

CI/CD Pipelines with GitHub actions

By Tareq Hasan

Who am I?

Founder, CTO
weDevs



CI: Continuous Integration

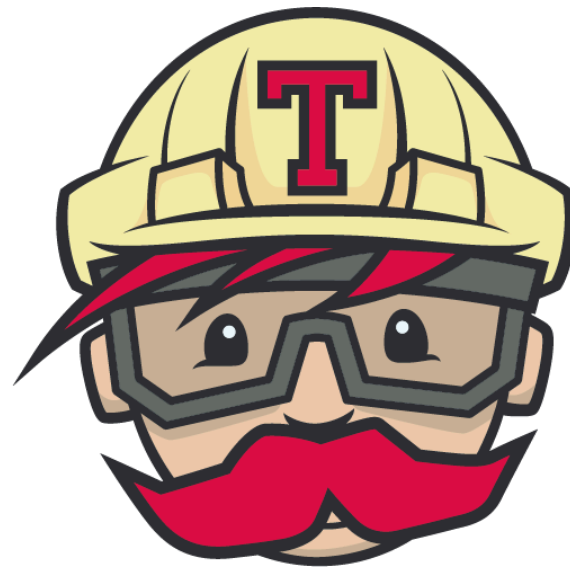
CD: Continuous Deployment



Jenkins



circleci



Travis




CODESHIP

Features • GitHub Actions

github.com/features/actions

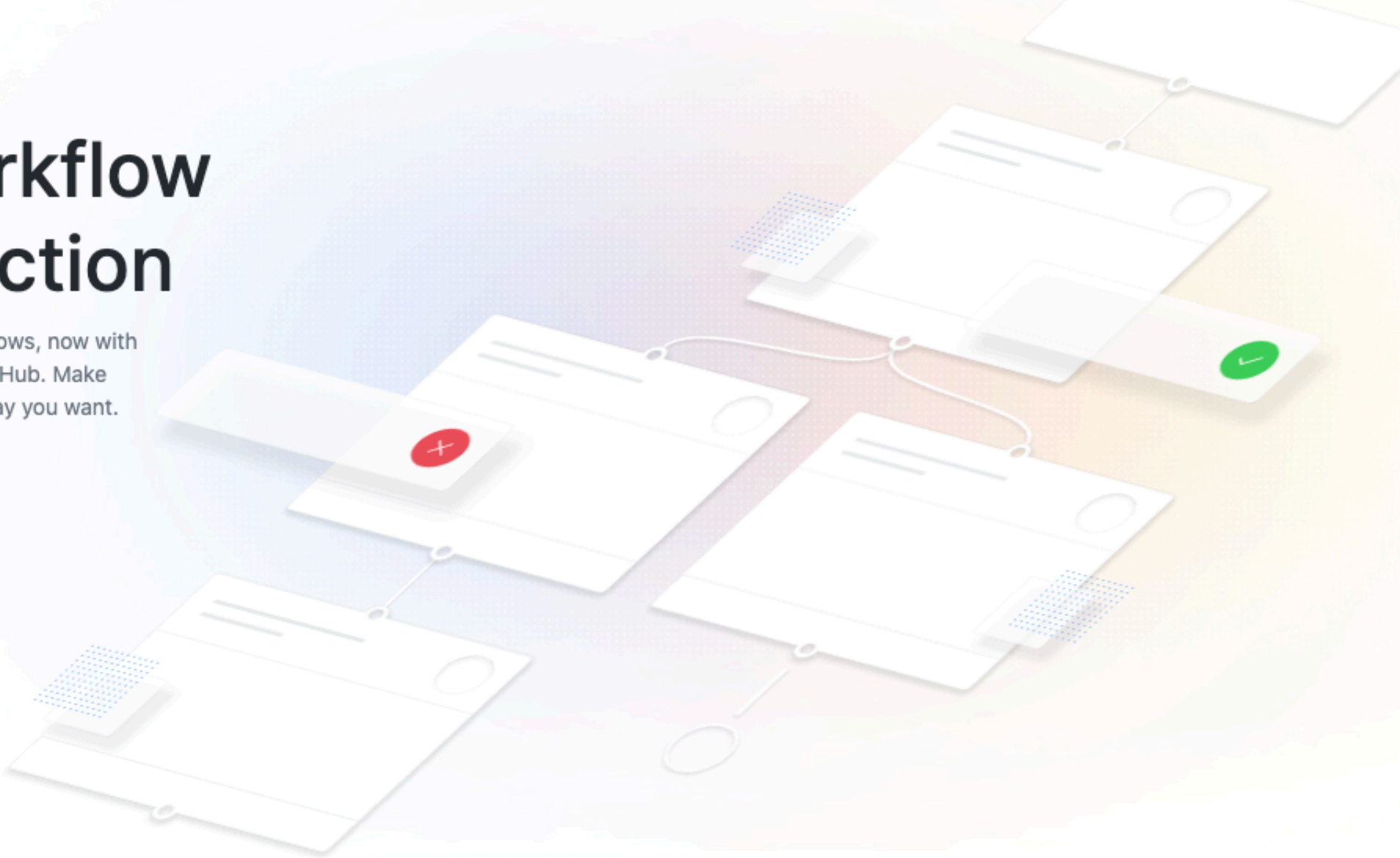
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 GitHub Actions

Automate your workflow from idea to production

GitHub Actions makes it easy to automate all your software workflows, now with world-class CI/CD. Build, test, and deploy your code right from GitHub. Make code reviews, branch management, and issue triaging work the way you want.

Explore GitHub Actions



on: pull_request_comment

on: public

on: page_build

on: watch

on: check_suite

on: scheduled

on: project

comment

Run a workflow on any GitHub event

Kick off workflows with GitHub events like push, issue creation, or a new release. Combine and configure actions for the services you use, built and maintained by the community.

Whether you want to build a container, deploy a web service, or automate welcoming new users to your open source projects—there's an action for that. Pair GitHub Packages with Actions to simplify package management, including version updates, fast distribution with our global CDN, and dependency resolution, using your existing GITHUB_TOKEN.

on: check_run

on: deployment

on: release

on: repository_dispatch

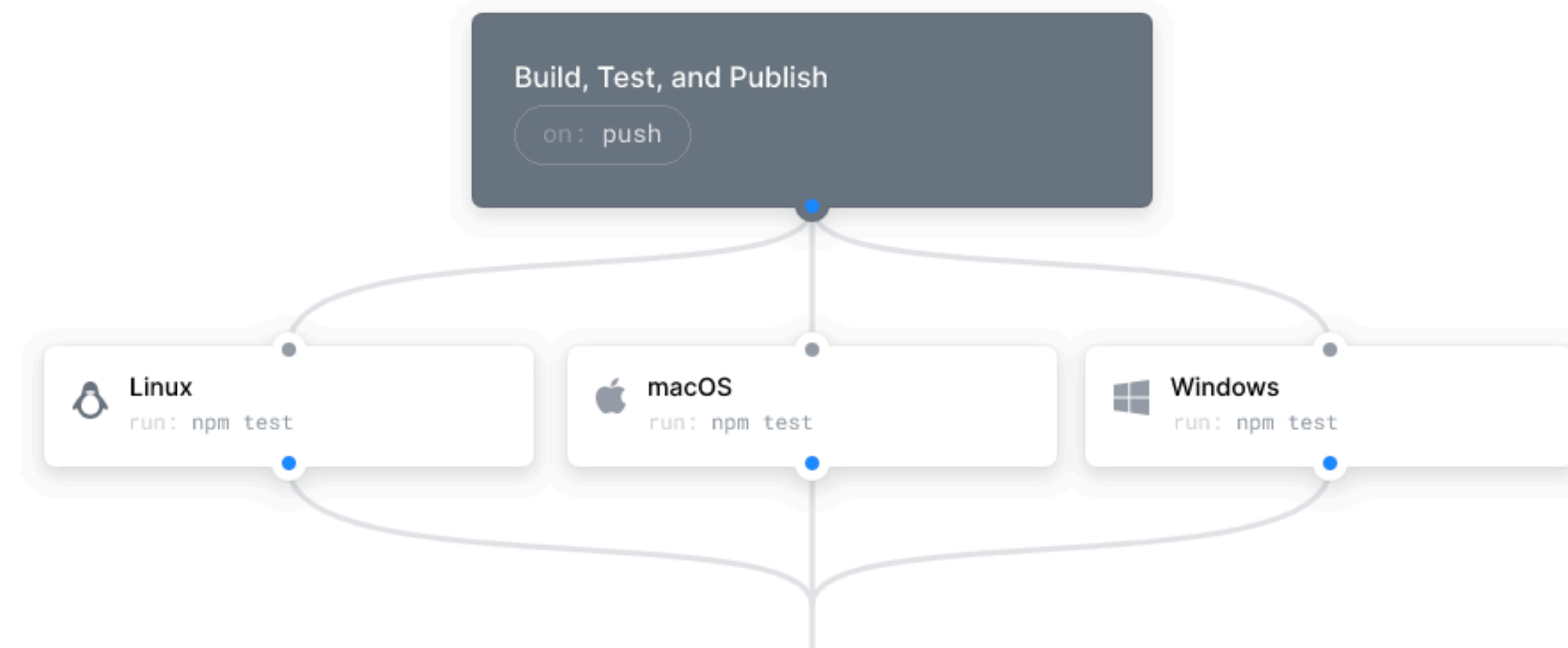
on: issue_comment

on: pull_request

on: delete

on: pull_request_review

on: pull



Linux, macOS, Windows, ARM, and containers

Hosted runners for every major OS make it easy to build and test all your projects. Run directly on a VM or inside a container. Use your own VMs, in the cloud or on-prem, with self-hosted runners.



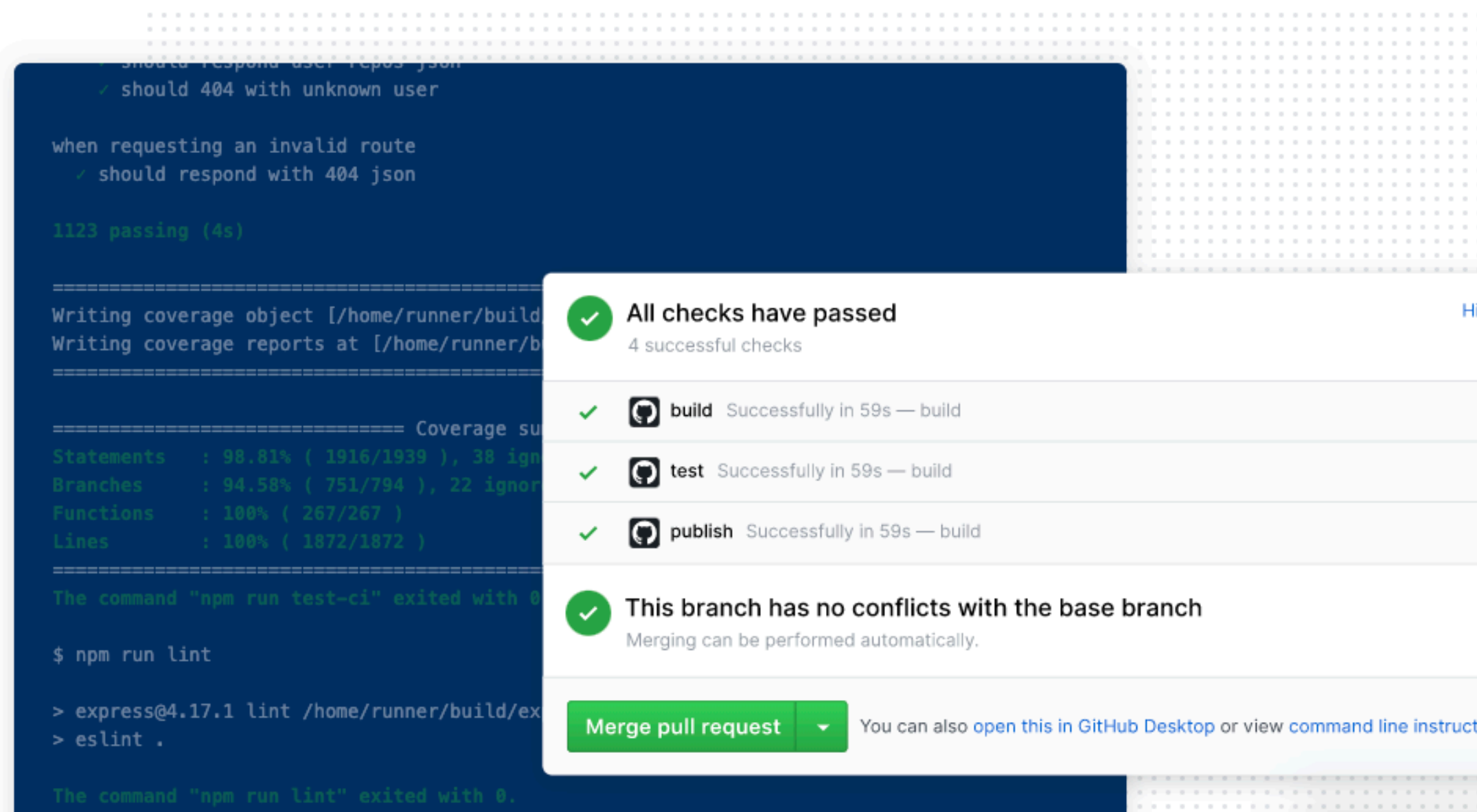
Matrix builds

Save time with matrix workflows that simultaneously test across multiple operating systems and versions of your runtime.



Any language

GitHub Actions supports Node.js, Python, Java, Ruby, PHP, Go, Rust, .NET, and more. Build, test, and deploy applications in your language of choice.



Current Runtime Resource

- 2-core CPU
- 7 GB of RAM
- 14 GB of SSD disk space
- Windows Server 2019
- Ubuntu 18.04
- Ubuntu 16.04
- macOS Catalina 10.15



GitHub Actions

Event Driven

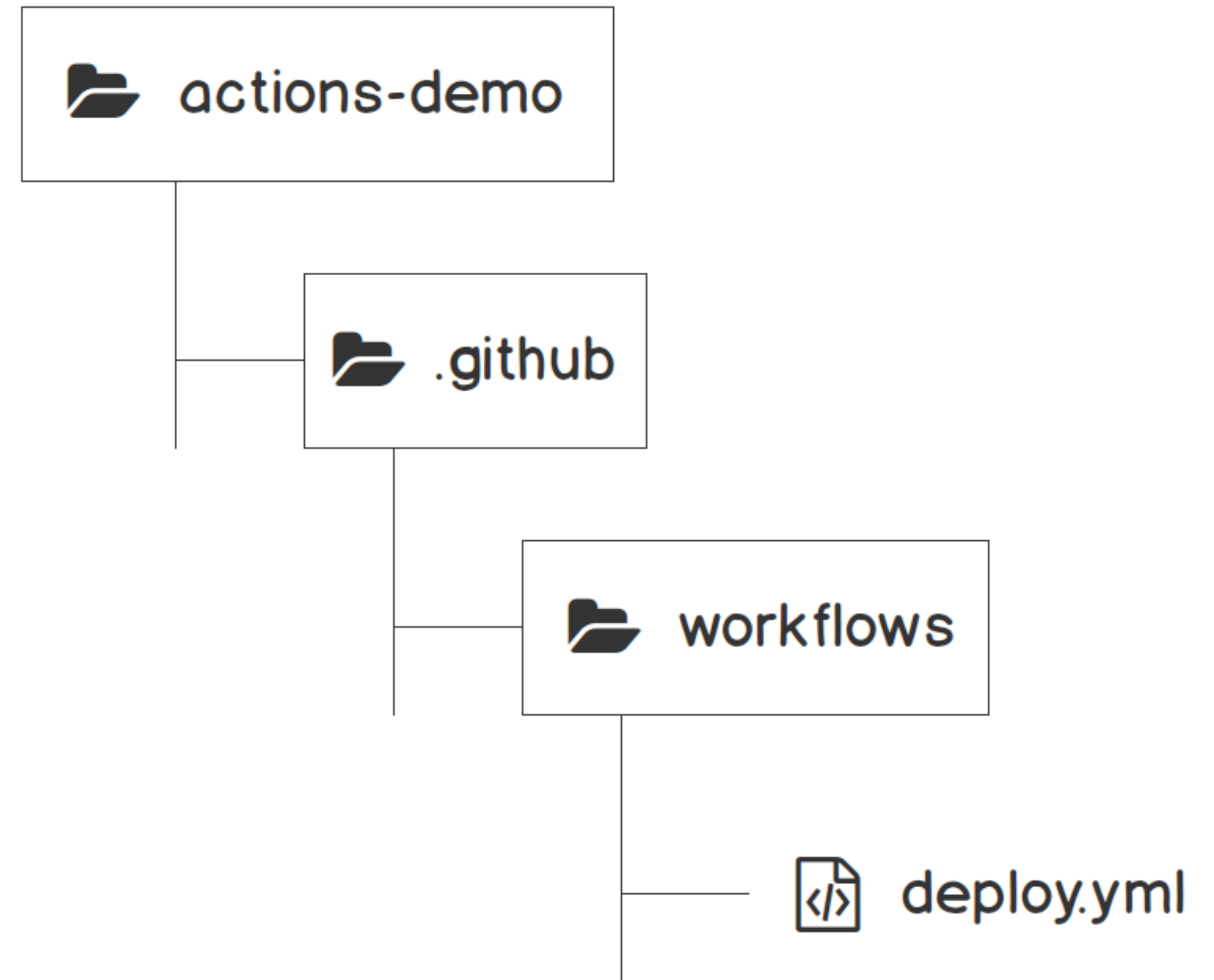
Events (27+)

Events that trigger workflows

- check_run
- check_suit
- create
- delete
- deployment
- deployment_status
- fork
- gollum
- pull_request
- issue_comment
- issues
- label
- milestone
- page_build
- project
- project_card
- project_column
- public
- pull_request_review
- pull_request_review_comment
- push
- release
- status
- watch
- schedule
- repository_dispatch
- registry_package

How to...

Folder Structure



 weDevsOfficial / actions-demo Private

 Unwatch 2  Star 0  Fork 0

 Code  Issues 16  Pull requests  Actions  Projects  Security  Insights  Settings

Options

Manage access

Security & analysis

Branches

Webhooks

Notifications

Integrations

Deploy keys

Secrets

Actions








Secrets

Secrets are environment variables that are **encrypted** and only exposed to selected actions. Anyone with **collaborator** access to this repository can use these secrets in a workflow.

Secrets are not passed to workflows that are triggered by a pull request from a fork. [Learn more](#).

New secret

Repository secrets

 API_URL	Updated 13 days ago	Update	Remove
 CONSUMER_KEY	Updated 13 days ago	Update	Remove
 CONSUMER_SECRET	Updated 13 days ago	Update	Remove
 REMOTE_DIR	Updated 13 days ago	Update	Remove
 SERVER_HOST	Updated 13 days ago	Update	Remove
 SLACK_WEBHOOK	Updated 13 days ago	Update	Remove
 SSH_KEY	Updated 13 days ago	Update	Remove

Secrets can also be created at the organization level and authorized for use in this repository.

Organization secrets

[Manage organization secrets](#)

Secrets...

EXPLORER

> OPEN EDITORS

▼ ACTIONS-DEMO

▼ .github / workflows

{...} deploy.yml

> .next

> api

> components

> context

> custom-hooks

> layout

> node_modules

> pages

> public

> store

> utils

.env

.env.example

.gitignore

client-config.js

{...} jsconfig.json

next.confia.is

> OUTLINE

> TIMELINE

> NPM SCRIPTS

{...} deploy.yml

×

.github > workflows > {...} deploy.yml

1 name: Continuous Deployment

2

3 on:

4 push:

5 branches:

6 - master

7 - develop

8

9 jobs:

10 deploy:

11 name: Deploy

12 runs-on: ubuntu-latest

13

14 steps:

15 - uses: actions/checkout@v2

16

17 - name: Setup Node

18 uses: actions/setup-node@v1

19 with:

20 node-version: 12.16

21

22 - name: Install dependencies

23 run: npm ci

24

25 - name: Run Build

develop

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Spaces: 2

UTF-8

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YAML

Prettier

For

 weDevsOfficial / actions-demo Private

 Unwatch 2  Star 0  Fork 0

<> Code  Issues 16  Pull requests  Actions  Projects  Security  Insights  Settings

Workflows

New workflow
















All workflows

 Continuous Deployment

All workflows

 Filter workflows


Event ▾ Status ▾ Branch ▾ Actor ▾

	fix checkout form submit validation Continuous Deployment #5: Commit b62b04d pushed by mehidi258	develop	 13 days ago  4m 18s	...
	Merge branch 'develop' of github.com:weDevsOfficia... Continuous Deployment #4: Commit 31d110b pushed by mehidi258	develop	 13 days ago  12m 27s	...
	Fix workflow hostname Continuous Deployment #3: Commit 0151e7d pushed by tareq1988	develop	 13 days ago  6m 41s	...
	Fix footer name Continuous Deployment #2: Commit 67f56fc pushed by tareq1988	develop	 13 days ago  2m 26s	...
	Added github actions deploy script Continuous Deployment #1: Commit 6fb9340 pushed by tareq1988	develop	 13 days ago  2m 12s	...

Runs...

 **fix checkout form submit validation**

develop  [b62b04d](#)

 [Re-run jobs](#)

Continuous Deployment

on: push

Continuous Deployment / **Deploy**

succeeded 13 days ago in 4m 2s

Search logs














< > ...

Continuous Deployment

on: push

Deploy

Octotree

▶ 	Set up job	2s
▶ 	Build appleboy/ssh-action@master	7s
▶ 	Build rtCamp/action-slack-notify@v2.0.0	56s
▶ 	Run actions/checkout@v2	1s
▶ 	Setup Node	0s
▶ 	Install dependencies	18s
▶ 	Run Build	26s
▶ 	Clean remote dist directory	3s
▶ 	Deploy to Server	3s
▶ 	Git Pull and Restart PM2	2m 5s
▶ 	Slack Notification	1s
▶ 	Post Run actions/checkout@v2	0s
▶ 	Complete job	0s

Steps...

Thanks!