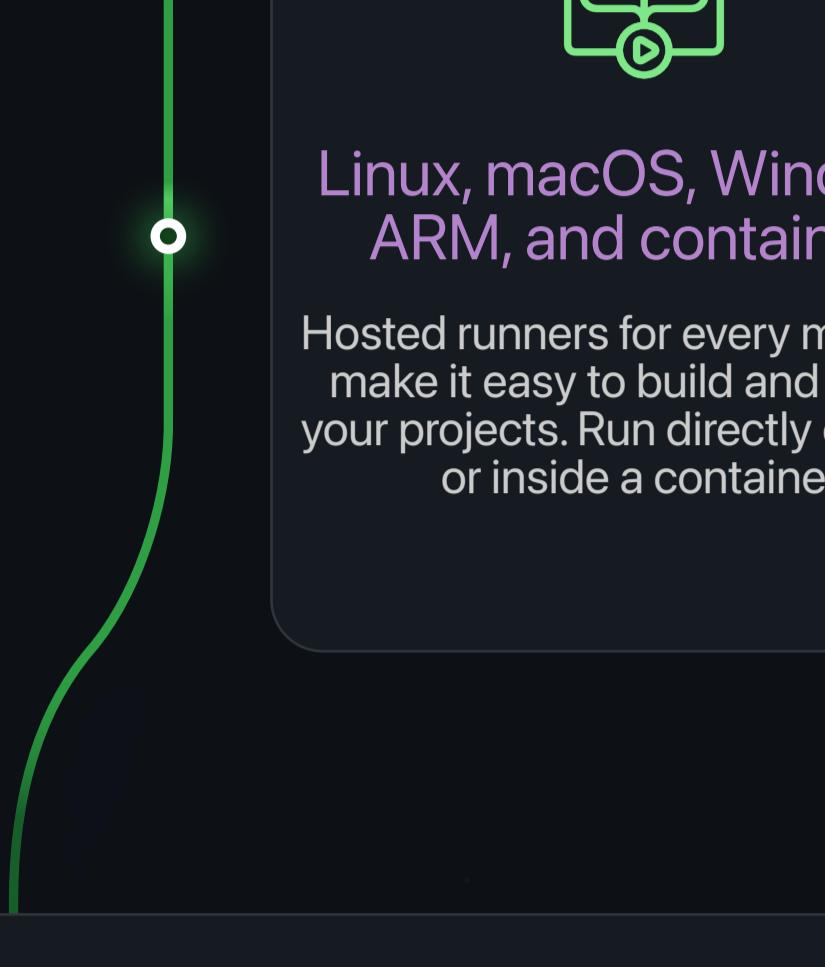


# GitHub Actions

GitHub Actions is a continuous integration and continuous delivery (CI/CD) platform that allows you to automate your build, test, and deployment pipeline.

## GitHub Actions, at a glance



## Easy for anyone, dependable for complex setups



GitHub Actions makes it **easy** to automate all your software workflows. Make code reviews, branch management, and issue triaging work **the way you want**.



### 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.



### 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.

## Community Workflows

You can **publish** actions in GitHub Marketplace and **share** actions you've created with the GitHub community. You can also freely **use** all actions published in the GitHub Marketplace.

## Basic Terminology

It's a necessary evil.

### Action(s)

A **program** that becomes a **reusable component** to be used in workflows. Actions can install software for the environment, set up authentication, or automate complex sets of tasks.

### Workflow

A **configurable, automated process** that you can use in your repository to build, test, package, release, or deploy your project. Workflows are made up of one or more "jobs" and can be **triggered by GitHub events**.

### Jobs

A **list** of the jobs that run as **part of the workflow**. Each job will **run independently** of the others, and will run on a different **virtual environment**. Jobs may have a name to make them easily identifiable in the UI.

### YAML

YAML stands for "Yet Another Markup Language". It's a **human-readable** markup language commonly used for configuration files, especially by CI- and DevOps-focused software tools. GitHub Actions uses YAML as the basis of its **configuration** workflows.

## Security x Workflows

### Embed security into developer workflows.

With GitHub, developers can secure their code easily whilst allowing enterprises to automatically comply with custom policies and regulations.

#### Deployment Environments

Protect your keys!

COLLECTOR_KEY	Updated last month		
DEVICE_ID	Updated last month		
SERVICE_URL	Updated last month		

+ Add secret

#### Secret Scanning

And the list goes on...

Partner	Supported secret
Adafruit IO	Adafruit IO Key
Adobe	Adobe Device Token
Adobe	Adobe Service Token
Adobe	Adobe Short-Lived Access Token

[https://assets.ctfassets.net/wfutmusrlt3h/OHW/twljwrrhdV3m50ZV87/5d0092144f32beec76fb26ea17abfd8/\\_downloads\\_GitHub Actions-Cheat-Sheet-One-Pager.pdf](https://assets.ctfassets.net/wfutmusrlt3h/OHW/twljwrrhdV3m50ZV87/5d0092144f32beec76fb26ea17abfd8/_downloads_GitHub Actions-Cheat-Sheet-One-Pager.pdf)

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- ✓ Managed service offering
- ✓ Granular policies
- ✓ Usage tracking
- ✓ Log forwarding
- ✓ Secret scanning
- ✓ Autoscaling runners

- ✓ Containerized builds

- ✓ Environments

- ✓ Marketplace

- ✓ Permissions

- ✓ Innersourcing

- ✓ Vulnerability detection

## Sources

Duart Snel, David Greven