

GitHub Actions documentation

Automate, customize, and execute your software development workflows right in your repository with GitHub Actions. You can discover, create, and share actions to perform any job you'd like, including CI/CD, and combine actions in a completely customized workflow.

[Overview](#)[Quickstart](#)

Start here [View all →](#)

Learn GitHub Actions

Whether you are new to GitHub Actions or interested in learning all they have to offer, this guide will help you use GitHub Actions to accelerate your application development workflows.

Examples

Example workflows that demonstrate the CI/CD features of GitHub Actions.

About continuous integration

You can create custom continuous integration (CI) workflows directly in your GitHub repository with GitHub Actions.

Deploying with GitHub Actions

Learn how to control deployments with features like environments and concurrency.

Popular

Workflow syntax for GitHub Actions

A workflow is a configurable automated process made up of one or more jobs. You must create a YAML file to define your workflow configuration.

Learn GitHub Actions

Whether you are new to GitHub Actions or interested in learning all they have to offer, this guide will help you use GitHub Actions to accelerate your application development workflows.

Examples

Example workflows that demonstrate the CI/CD features of GitHub Actions.

Events that trigger workflows

You can configure your workflows to run when specific activity on GitHub Enterprise Cloud happens, at a scheduled time, or when an event outside of GitHub Enterprise Cloud occurs.

Actions - Prevent self-reviews for secure deployments across Actions environments

October 16

Requiring workflows with Repository Rules is generally available

October 11

Actions - Secure deployment rollouts to protected environments based on select tag patterns

October 06

Guides

Using starter workflows

GitHub Enterprise Cloud provides starter workflows for a variety of languages and tooling.

@GitHub

Publishing Node.js packages

You can publish Node.js packages to a registry as part of your continuous integration (CI) workflow.

@GitHub

Building and testing PowerShell

You can create a continuous integration (CI) workflow to build and test your PowerShell project.

@potatoqualitee

[Explore guides →](#)

Learn GitHub Actions

[Understanding GitHub Actions](#)

[Finding and customizing actions](#)

[Essential features of GitHub Actions](#)

[Expressions](#)

[Contexts](#)

[Variables](#)

[Using starter workflows](#)

[Usage limits, billing, and administration](#)

Examples

[Using scripts to test your code on a runner](#)

[Using the GitHub CLI on a runner](#)

[Using concurrency, expressions, and a test matrix](#)

Using workflows

[About workflows](#)

[Triggering a workflow](#)

[Manually running a workflow](#)

[Disabling and enabling a workflow](#)

[Events that trigger workflows](#)

[Workflow syntax for GitHub Actions](#)

[Workflow commands for GitHub Actions](#)

[Reusing workflows](#)

[Required workflows](#)

[Caching dependencies to speed up workflows](#)

[Storing workflow data as artifacts](#)

[Creating starter workflows for your organization](#)

[Sharing workflows, secrets, and runners with your organization](#)

[Using GitHub CLI in workflows](#)

Using jobs

[Using jobs in a workflow](#)

[Choosing the runner for a job](#)

[Using conditions to control job execution](#)

[Using a matrix for your jobs](#)

[Using concurrency](#)

[Using environments for jobs](#)

[Running jobs in a container](#)

[Setting default values for jobs](#)

[Assigning permissions to jobs](#)

[Defining outputs for jobs](#)

Managing workflow runs

[Re-running workflows and jobs](#)

[Canceling a workflow](#)

[Approving workflow runs from public forks](#)

[Approving workflow runs from private forks](#)

[Reviewing deployments](#)

[Skipping workflow runs](#)

[Deleting a workflow run](#)

[Downloading workflow artifacts](#)

[Removing workflow artifacts](#)

Automating builds and tests

[About continuous integration](#)

[Building and testing Go](#)

[Building and testing Java with Ant](#)

[Building and testing Java with Gradle](#)

[Building and testing Java with Maven](#)

[Building and testing .NET](#)

[Building and testing Node.js](#)

[Building and testing PowerShell](#)

[Building and testing Python](#)

[Building and testing Ruby](#)

[Building and testing Swift](#)

[Building and testing Xamarin applications](#)

Deployment

[About deployments](#) • 2 articles

[Deploying to your cloud provider](#) • 3 articles

[Security hardening your deployments](#) • 8 articles

[Targeting different environments](#) • 1 articles

[Protecting your deployments with custom deployment protection rules](#) • 2 articles

[Managing your deployments](#) • 1 articles

[Deploying Xcode applications](#) • 1 articles

Using containerized services

[About service containers](#)

[Creating PostgreSQL service containers](#)

[Creating Redis service containers](#)

Publishing packages

[About packaging with GitHub Actions](#)

[Publishing Docker images](#)

[Publishing Java packages with Gradle](#)

[Publishing Java packages with Maven](#)

[Publishing Node.js packages](#)

Managing issues and pull requests

[Using GitHub Actions for project management](#)

[Adding labels to issues](#)

[Closing inactive issues](#)

[Commenting on an issue when a label is added](#)

[Moving assigned issues on project boards](#)

[Removing a label when a card is added to a project board column](#)

[Scheduling issue creation](#)

Migrating to GitHub Actions

[Using GitHub Actions Importer to automate migrations](#) • 10 articles

[Manually migrating to GitHub Actions](#) • 5 articles

Monitoring and troubleshooting workflows

[About monitoring and troubleshooting](#)

[Using the visualization graph](#)

[Adding a workflow status badge](#)

[Viewing workflow run history](#)

[Viewing job execution time](#)

[Using workflow run logs](#)

[Enabling debug logging](#)

[Notifications for workflow runs](#)

Using GitHub-hosted runners

[Using GitHub-hosted runners](#) • 3 articles

[About larger runners](#) • 4 articles

[Connecting to a private network with GitHub-hosted runners](#) • 6 articles

Hosting your own runners

[Managing self-hosted runners](#) • 12 articles

[Managing self-hosted runners with Actions Runner Controller](#) • 6 articles

Security guides

[Security hardening for GitHub Actions](#)

[Using secrets in GitHub Actions](#)

[Automatic token authentication](#)

[Creating actions](#)

Creating actions

[About custom actions](#)

[Creating a Docker container action](#)

[Creating a JavaScript action](#)

[Creating a composite action](#)

[Metadata syntax for GitHub Actions](#)

[Dockerfile support for GitHub Actions](#)

[Setting exit codes for actions](#)

[Publishing actions in GitHub Marketplace](#)

[Sharing actions and workflows with your enterprise](#)

[Releasing and maintaining actions](#)

[Developing a third party CLI action](#)

Legal

© 2023 GitHub, Inc. [Terms](#) [Privacy](#) [Status](#) [Pricing](#) [Expert services](#) [Blog](#)