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GitHub Actions Secrets



GitHub Actions Secrets

GitHub Actions is a tool that can be used to automate processes that relate to code stored within a repository. You can use it to automate your Continuous Integration/Continuous Deployment (CI/CD) processes.

When carrying out this kind of automation you need to be able to store sensitive data somewhere. [GitHub Actions Secrets](#) can be used to store that sensitive data. GitHub allows you to store secrets at 3 different levels:

- Repository
- Environment
- Organization

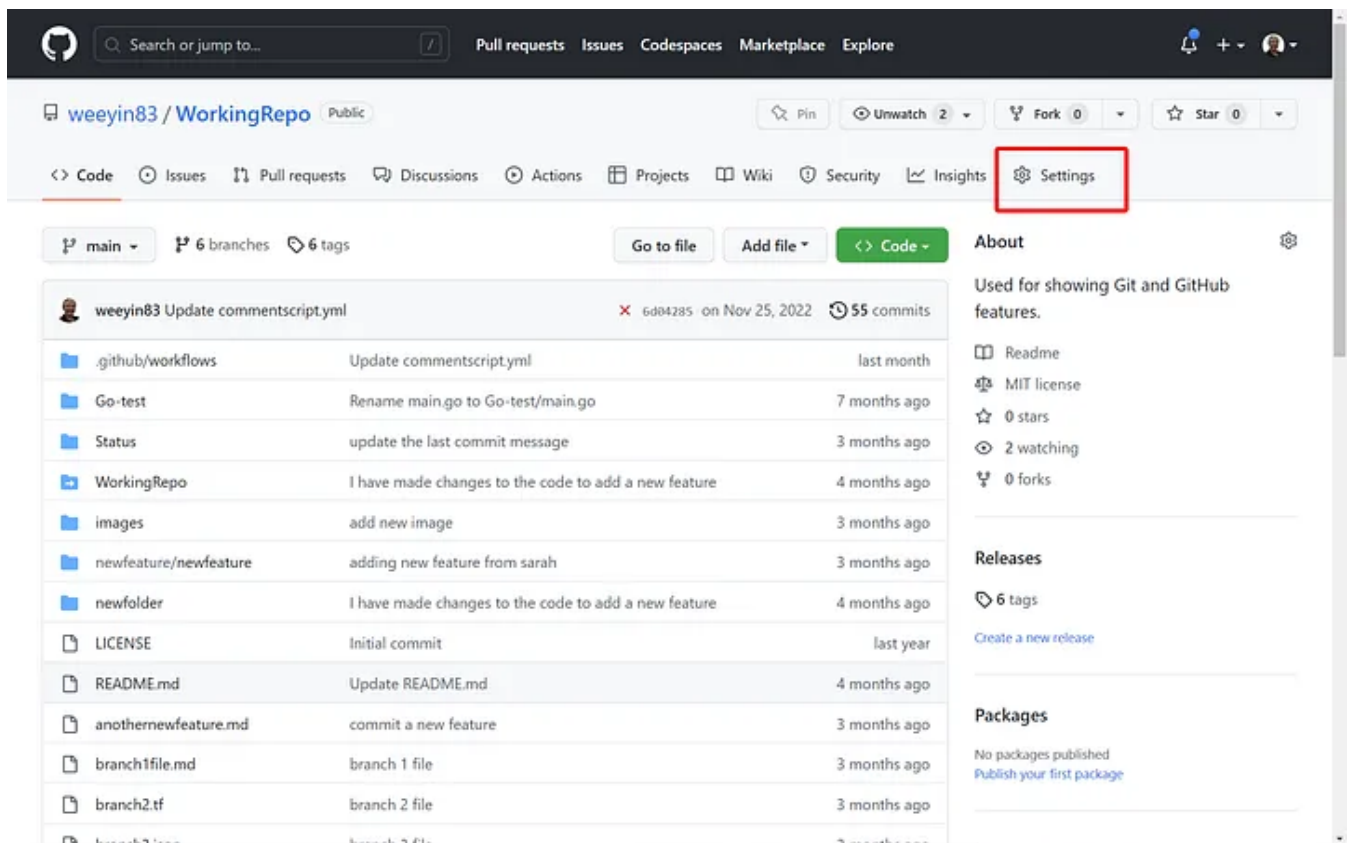
In this article, we will look at those three levels, and how to call secrets in an example GitHub Actions workflow.

Repository secrets

Repository secrets are tied to the repository they are created within. You can store 100 secrets per repository.

Add a repository secret

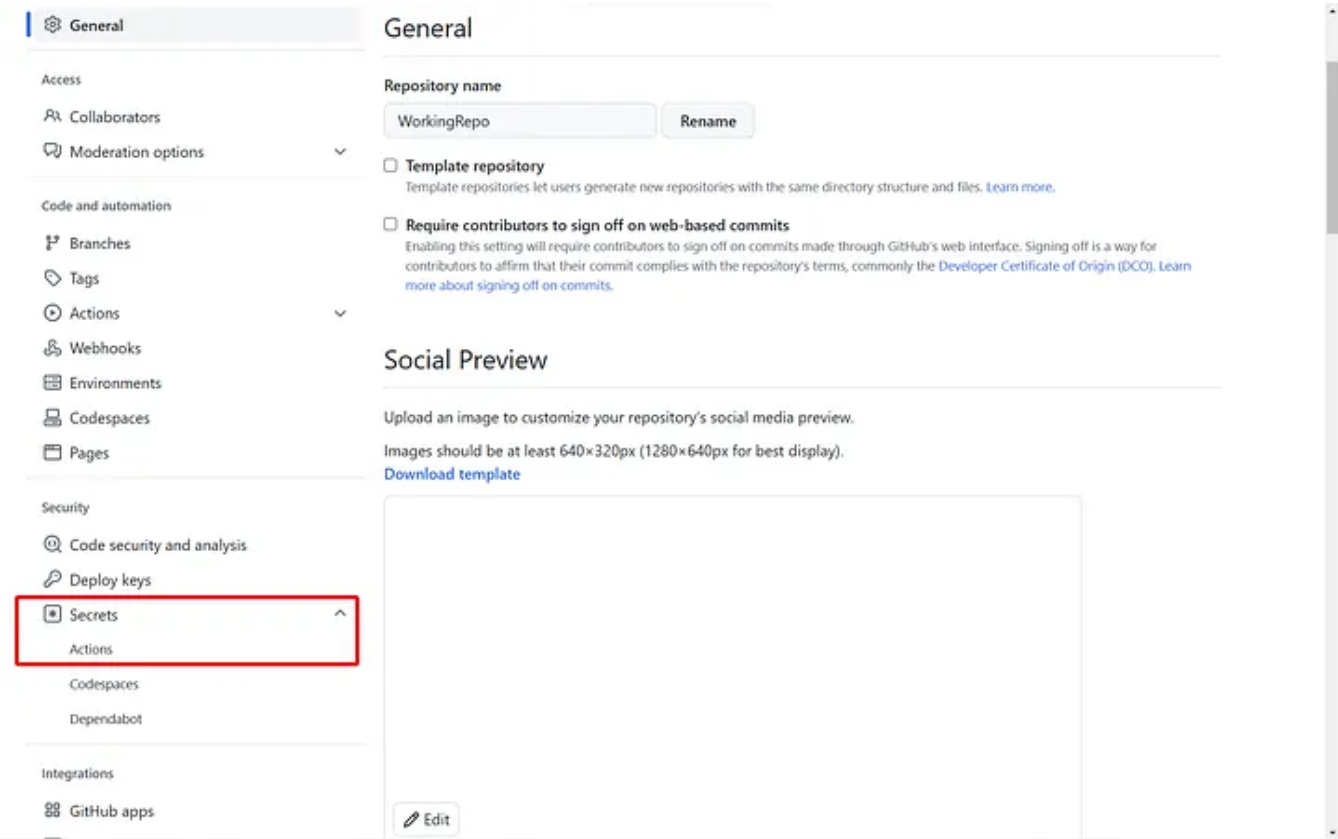
Open your project's repository and click on Settings in the top menu



Github repository

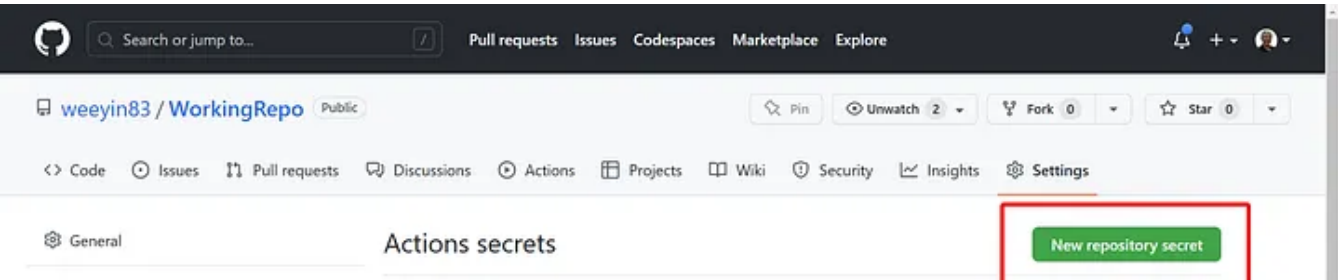
Click Secrets in the menu on the left hand side.

Then select Actions.



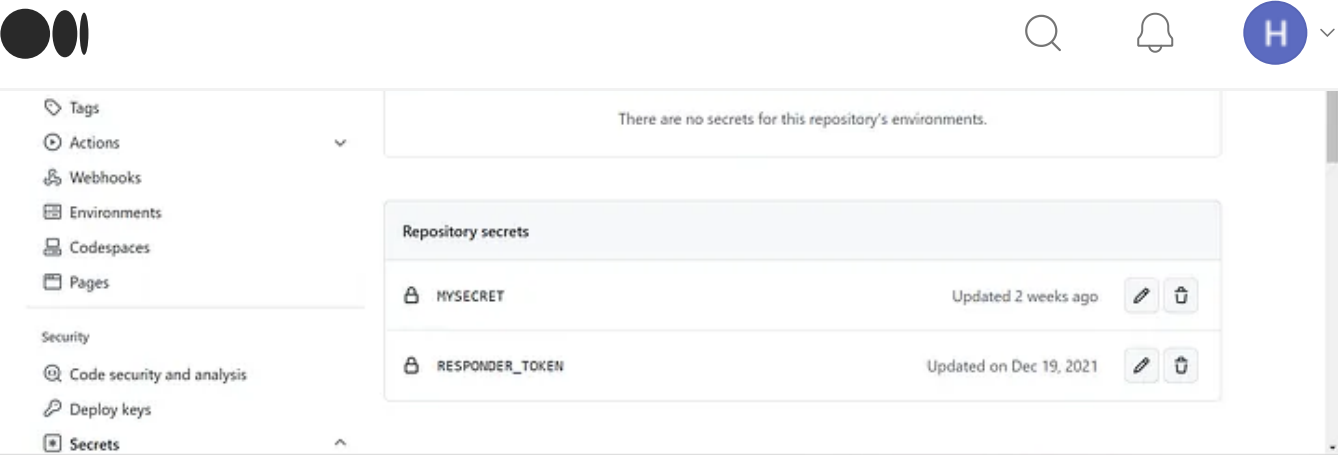
GitHub repository menu

Click on New Repository Secret.



Open in app

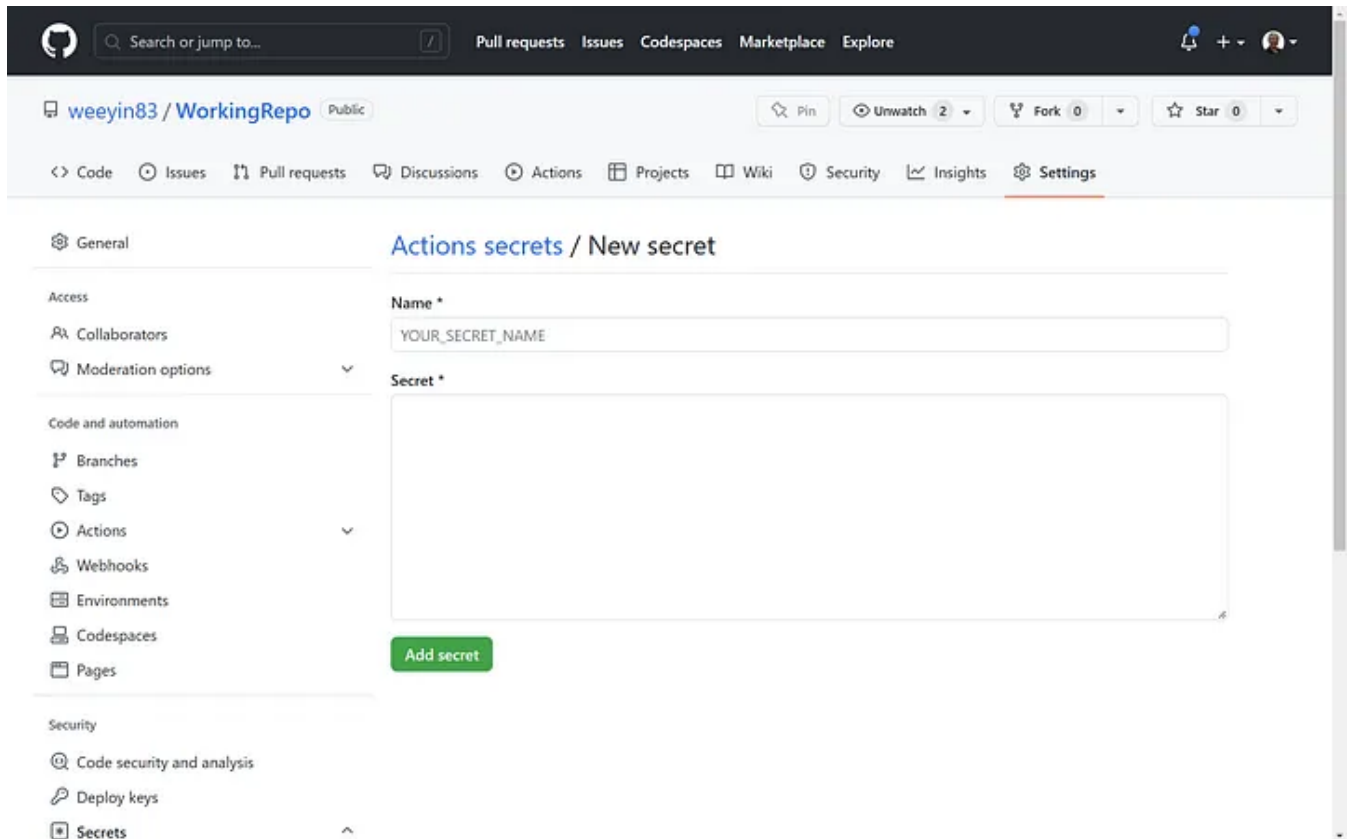
Get unlimited access



GitHub repository secret settings

Complete the following fields:

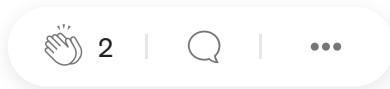
- Name, give the secret a suitable name, don't use any space or special characters. Underscores are usable.
- Value, enter the secrets.



Add a new repository secret in GitHub

Click on Add Secret.

You are able to update this secret whenever you need to change it.



Environment secrets

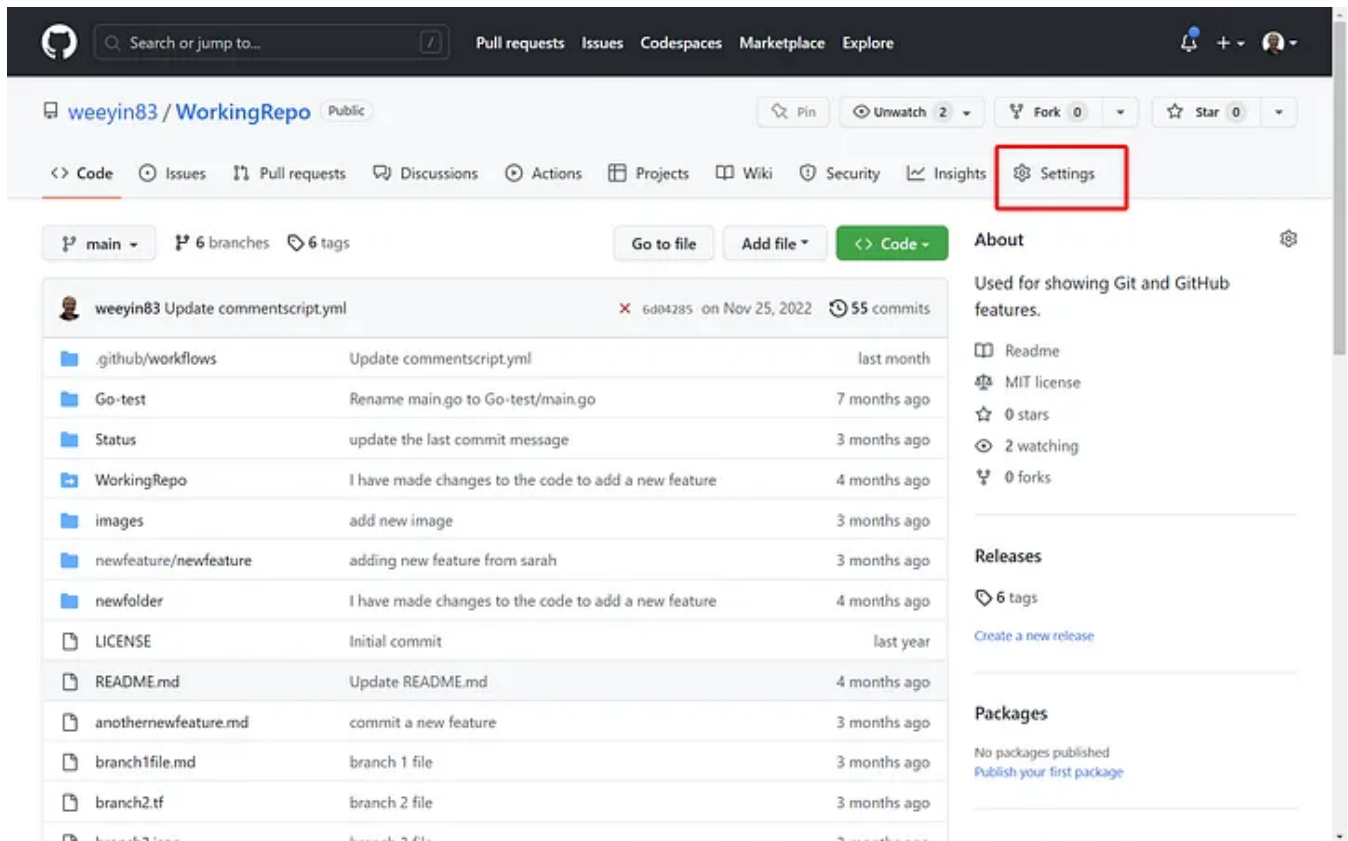
Within GitHub you can specify different environments in which to target for your deployments, such as production, staging, or development.

If you have a public or an enterprise licence you can set environment-specific secrets that will only work for that environment.

There is a limit of secrets per environment, 100.

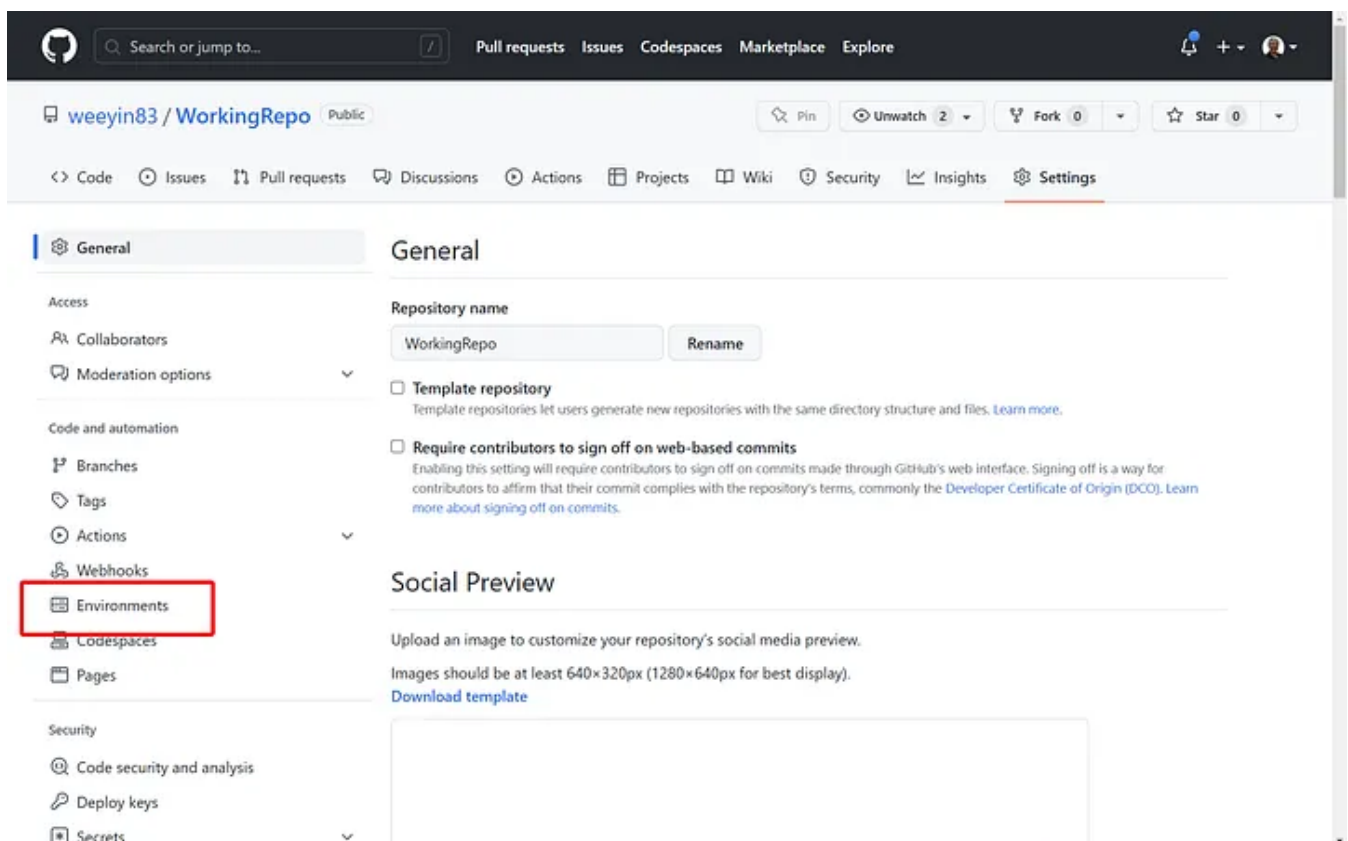
Add an environment secret when creating a new environment

Open your project's repository and click on Settings in the top menu



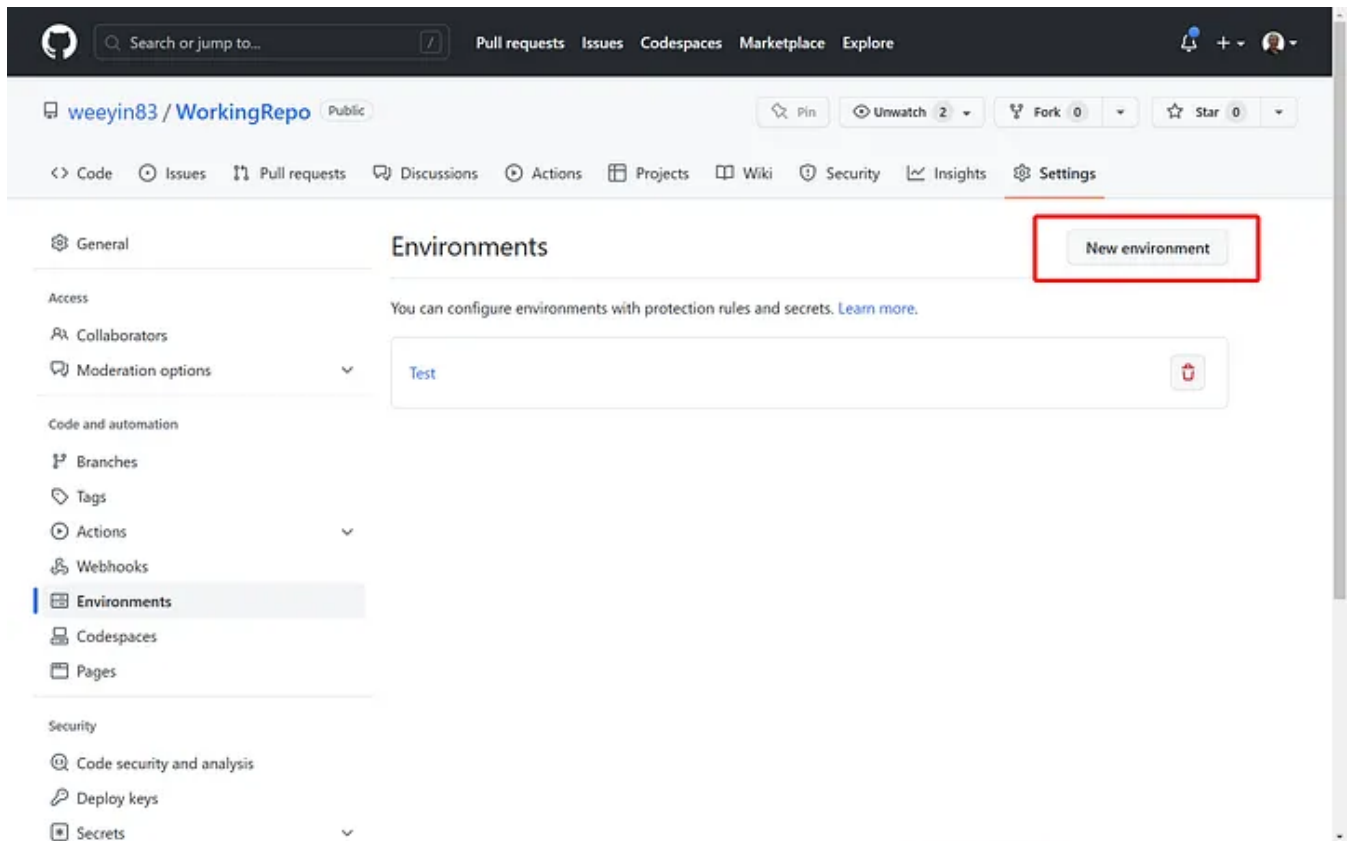
GitHub repository

Click Environments in the left hand side menu.



GitHub repository settings

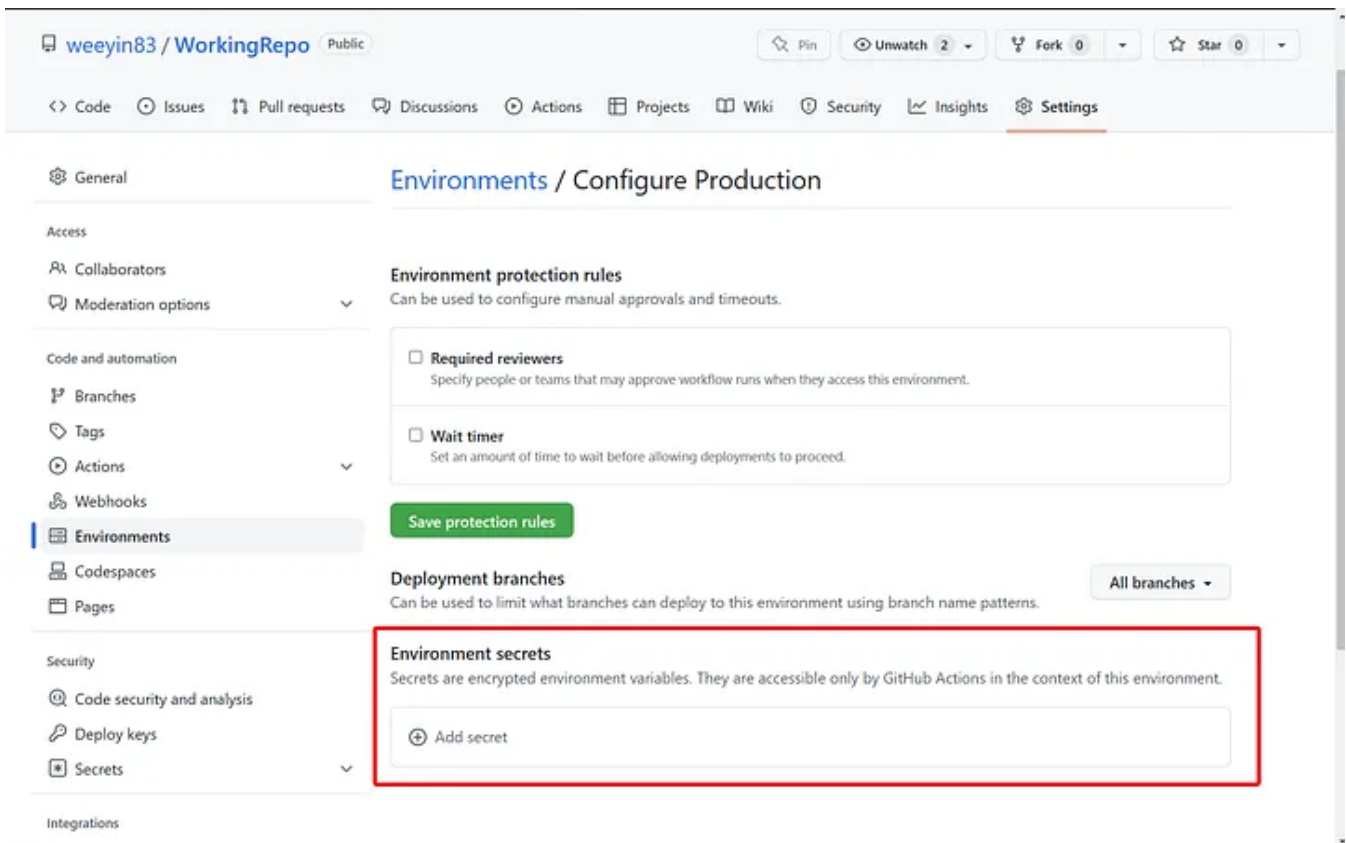
Click on New environment.



GitHub repository creating environment

Enter a name for your environment and click Configure environment.

Configure the environment's protection rules and deployment branches as you require them and then click on Add Secret.



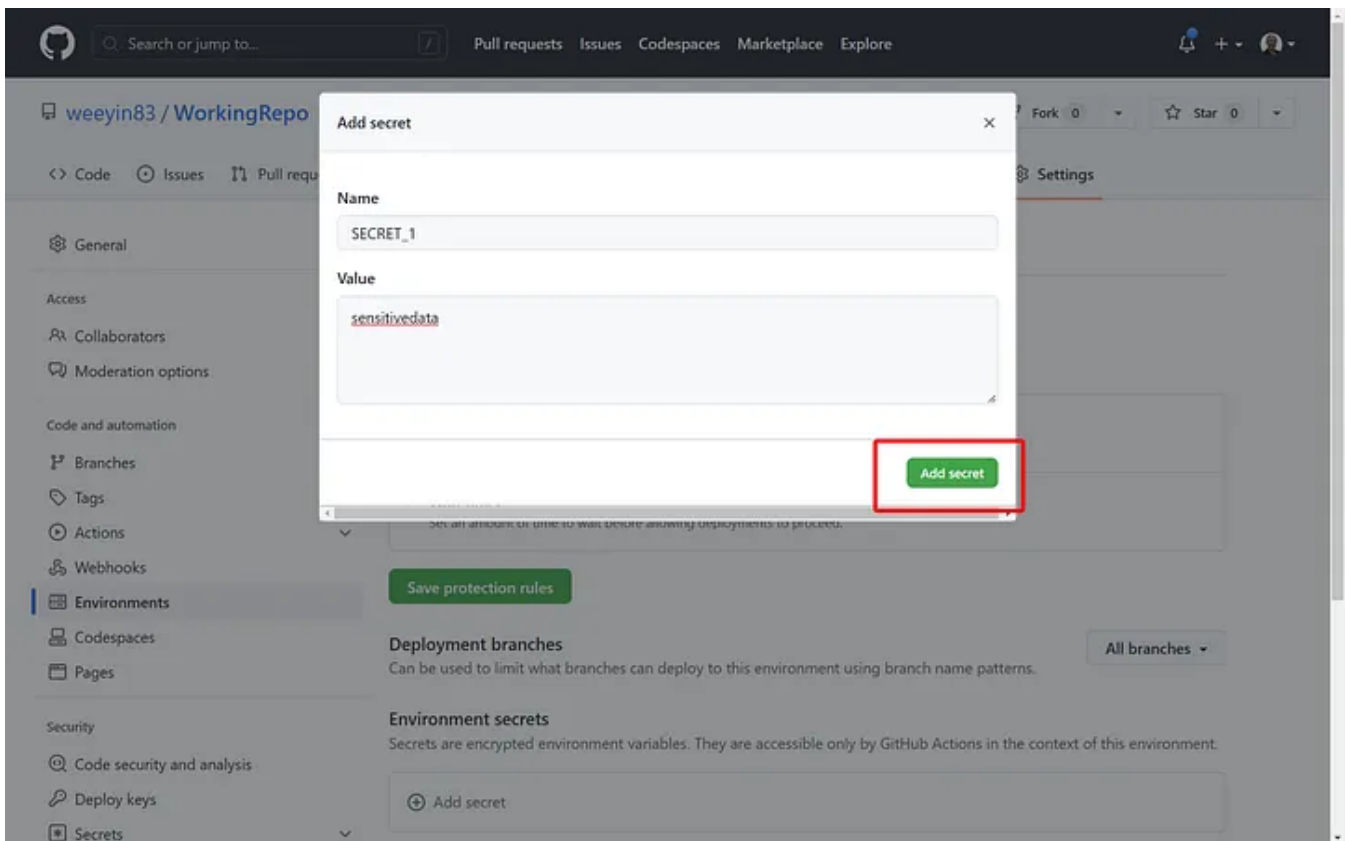
Add a GitHub environment secret

Complete the following fields:

— Name, give the secret a suitable name, don't use any space or special characters. Underscores are usable.

— Value, enter the secrets.

Click on Add Secret.



Add a new GitHub repository secret

If you wish to change the secret or add others for that environment in the future you can do so through Settings > Secrets > Actions.

Organization secrets

An organization within GitHub is a shared account for businesses or open-source projects to collaborate across many projects.

In 2020 GitHub announced organization secrets. A way of sharing secrets across repositories.

There are access policies available which allow you to control which repositories have access to an organization secret.

Add an organization secret

Open your organization's page in GitHub and click Settings in the top menu.

Click Secrets in the left menu.

Click on Actions.

Repository roles

Member privileges

Team discussions

Import/Export

Moderation

Code, planning, and automation

Repository

Codespaces

Actions

Webhooks

Discussions

Packages

Pages

Projects

Security

Authentication security

Code security and analysis

Verified and approved domains

Secrets

Actions

Codespaces

Dependabot

https://github.com/organizations/GlasgowAzureUG/settings/discussions

Email (will be public)

Description

URL

https://www.gaug.co.uk

Twitter username

GlasgowAzureUG

Location

United Kingdom

Billing email (Private)

sean@gaug.co.uk

Add more billing email recipients in the [billing page](#).

Gravatar email (Private)

Sponsors update email (Private)

The developers and organizations that your organization sponsors can send you updates to this email.

Update profile

Glasgow Azure User Group

Upload new picture

Note: To apply for a publisher verification your organization's profile picture should not be irrelevant, abusive or vulgar. It should not be a default image provided by GitHub.

GitHub Developer Program

GitHub organisation menu

Now select New organization secret.

Search or jump to...

Pull requests Issues Codespaces Marketplace Explore

GlasgowAzureUG

Organization account

Switch to another account

Go to your organization profile

General

Access

Billing and plans

Repository roles

Member privileges

Team discussions

Import/Export

Moderation

Code, planning, and automation

Repository

Codespaces

Actions

Webhooks

Discussions

Packages

Pages

Projects

Actions secrets

Secrets are environment variables that are **encrypted**. Anyone with **collaborator** access to the repositories with access to each secret can use it for Actions.

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

Organization secrets cannot be used by private repositories with your plan. Please consider [upgrading your plan](#) if you require this functionality.

INVITE_TOKEN

Available to public repositories

Updated on Dec 14, 2021

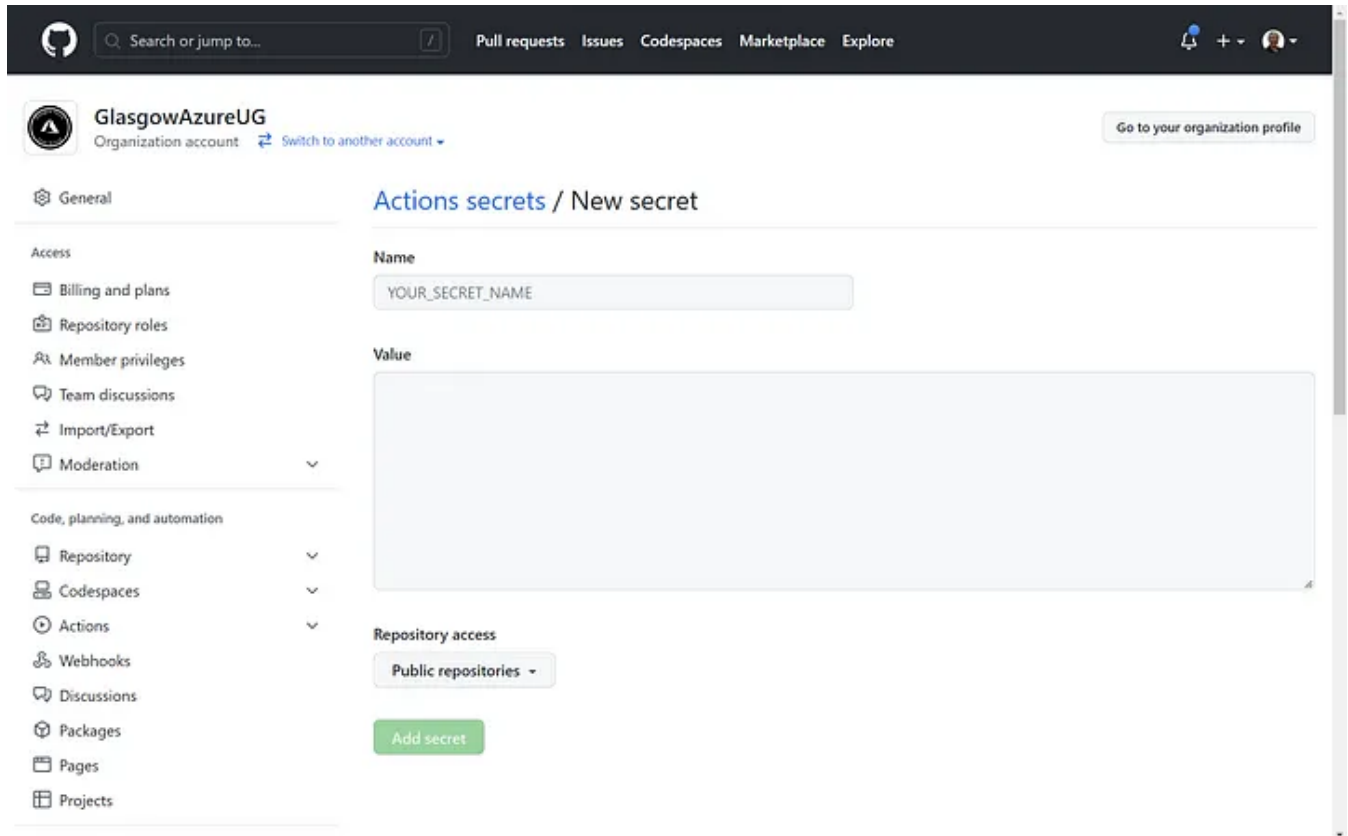
New organization secret

Add GitHub organisation secret

Complete the following fields:

- Name, give the secret a suitable name, don't use any space or special characters. Underscores are usable.
- Value, enter the secrets.
- Repository access, select the relevant policy or repositories you wish to be able to see this secret.

Click on Add Secret.



The screenshot shows the GitHub web interface for the 'GlasgowAzureUG' organization. The page is titled 'Actions secrets / New secret'. On the left, there is a sidebar with navigation links: General, Access, Billing and plans, Repository roles, Member privileges, Team discussions, Import/Export, and Moderation. Below these are links for Code, planning, and automation: Repository, Codespaces, Actions, Webhooks, Discussions, Packages, Pages, and Projects. The main content area has a 'Name' field with the placeholder 'YOUR_SECRET_NAME', a large 'Value' text area, and a 'Repository access' dropdown menu currently set to 'Public repositories'. At the bottom of the form is a green 'Add secret' button.

Add a new organisation secret

Using secrets in GitHub Actions workflows

Within GitHub Actions workflows contexts are how GitHub pulls information from various sources. We can use the secrets context to call your secret data in workflows.

As an example, if you are trying to interact with Azure during a workflow. Perhaps you are deploying an Azure Bicep template. You need to provide GitHub with credentials to your Azure environment.

You might add a step such as:

Here we are using the GitHub Actions action “[Azure Login](#)”. Our Azure credentials are stored within a repository secret and we are calling them into the workflow without exposing the information to the public.

If you’d like to learn more about GitHub Actions please do check out [my other blog posts](#).

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