

# Flutter CI/CD basics with GitHub Actions

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# What is GitHub Actions? 🤖

- CI/CD service
- Makes it easy to automate all your software workflows
- Access to Linux, macOS, Windows, ARM and containers
- Over 7.4k actions on the marketplace
- YAML only workflow configuration
- Free for public repositories
- Very generous free plan
- Fairly new service

Any other options? 🤔

### Bitrise

- Mobile-first features that help you build, test and deploy faster and more efficiently
- UI & YAML support
- Very good free plan

### Codemagic

- Started as a Flutter-first CI/CD service and moving towards Mobile-first.
- UI & YAML support
- Good free plan

# Why use GitHub Actions? ✓

- Free for public repositories & very generous free plan
- Free extra build minutes with Pro, Team and Enterprise accounts
- Your code and CI/CD configuration lives all in one repo
- Integrates nicely with GitHub pull request rules, issues and projects
- Used by big names
- Lots of open source 3rd party actions

# Prerequisites

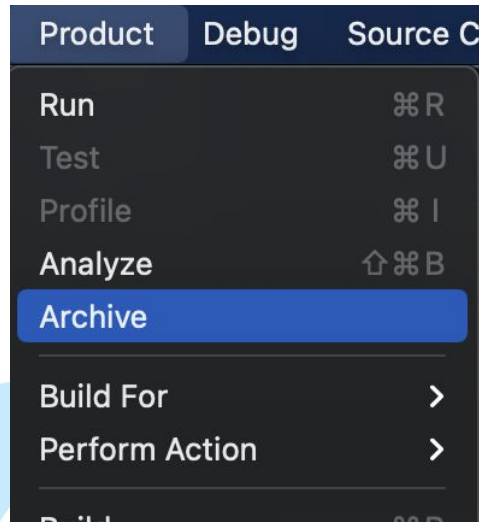
- Signing keys/certificates
  - <https://flutter.dev/docs/deployment/android>
  - <https://flutter.dev/docs/deployment/ios>
- ExportOptions.plist file
  - How to on repo
- Google Service account
  - <https://docs.fastlane.tools/actions/supply/#setup>
- Apple credentials and app-specific password

# Prerequisites 💪💪 - ExportOptions.plist

1. Open the iOS project in Xcode
2. Set the target to **'Any iOS Device...'**

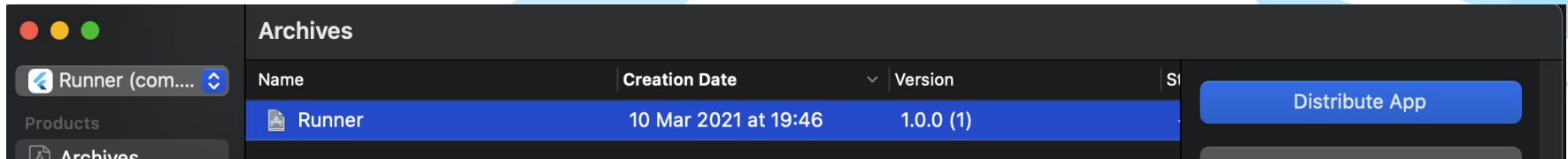
 Runner >  Any iOS Device (arm64, armv7)

3. Archive the app



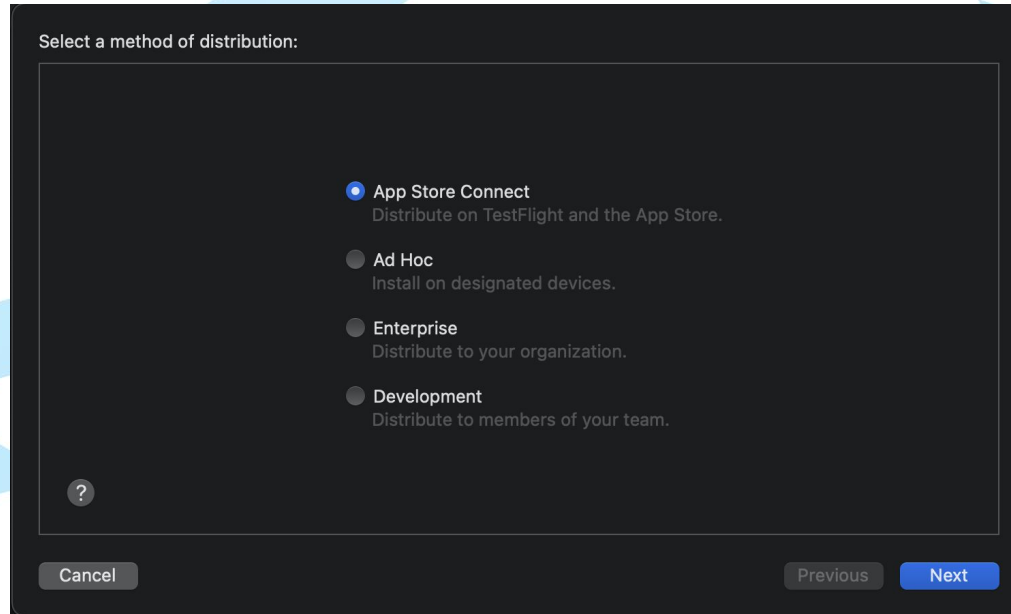
# Prerequisites 🦹🦹 - ExportOptions.plist

4. On the Archives window click on **'Distribute App'**



# Prerequisites 🦵🦵 - ExportOptions.plist

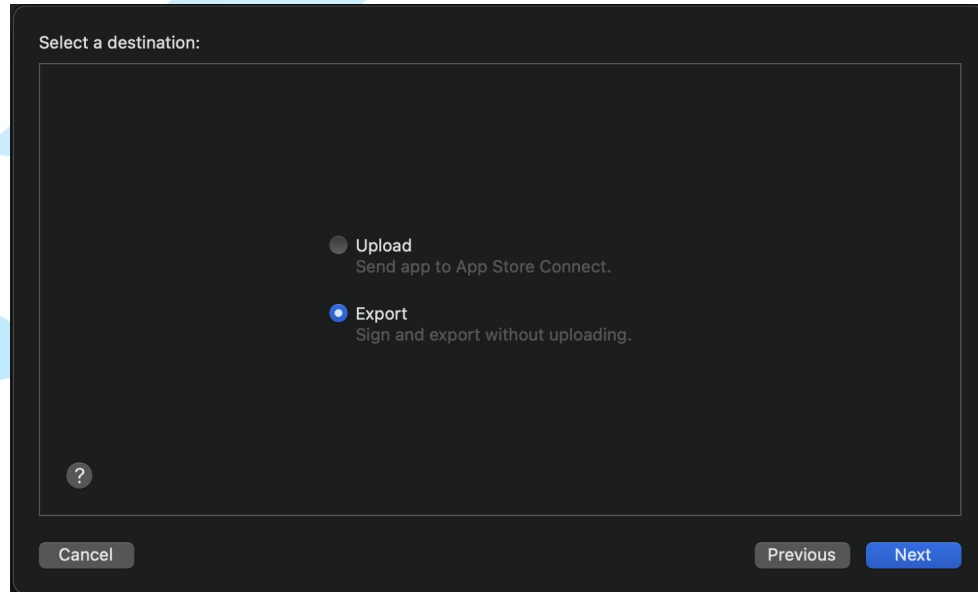
5. Select your desired destination and click **'Next'**





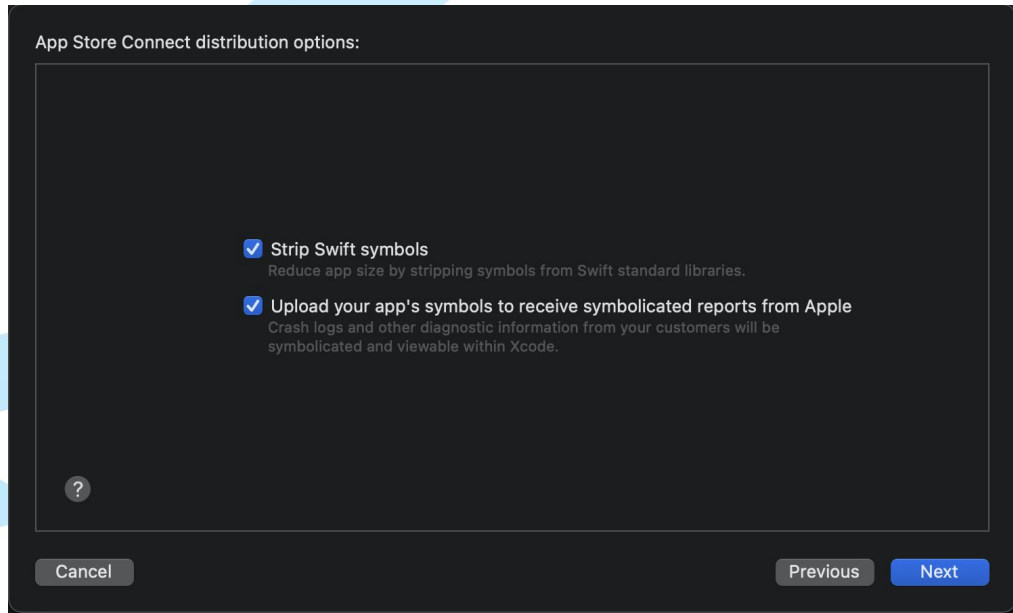
# Prerequisites 🦹🦹 - ExportOptions.plist

6. If your destination is **'App Store Connect'** choose **'Export'** and click **'Next'**



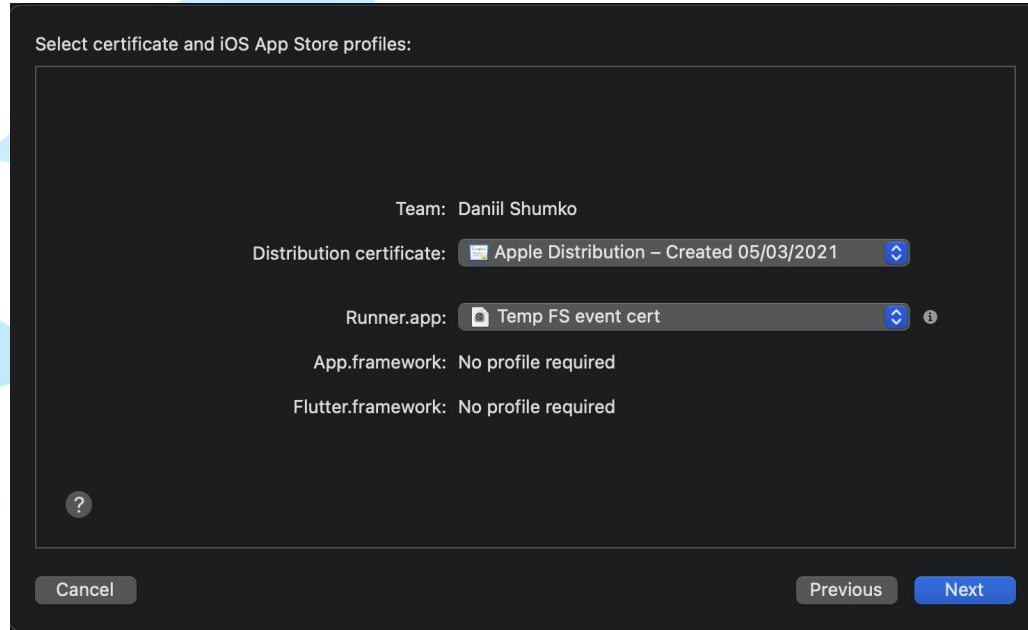
# Prerequisites 🦵🦵 - ExportOptions.plist

## 7. 'Next'



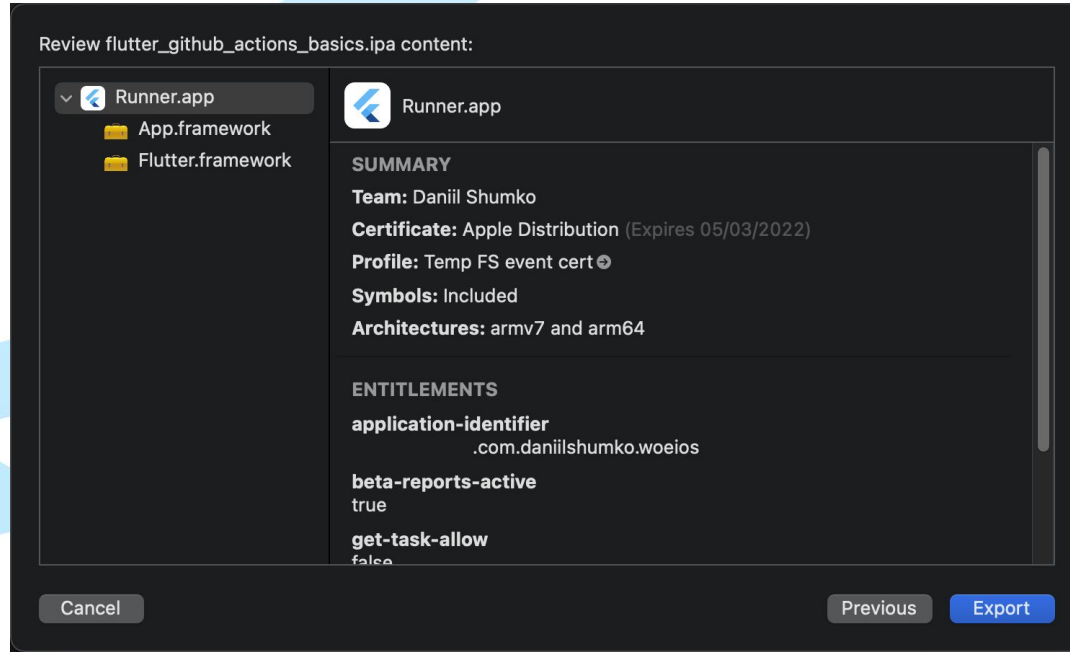
# Prerequisites 💪💪 - ExportOptions.plist

8. Choose correct distribution certificate and provisioning profile, click **'Next'**



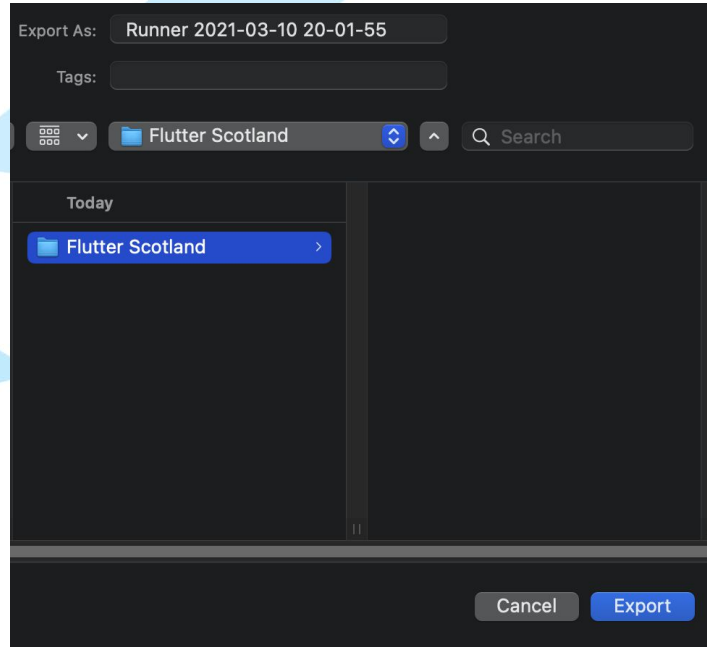
# Prerequisites 💪💪 - ExportOptions.plist

## 9. Click 'Export'



# Prerequisites 💪💪 - ExportOptions.plist





10. Choose your preferred location and click **'Export'**



## Prerequisites 🦵🦵 - ExportOptions.plist

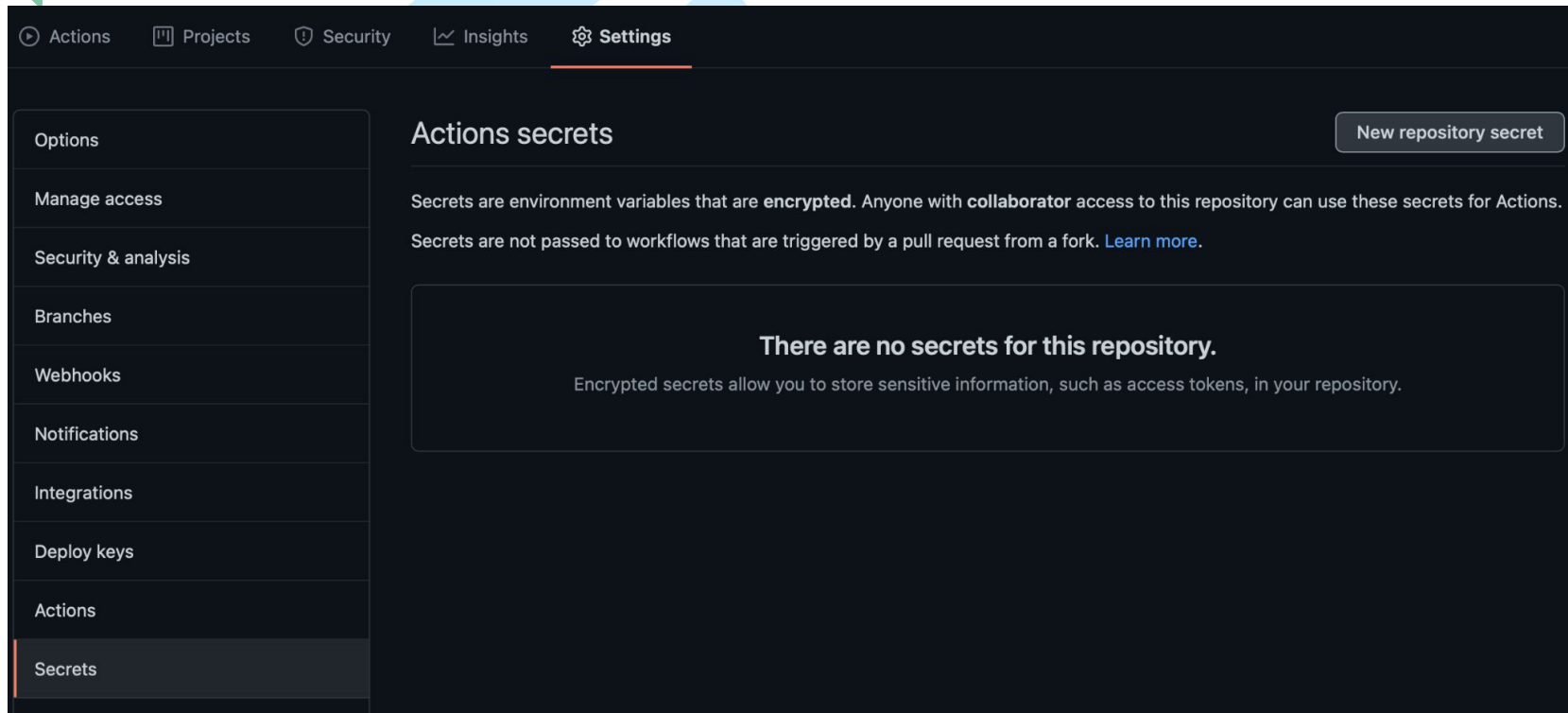
### Victory 🎉

Add the **ExportOptions.plist** file to the **ios/** folder of your Flutter project

	DistributionSummary.plist	Today at 20:04
	ExportOptions.plist	Today at 20:04
	flutter_github_actions_basics.ipa	Today at 20:00
	Packaging.log	Today at 20:00

# Prerequisites

Add your secrets to your GitHub repo



The screenshot shows the GitHub web interface for a repository's settings. The top navigation bar includes links for Actions, Projects, Security, Insights, and Settings (which is highlighted with an orange underline). On the left sidebar, a list of settings categories is shown, with 'Secrets' selected and highlighted in dark gray. The main content area is titled 'Actions secrets' and features a 'New repository secret' button in the top right corner. Below the title, there is explanatory text: 'Secrets are environment variables that are **encrypted**. Anyone with **collaborator** access to this repository can use these secrets for Actions. Secrets are not passed to workflows that are triggered by a pull request from a fork. [Learn more](#).' A large, light gray message box in the center states: 'There are no secrets for this repository. Encrypted secrets allow you to store sensitive information, such as access tokens, in your repository.'

Options

Manage access

Security & analysis

Branches

Webhooks

Notifications

Integrations

Deploy keys

Actions

Secrets

## Actions secrets

New repository secret

Secrets are environment variables that are **encrypted**. Anyone with **collaborator** access to this repository can use these secrets for Actions. Secrets are not passed to workflows that are triggered by a pull request from a fork. [Learn more](#).

**There are no secrets for this repository.**

Encrypted secrets allow you to store sensitive information, such as access tokens, in your repository.



# Prerequisites

Add your secrets to your GitHub repo

[Actions secrets](#) / New secret

**Name**

**Value**  

 FlutterScotland 

[Add secret](#)



## Prerequisites 🦹🦹🦹🦹

Add your **.p12**, **.mobileprovision**, **key.properties** & **key.jks** files to the GitHub Secrets.

Using Base64 encoded string:

**openssl base64 -in <input.file> > <output.txt> -A**

```
openssl base64 -in Certificates.p12 > Certificates.txt -A
```



# Workflow steps

1. Run tests and code analysis
2. Set up code signing on VM
3. Set up Flutter on VM
4. Build the app
5. Upload artifacts
6. Deploy artifacts

# Q&A - ask me anything :)

Source code at:

[https://github.com/daniil-shumko/flutter\\_github\\_actions\\_basics](https://github.com/daniil-shumko/flutter_github_actions_basics)

