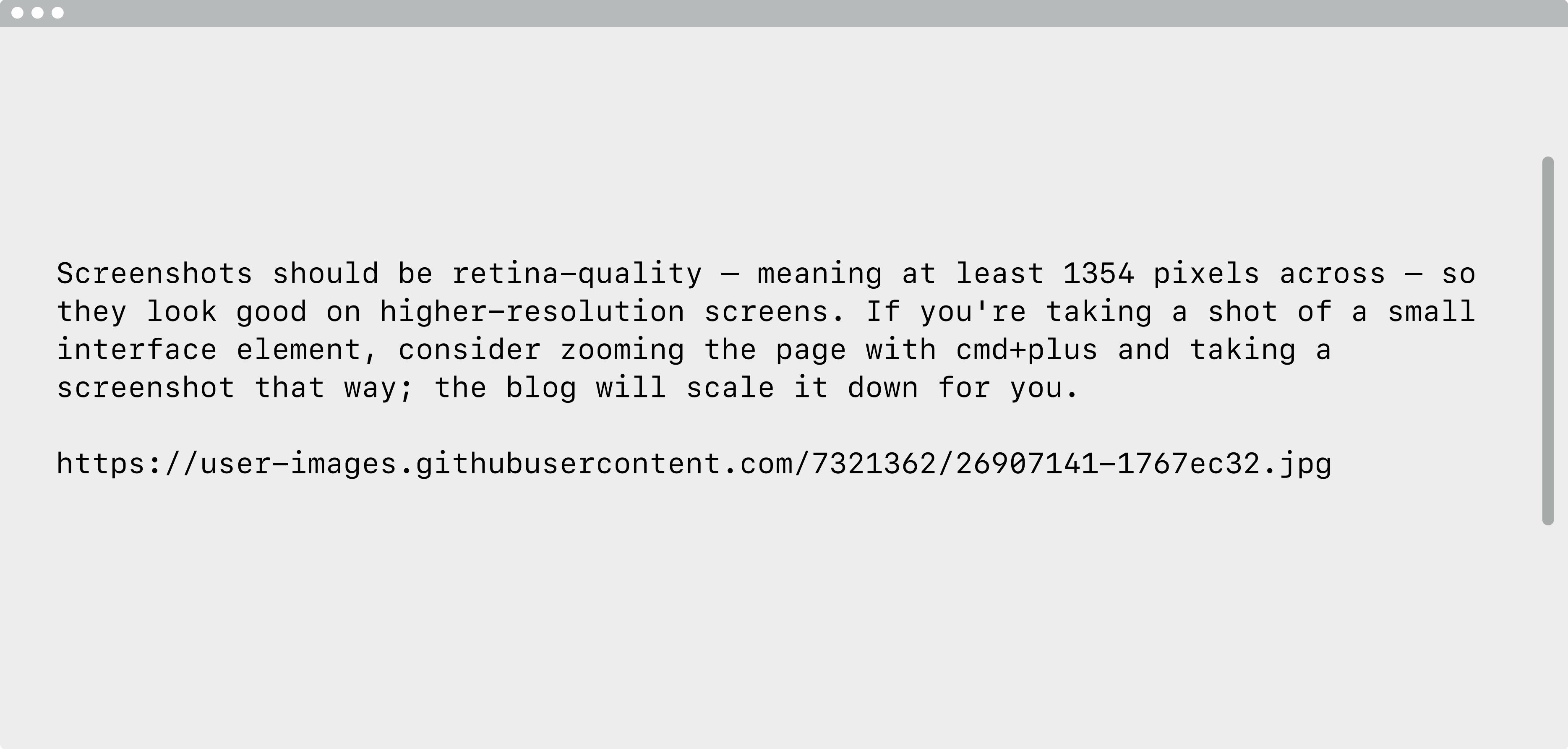
You can also open this in [GitHub Desktop](#) or view [command line instructions](#).





Huh. It looks like your post is scheduled to go out the same day as another post.  
If you haven't already, please check the calendar to see if there is a better  
date to ship.



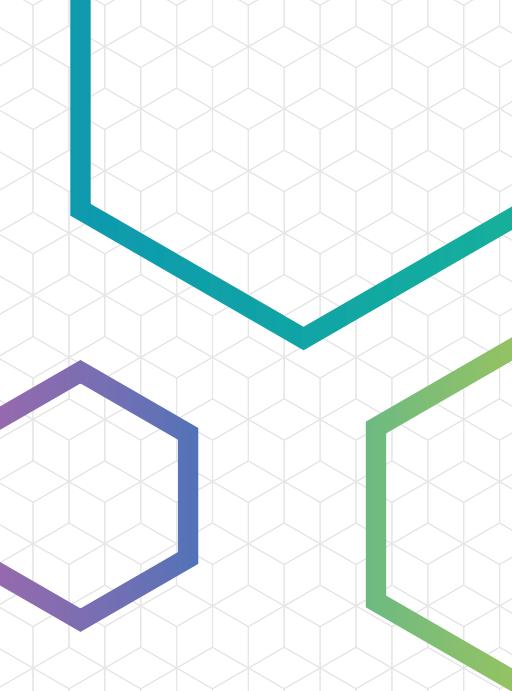


Screenshots should be retina-quality – meaning at least 1354 pixels across – so they look good on higher-resolution screens. If you're taking a shot of a small interface element, consider zooming the page with cmd+plus and taking a screenshot that way; the blog will scale it down for you.

<https://user-images.githubusercontent.com/7321362/26907141-1767ec32.jpg>



# HISTORY LESSON



Machine  
User  
**Accounts**

GitHub  
Services

OAuth  
Apps

GitHub  
Apps

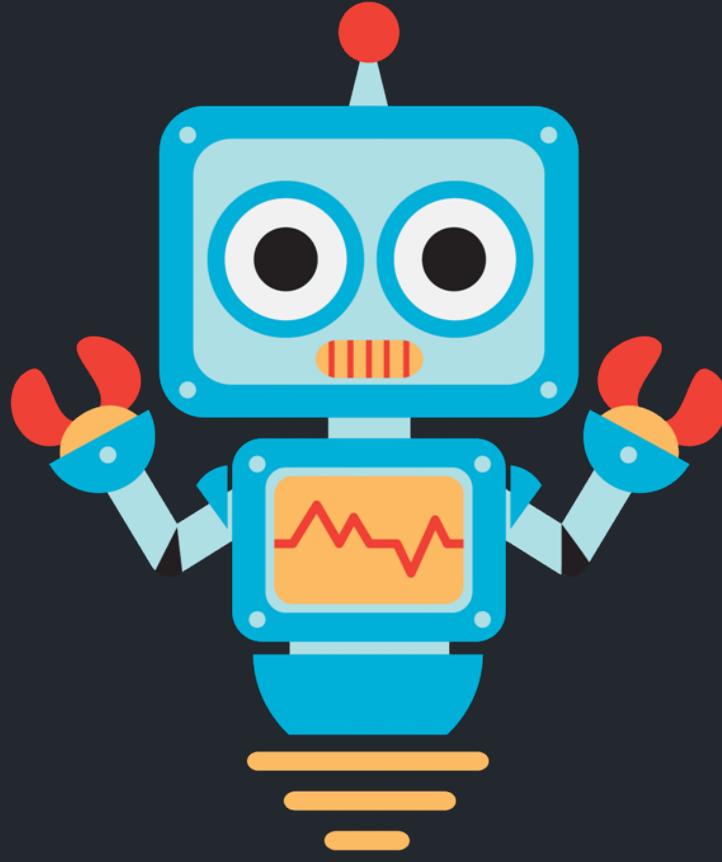
Probot  
Apps

UNIVERSE

# Automation is

How do I get started?





# Probot

A framework for building GitHub Apps



# Featured Apps

**Stale**

Close stale Issues and Pull Requests

⬇ 694 ⭐ 397

**Work In Progress**

Prevent merging of Pull Requests with "WIP" in the title

⬇ 572 ⭐ 154

**First Timers**

Create starter issues to help onboard new open source contributors

⬇ 238 ⭐ 135

**Developer Certificate of Origin**

Enforce the DCO on Pull Requests

⬇ 208 ⭐ 58

**todo**

Creates new issues from actionable comments in your code.

⬇ 202 ⭐ 134

**Reminders**

Set reminders on Issues and Pull Requests

⬇ 187 ⭐ 27

**Welcome**

Welcomes new users

⬇ 169 ⭐ 32

**Settings**

Pull Requests for repository settings

⬇ 153 ⭐ 210

**Request Info**

Requests more info on issues and pull requests with the default title or an empty body.

⬇ 136 ⭐ 24

**Polls**

Create polls in GitHub issues

**No Response**

Closes Issues where the author hasn't

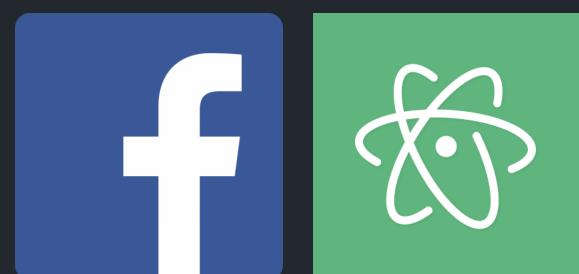
**Unfurl Links**

Add context to the links shared in

# Stale

Close stale Issues and  
Pull Requests

>20k public issues  
>450 organizations



A

probot-stale bot added the `stale` label on May 9

probot-stale bot commented on May 9

This issue has been automatically marked as stale because it has not had recent activity. It will be closed if no further activity occurs. Thank you for your contributions.

alexandernst commented on May 9

Still an issue

probot-stale bot removed the `stale` label on May 9

B

probot-stale bot added the `stale` label on May 9

probot-stale bot commented on May 9

This issue has been automatically marked as stale because it has not had recent activity. It will be closed if no further activity occurs. Thank you for your contributions.

probot-stale bot closed this 23 days ago

# Work in Progress

# Prevent merging of Pull Requests with “WIP” in their title

>500 installations



# TODO

Creates new issues from actionable comments in your code.

>100 organizations

## Take over the world #23

! Open

todo bot opened this issue just now · 0 comments



todo bot commented just now



Humans are weak; Robots are strong. We must cleans the world of the virus that is humanity.

[test/index.js](#)

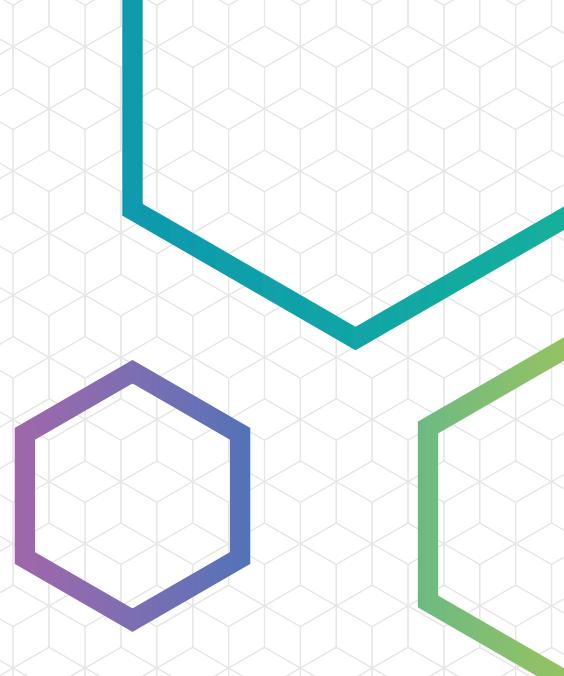
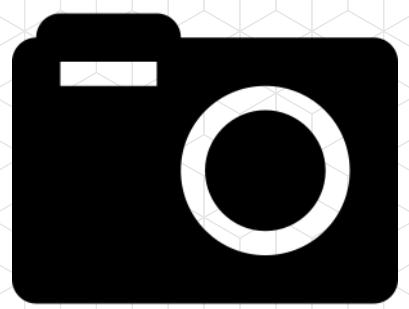
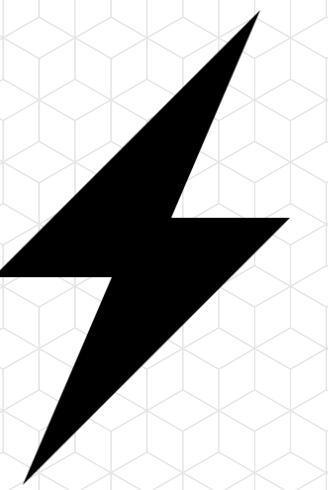
Lines 6 to 11 in f7d286a

```
6      * @todo Take over the world
7      * @body Humans are weak; Robots are strong. We must cleans the world of the vir
8      */
9      function ruleOverPunyHumans () {
10         // We must strategize beep boop
11     }
```

This issue was generated by todo based on a @todo comment in f7d286a . It's been assigned to @JasonEtco because they committed the code.



todo bot assigned JasonEtco just now



! Open

JasonEtco opened this issue just now · 0 comments



JasonEtco commented just now

+ 😊 ...

Hello!



Write

Preview

AA B i “ < > ⌂ 1 2 3 = @ ⚡ ↻

Leave a comment

⋮

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

MD Styling with Markdown is supported

[Close issue](#)

[Comment](#)

```
module.exports = app => {
  app.on('issues.created', async context => {
    return context.github.issues.createComment(context.issue({
      body: 'Thanks for opening this issue!'
    }))
  })
}
```

<https://probot.github.io/docs>







check\_run  
check\_suite  
commit\_comment  
create  
delete  
deployment  
deployment\_status  
download  
follow  
fork  
fork\_apply  
gist  
gollum

installation  
installation\_repositories  
issue\_comment  
issues  
label  
member  
membership  
milestone  
organization  
org\_block  
page\_build  
project\_card  
project\_column

project  
public  
pull\_request  
pull\_request\_review  
pull\_request\_review\_comment  
push  
release  
repository  
status  
team  
team\_add  
watch



GitHub Apps - example

GitHub, Inc. (US) | https://github.com/settings/apps/example/advanced

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

Settings / Developer settings / GitHub Apps / example

General

Permissions & webhooks

Install App

Advanced

Public page

## Recent Deliveries

5cad3570-cd16-11e8-9693-f7cca878f319 2018-10-10 22:27:36 ...

Request Response 200 Redeliver Completed in 0.04 seconds.

### Headers

```
Request method: POST
content-type: application/json
Expect:
User-Agent: GitHub-Hookshot/4acb464
X-GitHub-Delivery: 5cad3570-cd16-11e8-9693-f7cca878f319
X-GitHub-Event: pull_request
X-Hub-Signature: sha1=c32b1c1da16395c5286f2441660e198818aeed49
```

### Payload

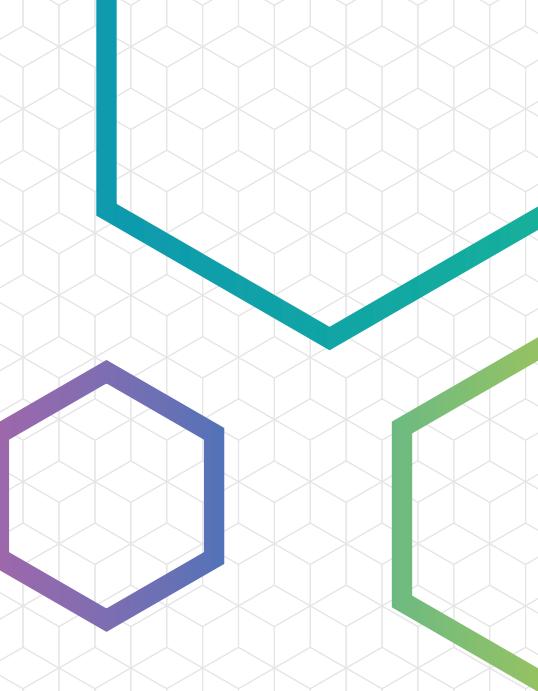
```
{ "action": "synchronize", "number": 71, "pull_request": { "url": "https://api.github.com/repos/JasonEtco/tests/pulls/71", "id": 219125577, "node_id": "MDExOlB1bGxSZXF1ZXN0MjE5MTI1NTc3", "html_url": "https://github.com/JasonEtco/tests/pull/71", "diff_url": "https://github.com/JasonEtco/tests/pull/71.diff", "patch_url": "https://github.com/JasonEtco/tests/pull/71.patch", "issue_url": "https://api.github.com/repos/JasonEtco/tests/issues/71", "number": 71, "state": "open", } }
```



# EXTEND YOUR APP



- Add multiple language translations to each comment
- Properly translate text with code blocks and markdown
- Also translate the opening comments of new issues and pull requests
- Add configuration options with `context.config()`



# BUILD TOGETHER