



TrioDocs

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Secrets Introduction

Introduction to Secrets

In order to build using the Browser Build method, you will need to collect and save six secrets from your free [GitHub](#) account and your paid Apple Developer account.

Summary of Steps

Time Estimate (click to open/close)

- If you have never built the *Trio* app (or any other OS-AID app) allow up to one week elapsed time
 - Request and get an *Apple Developer* Account: 1-2 days
 - Create and configure your [GitHub](#) account and `repositories`: 1-2 hours
 - Add `Secrets` (requires *Apple Developer* Account): 1 hour
 - Perform the [GitHub](#) `Action` steps: 30 minutes to 2 hours
- If you have previously built the *Trio* app with [Xcode](#) you have fewer steps and are probably familiar with some of the concepts
 - Expect 1 to 4 hours

Summary for Browser Build with Links (click to open/close)

You may be overwhelmed at first with all the new terms and the many steps. Take a deep breath and work through the steps one at a time.

- Use the template to [Save Your Information](#) ↗

If you prefer watching your instructions, a narrated video is available:

- [How to Build the Loop App With a Web Browser](#)
 - The steps for building [Loop](#) and [Trio](#) are similar, so this video may be helpful

Once you have your [GitHub](#) and [Apple Developer](#) accounts, the steps below are a high-level summary with links to the detailed [TrioDocs](#) section.

You can think of the first part as a scavenger hunt where you find or generate and save six [Secrets](#). All six secrets should be saved in your [Secrets reference file](#). You will need to be able to use them again.

- [GitHub](#):
 - [Create a GitHub account](#) ↗ if you don't have one
 - [Create and Save the GH_PAT Secret](#) ↗
 - (Optional) [Create a Free GitHub Organization](#) ↗ (strongly recommended)
- [Make up a Password](#) ↗
- [Apple](#):
 - [Collect the four Apple Secrets](#) ↗

Now it's time to use those [Secrets](#) to build the [Trio](#) app

- [GitHub](#):
 - [Fork the repository \(make your copy of Trio\)](#) ↗
 - Using an organization? Add [Secrets](#) and [Variables](#) to your Organization and all your apps can use them
 - Not using an organization? You have to add [Secrets](#) and [Variables](#) to each [repository](#) individually
 - [Add Secrets to your organization or a single fork](#) ↗
 - [Action: 1. Validate Secrets](#) ↗
 - [Action: 2. Add Identifiers](#) ↗
- [Apple](#):
 - [Configure Identifiers for Trio](#) ↗
 - [Create your version of Trio in App Store \(personal use only, not for distribution\)](#) ↗
 - [Set up Internal TestFlight Group for the App](#) ↗
- [GitHub](#):
 - [Action: 4. Build Trio](#) ↗
 - Yes we can count, but Action 3 is included in Action 4
- [Phone](#): [Install the Trio app using the TestFlight app](#) ↗

? FAQs (click to open/close)

- **Do I need a Mac computer?** No. This can be done on any browser, although it will be easier using a computer or tablet than just using a phone.
- **Isn't it hard to build every 90 days?** The initial setup and installation take a lot of your focused time. But once you build, future updates and builds are really fast. You just need to keep your Apple Developer account up to date. Review any email that says a [GitHub action failed](#) - read the error and take action. For more information, see the next bullet.
- **Can you explain automatic building?** There's a whole page in LoopDocs on [Automatic Update & Build](#) with most of that information valid for Trio users
 - [Successful Weekly Action](#)
 - [Successful Monthly Action](#)
 - [Automatic Certificate Renewal - annual event](#)
 - [Open-Source App Schedule for rebuilding](#)
- **Can I use this for my child?** You, as the adult, can install using [TestFlight](#) on your child's phone. The explicit steps are provided at [Install on Phone: TestFlight for a Child ↗](#).
- **Can I still use my customizations?** Yes. [Customize using Browser ↗](#)
- **Is there a build video?** Yes. [How to Build the Loop App With a Web Browser](#)
 - You need to adjust when watching that because you are building *Trio* instead of [Loop](#) and the video is somewhat out of date

Tips and Tricks

The steps to configure for building with a browser require a lot of focused attention. Take it in steps and take breaks as needed. Some people prefer a video. Some people prefer more detailed steps on a webpage and others only high-level steps.

! How to Ask for Help

First time setup should take several hours, but if you are having trouble don't get frustrated:

- [Click here to find help ↗](#).

Who should use a free GitHub Organization option (click to close/open)

There are several places where you see a recommendation to use a free [GitHub Organization](#) instead of building directly from your personal free [GitHub account](#).

When you use an organization, you don't have to add 6 Secrets to each [repository](#) for every app you build. It can save a lot of time in the long run.

- Even if you just build Trio and nothing else, using an organization is pretty easy and your build works just the same as using only a personal account - but there is no particular advantage (until you decide maybe you do want to build another app)
- Who should definitely build with an organization:
 - Anyone who is a caregiver will want LoopFollow
 - Anyone who wants to use LoopFollow for the amazing alarm capabilities
 - Anyone who might want to try a different app such as xDrip4iOS

The Short Version

Complete instructions are found at this link for those comfortable with using [GitHub](#) and navigating the *Apple Developer* and *Apple App Connect* pages.

- [Using GitHub Actions + FastLane to deploy to TestFlight](#)

The Video Version

If you prefer watching your instructions, there is a narrated video of each step needed to build using a browser. This video was created for [Loop version 3.2.x](#). So translate in your head - Trio instead of [Loop](#) and some steps are out-of-date.

- [How to Build the \[Loop App With a Web Browser\]\(#\)](#)

Do not decide to uncheck the box for Near Field Communications in the Identifier for [Trio](#) - that is required to build.

Click in the comments for a full index of topics. If you have issues with a particular section, use the index to advance to the relevant part of the video. Subtitles are in English. You can choose a different language but the automatic translation feature may provide translations that are not completely accurate.

The Detailed Version

If you prefer seeing step-by-step instructions, those are provided too.

Some sections have a Section Summary for those who just want high-level steps without a lot of graphics. It also provides a high-level view of what you are going to do before you do it.

- To view the summary, click on the summary header
- If the summary is all you need, use the `skip forward` symbol (▶▶) to skip to the next instruction

- Or follow the detailed instructions below the summary

Save Your Information

Everyone needs to read this section!

You need to keep a digital copy of your 6 `Secrets` .

- You need to copy and paste those `Secrets` to build the app with a browser
- Make sure your editor does not change any characters in your `Secrets` ; use a text-only editor like NotePad (PC) or TextEdit (Mac)
- Many people add other information to the `Secrets` file for easy reference

A Note about Capitalization and Spaces

In places, you use a name like " `FastLane API Key` " or " `FastLane Access Token` ". Please copy from the docs to use those exact names.

The `Secrets` that you add use names that are capitalized and use underscore `_` instead of spaces or hyphens. Be precise and careful.

Use a Text-Only Editor

Be sure to use a Text-Only editor like NotePad (PC) or TextEdit (Mac) to archive your information.

If you use a "smart" editor, it may change small letters to capital letters at the beginning of a line when you paste items into your archive file.

If even one character is capitalized when it should not be, you will get errors.

Make a `Secrets` Reference File

Please save yourself a lot of agony. Make a `Secrets` Reference folder and then create a `Secrets` Reference file in it.

You don't need to know anything about the `Secrets` to do this. Come up with your own names, but make sure you know where you put this file.

1. Decide where you want your `Secrets` saved and create a special folder
2. Open a text-only editor (do not use a Smart Editor, those might change capitalization or formatting and ruin your `Secrets`)
 - Create a blank `Secrets` Reference file using the text-only editor
 - Tap on the copy icon below to copy the template and paste it into your blank file
 - Save the file
3. As you move through the steps of collecting the six secrets, fill in the file
 - The `##` characters are used to indicate sections or title (text only file)

- There is a reference pattern for each SECRET: replace that with your SECRET or you can add your secret below the pattern to give yourself confidence you got the correct item
4. In addition to the `Secrets`, this template has places for other pieces of information you may find handy to save in the same file
 5. At the very beginning is a place to indicate the last day you updated the file

Template to use for Secrets

MySecretsReferenceFile.txt

This file updated on: DD MMM YYYY

Information needed to use Browser Build.
The same secrets are used for every app you build.

First some handy username and password information:

Apple ID username for your Developer account is the associated email:
<your information here>
suggest you use your desired password tool to save the password for this account

GitHub personal account username
<your information here>
suggest you use your desired password tool to save the password for this account

GitHub organization name
<your GitHub organization name>
Using an organization is optional.
But if you do use one, add the name here for reference.
You always log in using your GitHub personal account to access your organization.

There are Six Secrets and One Variable:
- the list below shows the expected format of each.
You can replace each prototype with your secret as you gather them,
- or put your secret below a prototype.
The letter A indicates an alphanumeric character;
- some may be small letter, some capital letters and some numerals.
The FASTLANE_KEY may have additional characters included.
Be sure to copy the entire key including
-----BEGIN PRIVATE KEY-----
through
-----END PRIVATE KEY-----

SECRETS BELOW:

TEAMID
<looks like this>
AAAAAAAAAA

FASTLANE_ISSUER_ID
<looks like this>
AAAAAAAA-AAAA-AAAA-AAAA-AAAAAAAAAAAA

FASTLANE_KEY_ID
<looks like this>
AAAAAAAAAA

FASTLANE_KEY
<looks like this>
-----BEGIN PRIVATE KEY-----
AA
AA
AA
AAAAAAA
-----END PRIVATE KEY-----

GH_PAT
<looks like this>
ghp_AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

MATCH_PASSWORD
<looks like this>

```
AnythingYouWant-sameForEveryRepository
```

This Variable (not a secret) is required for the annual certificate renewal:

```
ENABLE_NUKE_CERTS = true
```

```
## Repository Names for my Fork:
```

```
If you use an organization (recommended)  
https://github.com/my-name-org/Trio
```

```
or (if you don't use an organization):  
https://github.com/my-name/Trio
```

Add additional apps here if you decide to build any

New Terms with GitHub Browser Build

The GitHub Browser Build may use new and unfamiliar **terms**.

These instructions can be used without knowing what any of these terms mean. But if you are curious:

Some of these **terms** have ToolTips, so hover your mouse over those - or review them in the [Glossary ↗](#).

- Some terms in the Glossary are not in alphabetical order to improve logical grouping. All the individual **Secrets** are listed after **Secrets** in the Glossary.
- **Actions**: available in your GitHub repositories to build your app
 - You must be logged in to GitHub to run the actions manually
 - The build action is automatically run for you once your repository is configured
- **Fork**: you make a copy of the code needed to build an app and store it in your GitHub account (using a free GitHub organization is recommended for storing your **forks**)
- **Secrets**: are required to enable GitHub to build an app from a repository using GitHub Actions
 - Six **Secrets** must be entered to enable your app (or apps) to build
 - These **Secrets** work for any branch in your fork (**main** or **dev**, for example) and if you use the recommended free GitHub organization to build, they work for any app you fork to your organization
 - If you build more than one app, they use the same **Secrets** and the use of a GitHub organization is even more strongly recommended
- **Certificates**: These are required to enable GitHub to build an app from a repository using GitHub Actions
 - They are manually created with the Create Certificates action
 - They expire at the end of one year
 - Certificates are automatically renewed as long as you [add the required Variable ↗](#)
- **API Key**: Application Programming Interface Key
 - You create an API key from the *Apple Developer* website
 - Doing this provides 3 of your **Secrets**
 - These secrets enable your GitHub account to interface with *Apple* to create your app

- `Identifiers` : are required to build the *Trio* app with `GitHub Browser Build` (these are automatically generated for you) when you run `Add Identifiers`
 - `App Store Connect` : a website available for *Apple Developers* to review apps build with your *Apple Developer* account
 - Once you purchase an *Apple Developer* annual account, you are an *Apple Developer* and have access to this site
 - Most users will not have an App until using the `GitHub Browser Build`
 - The instructions walk you through creating and naming your app: [Create Trio App in App Store Connect ↗](#)
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Next Step

Ready to begin? Proceed to:

→ [Create GitHub Account](#)

Navigation: ← [Back to Overview](#) | Next: [Create GitHub Account](#) →