

DEVOPS

Github Actions 101

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Présentation de Github Actions

- Créé en 2018 par *Github*
- Outil de CI/CD

GitHub Actions is a continuous integration and continuous delivery (CI/CD) platform that allows you to automate your build, test, and deployment pipeline. You can create workflows that build and test every pull request to your repository, or deploy merged pull requests to production.



GitHub Actions

Introduction

```
name: GitHub Actions Demo
on: [push]
jobs:
  Explore-GitHub-Actions:
    runs-on: ubuntu-latest
    steps:
      - run: echo "🔍 The name of your branch is ${github.ref} and your repository is ${github.repository}."

      - name: Check out repository code
        uses: actions/checkout@v3

      - run: echo "💡 The ${github.repository} repository has been cloned to the runner."

      - run: echo "💻 The workflow is now ready to test your code on the runner."

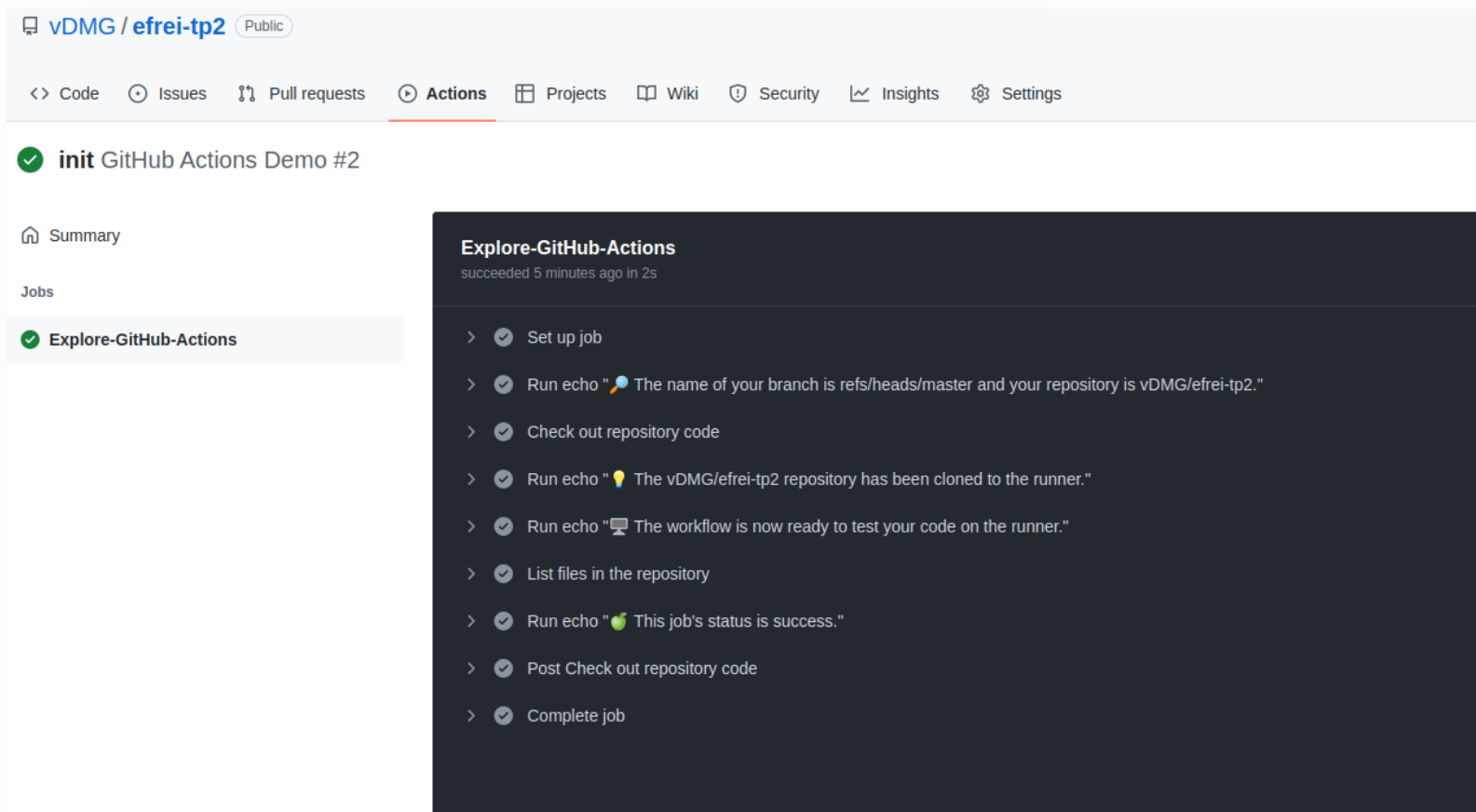
      - name: List files in the repository
        run: |
          ls ${github.workspace}

      - run: echo "🍏 This job's status is ${job.status}."
```

<https://github.com/marketplace?type=actions>

Création d'un premier workflow

<https://github.com/vDMG/efrei-tp2>



The screenshot shows the GitHub interface for the repository `vDMG / efrei-tp2`, which is public. The navigation bar includes links for Code, Issues, Pull requests, Actions (highlighted), Projects, Wiki, Security, Insights, and Settings. Under the Actions tab, there is a green checkmark icon and the text `init` GitHub Actions Demo #2. Below this, there is a 'Summary' section and a 'Jobs' section. The 'Jobs' section lists a single job, `Explore-GitHub-Actions`, which is marked with a green checkmark. A detailed view of this job is shown on the right, indicating it 'succeeded 5 minutes ago in 2s'. The job steps are as follows:

- > ✓ Set up job
- > ✓ Run echo "💡 The name of your branch is refs/heads/master and your repository is vDMG/efrei-tp2."
- > ✓ Check out repository code
- > ✓ Run echo "💡 The vDMG/efrei-tp2 repository has been cloned to the runner."
- > ✓ Run echo "💻 The workflow is now ready to test your code on the runner."
- > ✓ List files in the repository
- > ✓ Run echo "🟢 This job's status is success."
- > ✓ Post Check out repository code
- > ✓ Complete job

Github Actions marketplace

<https://github.com/marketplace?type=actions>

The screenshot shows the Github Actions marketplace search results page. The left sidebar contains a 'Types' section with 'Actions' selected, and a 'Categories' section with various options like 'API management', 'Chat', 'Code quality', etc. The main content area shows a search bar, a sort dropdown set to 'Best Match', and a list of 13,618 results filtered by 'Actions'. The list displays several actions, each with a play button icon, a title, a description, and a star count.

Marketplace / Search results

Types

Apps

Actions

Categories

API management

Chat

Code quality

Code review

Continuous integration

Dependency management

Deployment

IDEs

Learning

Localization

Mobile

Monitoring

Project management

Publishing

Recently added

Search for apps and actions

Sort: Best Match

Actions

An entirely new way to automate your development workflow.

13618 results filtered by Actions

Actions

Action	Description	Stars
First interaction	Greet new contributors when they create their first issue or open their first pull request	140 stars
Close Stale Issues	Close issues and pull requests with no recent activity	587 stars
Download a Build Artifact	Download a build artifact that was previously uploaded in the workflow by the upload-artifact action	539 stars
Setup Java JDK	Set up a specific version of the Java JDK and add the command-line tools to the PATH	717 stars
Setup .NET Core SDK	Used to build and publish .NET source. Set up a specific version of the .NET and authentication to private NuGet repository	501 stars
Upload a Build Artifact	Upload a build artifact that can be used by subsequent workflow steps	1.6k stars
Setup Node.js environment	Setup a Node.js environment by adding problem matchers and optionally	
Setup Go environment	Setup a Go environment and add it to the PATH	

Github Secrets

GitHub Secrets are encrypted and allow you to store sensitive information, such as access tokens, in your repository.

You could use GitHub secrets to store your Azure Credentials, container registry credentials or any such sensitive details which are required to automate your CI/CD workflows using GitHub Actions.

```
name: ci

on:
  push:
    branches: main

jobs:
  login:
    runs-on: ubuntu-latest
    steps:
    -
      name: Login to ECR
      uses: docker/login-action@v2
      with:
        registry: <aws-account-number>.dkr.ecr.<region>.amazonaws.com
        username: ${ secrets.AWS_ACCESS_KEY_ID }
        password: ${ secrets.AWS_SECRET_ACCESS_KEY }
```