

TrioDocs Version: 0.4.0 Date: July 27, 2025

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Build Beta with Browser

Use Browser Build for Public Beta Version

This page is provided to help people currently running the public beta version of Trio.

Public Beta

The public beta is built from the dev branch of Trio.

This code is undergoing testing and receives rapid updates. Be sure to follow along in Trio Discord and to update frequently (at least weekly).

• Trio Discord Invitation

To ensure weekly updates, make the dev branch the default branch in your fork on GitHub. Remember, this will just automatically trigger a build of the latest dev to TestFlight every Wednesday at 08:43 UTC. You are still responsible for manually installing the update via the TestFlight app on your phone.

Once this beta is released to main as 1.0, then you should return to building from the main branch.

Update to Trio dev branch from Trio 0.2.x main

A Note on Compatibility

Upgrading to Trio 0.5.x from 0.2.x is smooth and straightforward. The new Onboarding Wizard will guide you step by step. Your pump, CGM, therapy settings, and the last 24 hours of treatment and glucose history will be brought over automatically.

Be Aware

- Once you have upgraded to 0.5.x, going back to 0.2.x is not supported
 - If you choose to downgrade, you will need to set everything up again from scratch
 - If you accidentally build 0.2.x over 0.5.x, and then return to 0.5.x:
 - You will see "Oops? Some data didn't make it over" every time you restart the app
 - But all your "stuff" is there
 - See Remove Annoying Message
- Some guardrails have changed compared to 0.2.x
- Your saved Temp Targets and Overrides will not be maintained
 - The storage method in 0.5.x is different from 0.2.x, so you will need to recreate them
 - Before you update from 0.2.x, capture a screenshot of each named Temp Target or Override that you want to add to 0.5.x

The Browser Build documentation is under construction for Trio version 0.5.x and newer.

This temporary set of instructions is intended for the subset of users who **previously built Trio 0.2.x using Browser Build**. Because this is aimed at experienced builders, some of the steps are abbreviated and will be expanded as the documents are updated.

If you are new to Trio – please wait until the documents have been expanded and preferably until the release of Trio 1.0.

Mac-Xcode to Browser Build

Experienced Mac-Xcode Builder

If you are an experienced Trio 0.2.x user who wants to join the open beta testing, but also wants to switch from Mac-Xcode build to Browser Build — welcome. For the time being, please do this:

- Use the 0.2.x: Build Trio with *GitHub* ↗ instructions to build Trio 0.2.x and wait for it to show up in your TestFlight. Do not install it you just want to make sure you can succeed with a Browser Build.
- Then return to this page and follow the directions; you will need to run Add Identifiers and Create Certificates again when updating to 0.5.x.

Transition from Other Apps to Trio Browser Build

Coming from Other Apps

If you are an experienced Browser Build person who has not built Trio before, you will need to add the Trio App Group to 3 Identifiers and create a Trio App in App Store Connect.

The steps are summarized in New Trio Builders.

If you are not experienced with Browser Build, we suggest you follow the 0.2.x instructions: 0.2.x: Build Trio with *GitHub* first. Then return to this page to update to 0.5.x; you will need to run Add Identifiers and Create Certificates again when updating to 0.5.x.

Summary of Tasks to Build Trio 0.5.x

These steps assume:

- You previously built Trio 0.2.x using GitHub Actions (Browser Build)
- You confirmed your Apple Developer license agreements are up to date

These are the new steps for you to follow:

- 1. Configure Browser Build Certificate Automation
- 2. Configure Fork with dev branch
 - Configure the dev branch as default (while public beta is ongoing)
- 3. Update Identifiers
- 4. Update Certificates

Browser Build Certificate Automation

Browser Build Certificate Automation was added to Trio 0.2.3 - if you have not added the ENABLE_NUKE_CERTS variable, you should add it now. Otherwise, skip ahead to Configure Fork with dev branch.

In order to utilize the new automatic certificate renewal feature, you'll need to add a new Variable. Variables are located in *GitHub*, in the same location as your Secrets. The exact location will depend upon whether you build using a *GitHub organization* or a personal account.

If you use a personal account, click on your Trio repository. If you have other repositories, just follow these same steps for each of them.

If you build using a *GitHub* organization and have already added this variable to your organization, there's nothing for you to do. All repositories in your organization are covered. Otherwise, click on your organization name.

The numbered steps correspond to numbers in the graphics below:

- 1. Choose settings
- 2. Scroll down to select Secret and variables
- 3. Choose Actions
- 4. Choose Variable
- 5. Tap on "Create new organization variable" or "New repository variable"
- 6. For the Name, type ENABLE_NUKE_CERTS
- 7. For the Value, type true
- 8. Tap on Add Variable.

	鐐 General		Actions secrets and variables
	Access A: Collaborators D: Moderation options Code and automation IP Branches Code and automation IP Branches Code and automation IP Branches Code and automation IP Rules IP Rules IP Actions IP Environments IP Codespaces	~	Secrets and variables allow you to manage reusable configuration data. Secrets are encrypted and are used for sensitive data. Learn more about encrypted secrets. Variables are shown as plain text and are used for non-sensitive data. Learn more about variables. Anyone with collaborator access to this repository can use these secrets and variables for actions. They are not passed to workflows that are triggered by a pull request from a fork. Secrets Variable This environment has no variables. Manage environment variables
	 Pages Security Advanced Security Deploy keys Secrets of a bables Action 3 		Repository variables
2		This repository has no variables New repository variable 5	

Actions variables / New variable

Note: Variable values are exposed as plain text. If you need to encrypt and mask sensitive information, create a secret instead.

ENABLE	_NUKE_CERTS 6				
 Variable 	names may only contain alp	hanumeric characters (a-z], [A-Z], [0-9]) or unde	rscores (_).	
 Variable 	names cannot start with a n	umber.			
 Variable 	names cannot start with GI	THUB_ prefix.			
Value *					
	_				

Configure Fork with dev branch

The open beta testing for Trio uses the dev branch.

- If you do not have a dev branch you must first configure one following these directions.
- If you already have a dev branch, skip ahead to Update Branch and be sure to select the dev branch when you update your fork .

Add Branch

First, you need to get to your Trio repository and tap on the branch icon. (Do not worry about how many branches you have.):

\leftrightarrow \rightarrow C \sim github.com/docs-test/Trio		₽ ☆
📃 🜍 docs-test / Trio		Q Type [] to search
<> Code 14 Pull requests (> Actions () Projects	🕛 Security 🛛 🗠 Insights	s ැමු Settings
Trio Public forked from nightscout/Trio		S Edit Pins ▼
양 main 👻 양 7 Branches 🛇 0 Tags	Q Go to file	t Add file - <> Code -
This branch is up to date with nightscout/Trio:main .		ी Contribute - ि Sync fork -
dnzxy Merge pull request nightscout#489 from nights	scout/release/0.2.5 🚥	0309f6a · last month 🕚 4,655 Commits

The next screen displays the branches you currently have. It shows a <u>New branch</u> button in the upper right. If you don't see that, you are not logged in. Tap on the <u>New branch</u> button.

	docs-test / Trio				Q 8	• + •	0 n 🖻 🔞
<> Code	ໃ່ Pull requests	 Actions 	Projects	Security	🗠 Insights	l Settings	
Branche	es	Stale All					New branch
Q Search	branches	Stale All					

Each step in the list below matches with the number in the graphic. On the left half of the graphic is the default selections for your fork when main is the default branch. The right side shows the display after making the indicated selections.:

- 1. Click on the drop-down menu labeled 1 in the graphic and choose nightscout/Trio
- 2. Click on the drop-down menu labeled 2 in the graphic and choose dev

3. Click on the Branch name box labeled 3 in the graphic and type dev

- The branch name in your fork should always match the branch name you are adding; check that you type it correctly
- 4. Review the dialog items to make sure everything is correct, and then tap on Create branch

Create a branch	×		Create a branch ×
New branch name	Ģ	3	New branch name
Source Choose from this fork or its upstream repository.		1 2	Source Choose from this fork or its upstream repository.
Cancel Create new b	oranch		Cancel Create new branch

Configure the dev branch as default

This recommendation is only while the public beta is ongoing. Typically only developers configure the dev branch as their default branch.

- 1. Once you commit to the 0.5.x version of Trio, you want to stay with it
- 2. By making the dev branch your default, you will get automatic build updates weekly

These are the steps to modify the default branch.

For this example, we show how to change from a default branch of main to a default branch of dev. Note – only the owner of the repository can take this action and they must be logged in. Otherwise the Settings tab does not appear.

For the numbered steps below, refer to the graphic found under each group of steps.

- 1. Click on the Settings Icon near the top right of your Trio repository
 - You may need to scroll down to see the Default Branch as shown in the graphic
 - Do not tap on the Branches tab to the left under Code and Automation, that is not the correct menu

<> Code 🖏 Pull requests 💿 Actions 🖽 Projects	⑦ Security ∠ Insights <a a="" against="" all="" and="" are="" automatically="" base"="" branch="" branch.<="" code="" commits="" different="" href="https://www.security.com/security/listings/listin</th></tr><tr><th>翁 General</th><th>General</th></tr><tr><td>Access
유 Collaborators
다 Moderation options ~</td><td>Repository name Rename Template repository</td></tr><tr><td>Code and automation
<sup>3</sup> Branches
<sup>3</sup> Tags
<sup>4</sup> Rules
<sup>4</sup> Beta</td><td>Template repositories let users generate new repositories with the same directory structure and files. Learn more. Require contributors to sign off on web-based commits Enabling this setting will require contributors to sign off on commits made through GitHub's web interface. Signing off is a way for contributors to affirm that their commit complies with the repository's terms, commonly the Developer Certificate of Origin (DCO). Learn more about signing off on commits.</td></tr><tr><td> Actions ~ Webhooks </td><td>Default branch</td></tr><tr><td>문 Environments
금 Codespaces
뜬 Pages</td><td>The default branch is considered the " in="" made,="" pull="" repository="" requests="" specify="" td="" unless="" which="" you="" your="">
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- 2. To the right of the default branch name there is a pencil and a left-right arrow icon (\rightleftharpoons)
 - Tap on the left-right arrow icon (⇄) to bring up the Switch default branch to another branch dialog

3. Click on the dropdown next to the current default branch, in this example, main



- 1. Select the desired default branch, for the public beta, choose dev
- 2. Click on the Update button
- 3. You will be presented with an are-you-sure question.
 - Click on the red I understand, update the default branch. button

Your default branch has been changed.

Update Branch

The dev branch of the nightscout/Trio repository will be updated frequently. This is how you know if your fork needs to be updated as well. As long as the automatic runs are happening weekly for your repository — you will not need these manual instructions, unless you want to manually build an update sooner.

Tap the Code button (upper left) and ensure this branch in your fork is up to date.

- Select the desired branch in the dropdown menu (this graphic shows main branch, to get 0.5.x, you must choose dev branch)
- If the message indicates this branch is "behind", tap on the sync fork button and then the Update branch button

<> Code 👬 Pull request	s 🕞 Actions	Projects	() Securit	ty 🗠 Insight	s 龄 Settings
ه ه main ◄ This branch is 2 commits behin	E E E E E E E E E E E E E E E E E E E	Go to file Co	Add file -	<> Code -	About No description, webs provided.
 .circleci .github/workflows 	Upgrade circleo FastLane + Gitł	Control Contro	anch is out- anch to keep th syncing 3 com repository. e	of-date is branch up- imits from the	 □ Readme ☆ 0 stars ⊙ 0 watching ♀ 300 forks
 Amplitude-iOS @ 9 AmplitudeService 	Update to all th misc updates	Compare	Upda	ate branch	Releases
CGMBLEKit @ 50ef	Update CGMBLE	Kit submodule r	ev	3 weeks ago	Create a new release

Update Identifiers

For Trio 0.5.x and newer, you must have Apple Push Notification enabled to build the app. This capability is added to the existing Trio Identifier by running the Action: Add Identifiers after you update your fork.

Refer to the graphic below for the numbered steps:

- 1. Click on the Actions tab of your Trio repository
- 2. On the left side, click on 2. Add Identifiers
- 3. On the right side, click Run Workflow to show a dropdown menu
 - You will see your default branch (typically this is main)
 - To update the Identifiers so you can build the Trio 0.5.x, you must select dev
- 4. Tap the green button that says Run workflow.

<> Code	Actions ☐ Projects ① Security ∠ Insights	龄 Settings
Actions New workflow All workflows 1. Validate Secrets	Add Identifiers add_identifiers.yml 14 workflow runs	
2. Add Identifiers 2 3. Create Certificates 4. Build	Event - Status - Branch - Actor -	
Management	trigger.	Run workflow + 3
Ef Caches	 ✓ Add Identifiers Add Identifiers #14: Manu loopdocs-tester Branch: main ▼ (OC Run workflow 	otional)
	Add Identifiers Add Identifiers #13: Manually run by loopdocs-tester	⊟ yesterday ··· ⊘ 36s

🔥 🛛 Be Patient

- Refresh the browser if you are unsure if the action started
- Do not start a new action until the first one completes

The Add Identifiers Action should succeed or fail in a few minutes. Do not continue to the next step until this one succeeds.

Update Certificates

For Trio 0.5.x and newer, you must have Apple Push Notification enabled to build the app. After you add this capability to the Trio Identifier, you must update the Certificate by running the Action: Create Certificates.

Refer to the graphic below for the numbered steps:

- 1. Click on the Actions tab of your Trio repository
- 2. On the left side, click on 3. Create Certificates
- 3. On the right side, click Run workflow to show a dropdown menu
 - You will see your default branch (typically main)
 - Because you plan to build Trio 0.5.x, select dev
- 4. Tap the green button that says Run workflow.

<> Code ፤ጎ Pull requests (] ⊙ Actions ⊞ Projects ① Security 🗠 Insights பி Settings
Actions New workflow All workflows	Create Certificates Q Filter workflow runs create_certs.yml 2 workflow runs
2. Add Identifiers 3. Create Certificates 2	Event - Status - Branch - Actor - This workflow has a workflow_dispatch event Run workflow - 3
4. Build Management	trigger. Use workflow from Branch: main - (Optional)
	Create Certificates #2: Mi by loopdocs-tester Run workflow 4
	Create Certificates Image: Second

5. Wait a minute or two for the action to finish

👌 🛛 Be Patient

- Refresh the browser if you are unsure if the action started
- Do not start a new action until the first one completes

Once you see the green check mark by Create Certificates, the next step is to Build the app.

Build the App

If you completed all the steps on this page successfully (got a green checkmark 🔽), you are ready to run Action: Build Trio.

We recommend that while participating in the public beta, you should Configure the dev branch as default. This will ensure weekly updates to TestFlight. You must still manually install updates to your phone from TestFlight.

If you choose to build a different branch than your default branch, there is an extra step when you Build Trio. In addition to the normal steps 1, 2, and 3 in the graphic below, you must also do the (optional) step. Select the dev branch in the branch dropdown menu before continuing to step 4 and tapping on the green Run workflow button:

<> Code 11 Pull requests) Actions 🗄 Projects 🕕 Security 🗠 Insights 🕸 Settings
Actions New workflow All workflows	4. Build Trio build_trio.yml
1. Validate Secrets 2. Add Identifiers	133 workflow runs
3. Create Certificates	Event - Status - Branch - Actor -
4. Build Trio 2 8. DONT RUN Add Disabled	This workflow has a workflow_dispatch event Run workflow 3 trigger.
8. DONT RUN close Disabled	Use workflow from Build Trio (bast_fe; Branch: dev - (Optional)
Management	4. Build Trio #133: Sched Run workflow 4

Refresh, Do Not Repeat

6 Hit Refresh
After you tap the green Run workflow button, <i>GitHub</i> can be slow to update.
Refresh the browser if you are unsure if the action started
Do not start a new action until the first one completes

Disable the DO NOT RUN Actions

You may notice some *GitHub* actions that have DONT RUN or DO NOT RUN in their names. Those are special actions that are used by the developers. They are skipped in your Fork, but you may see logs for them.

If they already have the notation disabled beside them, so won't see them run. Otherwise, click on each one, click on the three dots at the upper right, and then select Disable workflow. Then you will avoid the annoyance of seeing logs that say the action was automatically run and then skipped.

<> Code	រ៉ៀ Pull requests		Projects	() Secu	rity	
8. DONT I	RUN Add bugs to	bugs projec	ct -		1	
add_to_proj	ect.yml		Create statu	s badge		
Q Filter w	_F	Pin workflow	-			
0 workflow runs			C.	Disable work	flow	

Update Build Errors

The most likely build error is that you did not Update <u>Identifiers</u> and <u>Certificates</u>. In that case, you will see this **error** in the **build action annotations**.

Error



If you decide to look at the action **log**, instead of reading the annotations, you may see an **error** similar to the two graphics below.

691	[23:27:00]:	Called from Fas	stfile at line 138
692	[23:27:00]:		
693	[23:27:00]:	136:)
694	[23:27:00]:	137:	
695	[23:27:00]:	=> 138:	gym(
696	[23:27:00]:	139:	<pre>export_method: "app-store",</pre>
697	[23:27:00]:	140:	scheme: "Trio",
698	[23:27:00]:		
699	[23:27:00]:	Error building	the application - see the log above
700)		
701	+		+

	Hom project Thebase /
518	<pre>[23:27:00]: :error file=/Users/runner/work/Trio-dev/Trio-</pre>
	<pre>dev/Trio.xcodeproj::Provisioning profile "match AppStore org.nightscout.***.trio" doesn't</pre>
	support the Push Notifications capability. (in target 'Trio' from project 'Trio')
519	[23:27:00]: ▶ /Users/runner/work/Trio-dev/Trio-dev/Trio.xcodeproj: error: Provisioning
	profile "match AppStore org.nightscout.***.trio" doesn't include the aps-environment
	entitlement. Profile qualification is using entitlement definitions that may be out of
	date. Connect to network to update. (in target 'Trio' from project 'Trio')
520	[23:27:00]: ▶ note: Disabling previews because SWIFT_VERSION is set and
	SWIFT_OPTIMIZATION_LEVEL=-O, expected -Onone (in target 'Trio' from project 'Trio')
521	[23:27:00]: • note: Run script build phase 'Swiftformat' will be run during every build
	because the option to run the script phase "Based on dependency analysis" is unchecked.

Solution

- 1. Update Identifiers make sure you select dev branch
- 2. Update Certificates make sure you select dev branch

New Trio Builders

For experienced browser builders, this minimal set of instructions might be sufficient. Warning - there is no hand holding in these directions.

Every app you build will use the same 6 Secrets.

- Fork from: https://github.com/nightscout/Trio
- Use the Trio App Group for Trio, see Create the Trio App Group
- Identifiers for Trio: see Table of Identifiers
- Add the Trio App Group to these Identifiers:
 - Trio
 - Trio Watch
 - Trio WatchKit Extension
- In App Store Connect, the Bundle ID for Trio will be: org.nightscout.TEAMID.trio

Create the Trio App Group

If you already have a Trio App Group

- You can skip this step your existing App Groups are found at this link: App Group List
- If your Trio App Group was created from a Mac with Xcode, you may choose to edit the Description to make the **NAME** match

If you do not have a Trio App Group:

- Go to Register an App Group on the Apple developer site and use the table below to help you create one.
- Replace TEAMID with your Apple Developer ID.

NAME	Xcode version (NAME)	IDENTIFIER
Trio App	group org nightscout TEAMID trio trio-app-	group.org.nightscout. <u>TEAMID</u> .trio.trio-app-
Group	group	group

Table of Identifiers

These are the Identifiers created by running the *GitHub* action "Add Identifiers". Only 3 of them need to have the Trio App Group added. Be sure that you selected the dev branch when you start the "Add Identifiers" action. For more details, see Update Identifiers, but then return here when that action succeeds.

NAME	Xcode version (NAME)	IDENTIFIER	
Trio	XC org nightscout	org.nightscout. <u>TEAMID</u> .trio	
Trio LiveActivity	-	org.nightscout.TEAMID.trio.LiveActivity	
Trio Watch App	XC IDENTIFIER	org.nightscout.TEAMID.trio.watchkitapp	
Trio Watch Complication	XC IDENTIFIER	<pre>org.nightscout.TEAMID.trio.watchkitapp.TrioWatchC omplication</pre>	

Add Trio App Group to Identifiers

- Open the App IDs Identifier page for your Apple Developer Account.
 - Click on the Trio Identifier and assign the Trio App Group to the Identifier see graphic below.

ertificates	App Group Assignment			
< All Identifiers	Select the App Groups you wish to assign to			
Edit your App	Select All		1 of 3 item(s) selected	Remove Save
	Loop App Group	group.com.7PT47XGDN4.loopkit.LoopGroup		
Platform iOS, iPadOS, macOS, tvO	LoopCaregiver App Group	group.com.7PT47XGDN4.loopkit.LoopCaregiverGroup		
Description	🗹 Trio App Group	group.org.nightscout.7PT47XGDN4.trio.trio-app-group		
Trio				
Capabilities A				
ENABLE N				
			Cancel Continue	
• (Rccess Wi-Fi Information 🕕			
	App Attest			

• Repeat this for the other 2 Identifiers that need to have an App Group assigned: Trio Watch and Trio WatchKit Extension

Configure Trio App

Follow the directions in LoopDocs, but use the Trio Bundle ID

• In App Store Connect, the Bundle ID for Trio will be: org.nightscout.TEAMID.trio

Return to the main set of instructions on this page, Update Certificates, and keep going until you have a successful build.

Extra Tips

Remove Annoying Message

If you accidentally build 0.2.x over 0.5.x, and then return to 0.5.x:

- You will see "Oops? Some data didn't make it over" every time you restart the app
- But all your "stuff" is there

You see that because some special files are labeled with <u>.migrated</u> by 0.5.x when you complete the onboarding action when you upgrade from 0.2.x to 0.5.x.

- When you accidentally build 0.2.x over 0.5.x, the old names for the files are recreated
- When you restore to 0.5.x, it sees the duplicate files, one set has .migrated in the file name and one set does not
- You are warned that migration can't happen but for this case, you don't need it

You can get rid of the annoying message by taking these steps:

First quit (stop running, swipe up) the Trio app

- Search for Files on your phone
- Open the Trio folder on your phone
- Open the enact folder
 - you may see 4 files, instead of 2
 - delete the ones that do **not** have .migrated in the name
- Open the monitor folder
 - you will probably see many files, but 3 of them have .migrated in the name
 - find the files with the same name except for <code>.migrated</code> and delete them

Open the Trio app and it should just say "Getting everything ready for you" and just keep going. Annoying message is gone.