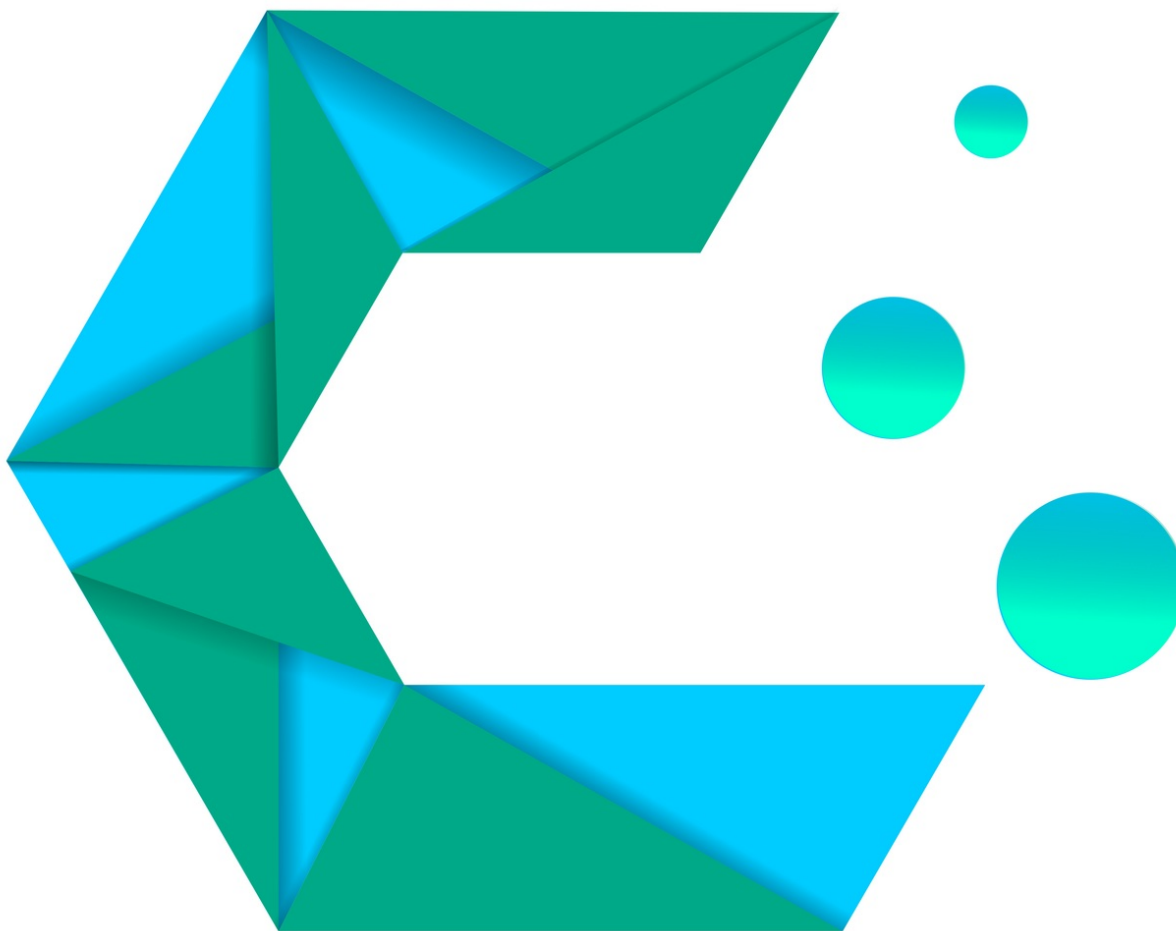




CachyOS Installation on the Framework Laptop 12

How to install CachyOS Linux on a Framework Laptop 12.

Written By: Jesse Darnley



INTRODUCTION

Once you have your Framework Laptop 12 set up following the [Quick Start Guide](#), you're ready to install your preferred OS. CachyOS is one of the many community supported Linux distributions we recommend. It offers bleeding edge software enabling full hardware support with very little setup required, and the installer offers options for many popular GUIs.



PARTS:

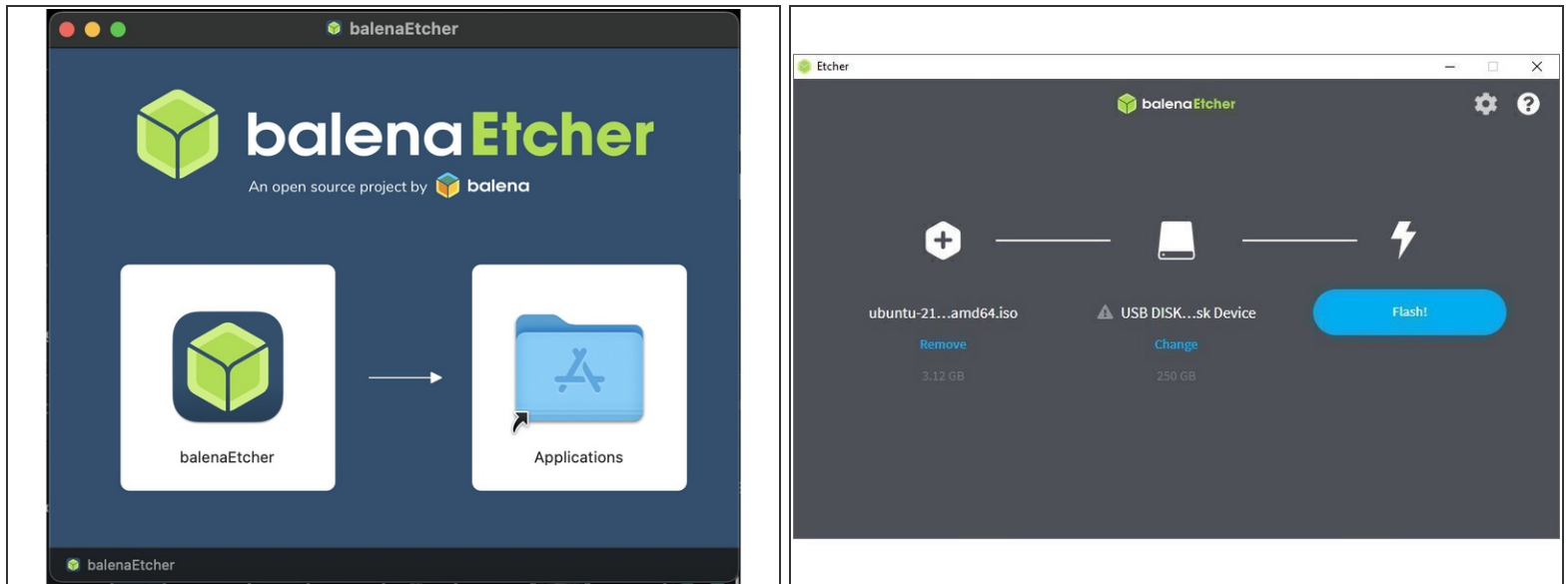
- [Storage Expansion Card](#) (1)
-

Step 1 — CachyOS on the Framework Laptop 12



- ✦ This guide is for CachyOS using the KDE Plasma desktop on both the 13th Gen Intel® Core™ and Intel® Core™ Series 3 variations of the Framework Laptop 12.

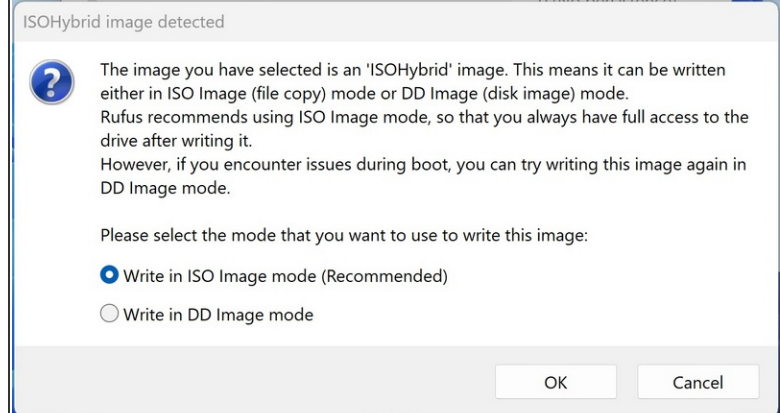
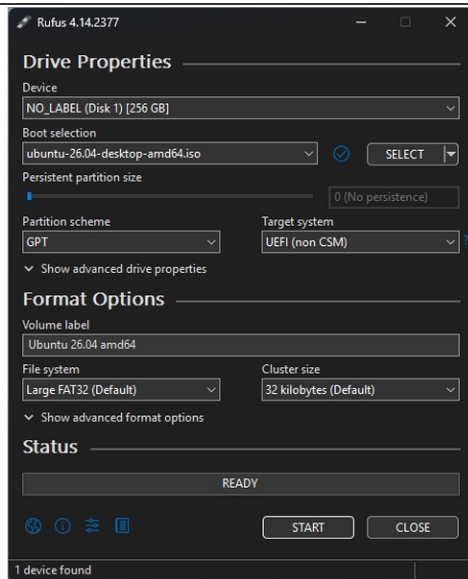
Step 2 — (From macOS) Preparing USB CachyOS Installation Media



⚠ This process will delete all data from the flash drive being used! Ensure any important data that may be kept on those drives is backed up before continuing.

- First, [download the latest CachyOS release](#) from the CachyOS website. We'll go through the steps in this Guide assuming you have a simple installation scenario of a fresh install on a blank drive.
- Download [balenaEtcher](#) as a tool to create the USB installer from the ISO. Download the X64 version for older Intel-based Macs. Download the ARM64 version for Apple Silicon based (M series) Macs.
- Launch balenaEtcher. Insert a USB drive (8GB or larger). Click on *Flash from file* and select the CachyOS iso that was downloaded. Click on *Select target* and choose the USB drive. Click *Flash* and wait a minute or two for it to complete.
- Once the USB drive creation is complete, close balenaEtcher and eject the USB drive in Finder if it is still mounted.

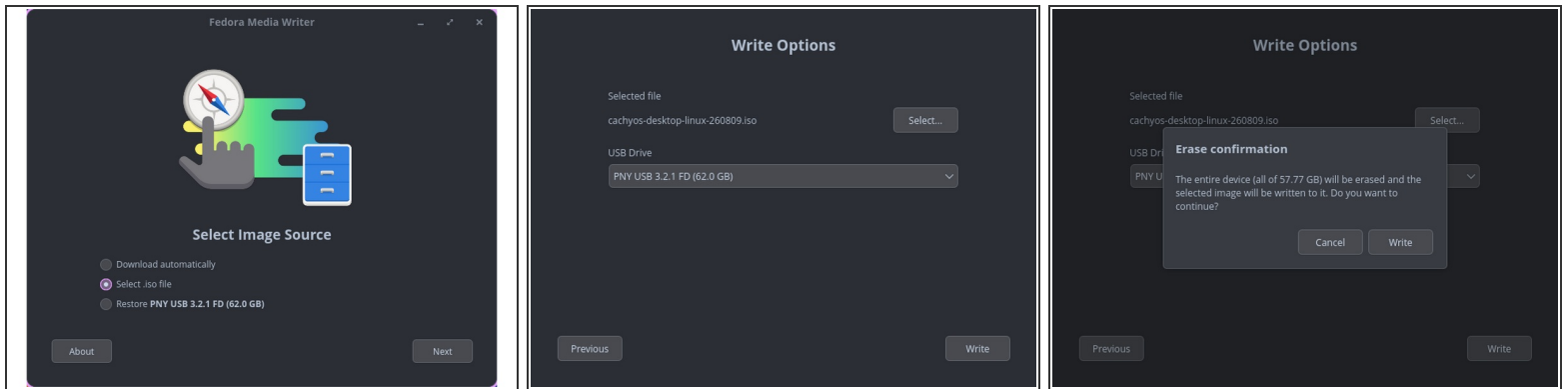
Step 3 — (From Windows) Preparing USB CachyOS Installation Media



⚠ This process will delete all data from the flash drive being used! Ensure any important data that may be kept on those drives is backed up before continuing.

- First, [download the latest CachyOS release](#) from the CachyOS website.
- Download [Rufus](#) as a tool to create the USB installer from the ISO. The first item in this list will be a link to install installer for the latest version. Install Rufus using this.
- Open Rufus, from the Device drop-down, select the USB flash drive stick.
 - ⚠ In order to use devices like external hard drives, external solid state drives, or the Framework Storage Expansion Card to create a live USB, *List USB Hard Drives* must be enabled under *Show advanced drive properties*.
- Use the *Select* Button next to *Boot selection* to choose the downloaded CachyOS ISO.
- ⚠ Set *Partition scheme* to *GPT* to ensure the live USB is properly recognized at boot.
- Click Start. A window will pop up to prompt for a choice between *dd image mode* and *ISOHybrid image mode*. Select *ISOHybrid image mode* then *OK*.

Step 4 — (From Linux) Preparing USB CachyOS Installation Media



- First, [download the latest CachyOS release](#) from the CachyOS website.
- Fedora: Media Writer is already installed on Workstation, so just launch it from the app menu.
- Other distro, Flatpak installed: Run `flatpak install flathub org.fedoraproject.MediaWriter`, then launch it from the app menu or with `flatpak run org.fedoraproject.MediaWriter`.
- Other distro, no Flatpak: Install Flatpak and add Flathub per <https://flathub.org/setup>
- Insert an 8 GB+ USB key. Back up its contents first, since this erases the entire drive.
- Open Fedora Media Writer, choose Select .iso file, and pick the downloaded CachyOS ISO.
- Select the USB drive from the device list, double-checking the name and size to avoid wiping the wrong disk.
- Click Write, enter the user password if prompted for administrator permissions, wait for it to finish, then click Finish and safely eject the USB.

Step 5 — Secure Boot



⚠ To install CachyOS, Secure Boot must be disabled! By default CachyOS will not boot with Secure Boot enabled. Please refer to [our explanation of Secure Boot](#) to learn more.

📘 To disable secure boot:

- Boot into BIOS by tapping F2 just before the Framework splash screen.
- Arrow down to Administer Secure Boot. Press enter.
- Arrow down to Enforce Secure Boot. Press enter, select Disabled, and press enter.
- Press F10 to save and reboot. With Yes selected, press Enter.

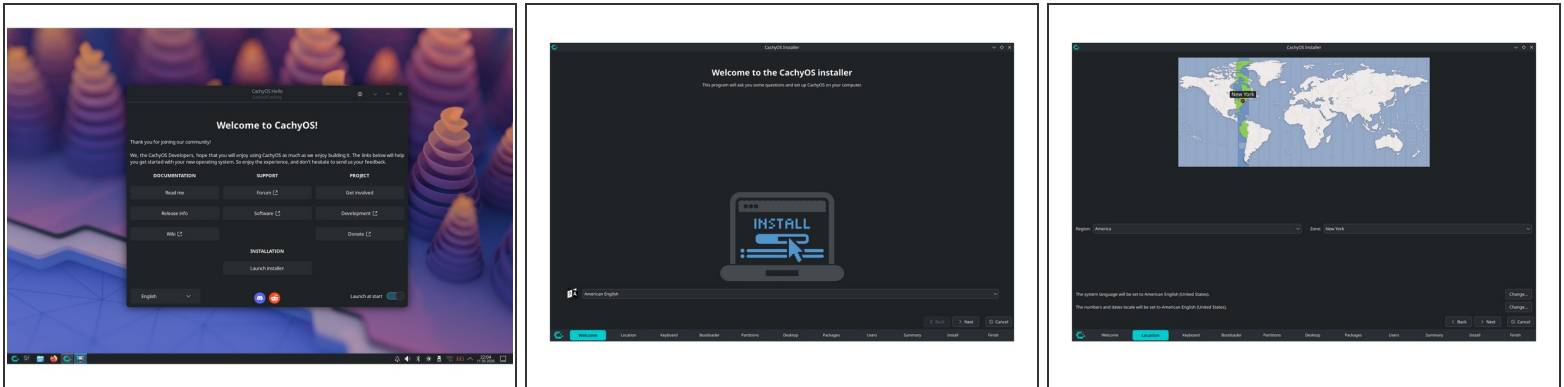
📌 To enable Secure Boot again, repeat the above steps but select Enable this time.

Step 6 — Booting to Live CachyOS USB



- Insert the USB drive into the powered off Framework Laptop 12, and then power on. If an existing OS is installed on a Storage drive in the Laptop, immediately after the power light comes on begin tapping the F12 key before the Framework logo is visible.
- ① If no operating system is detected, the system will automatically boot from the Live USB.
- Select the USB drive. Press the enter key.
- Next select CachyOS from the list (not the LTS version). Hit the enter key.
- The speed of the flash drive will determine how quickly the live environment starts. It will boot directly to a KDE desktop in anywhere from a few to many minutes.

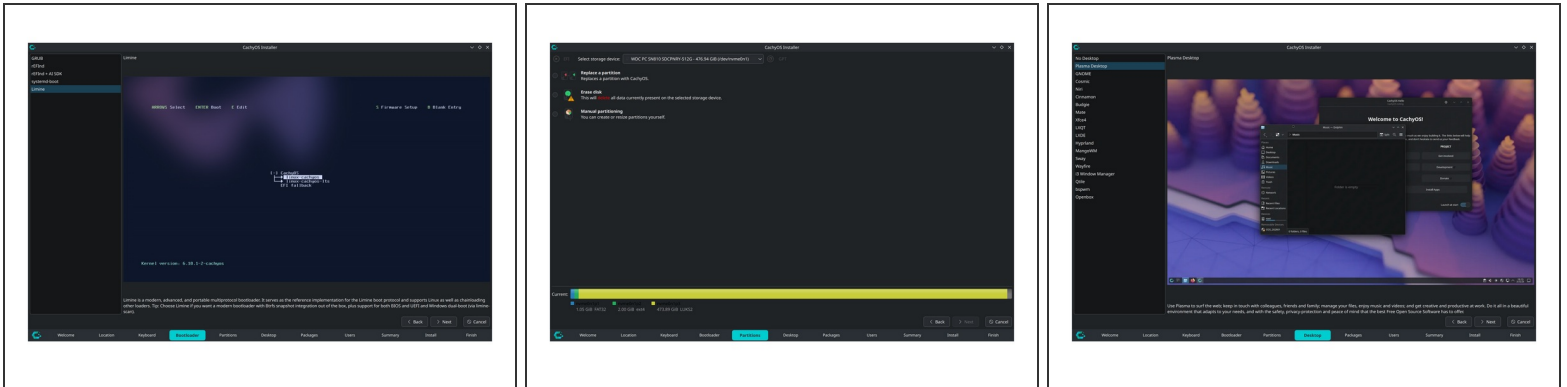
Step 7 — Starting CachyOS Installation



⚠ In the bottom right corner of the screen, use the WiFi icon in the system tray to connect to a network. The installer will not work without it.

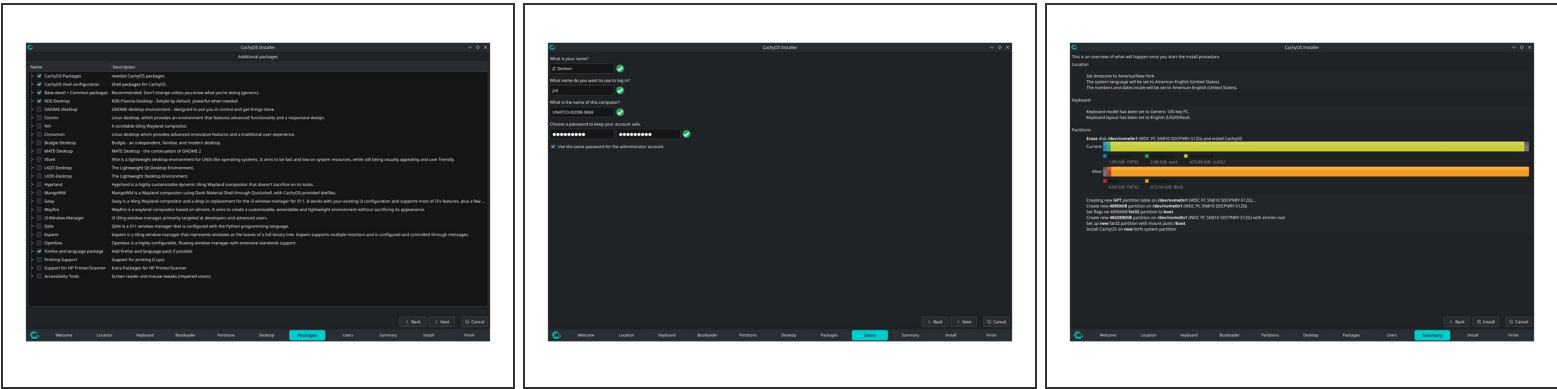
- The first thing to open on the live desktop is CachyOS Hello, a greeter window that provides links to a number of useful resources, an option to select language, and a button to open the installer.
- Click "Launch installer" in the CachyOS Hello window after connected to the internet. If the window was closed for any reason, it can be reopened using the Application Launcher on the left side of the task bar.
- When the installer opens, select a language, region (locale), timezone, and keyboard layout, clicking "Next" to progress through each slide.

Step 8 — Configuring CachyOS Installation



- Select a bootloader. The installer includes descriptions for each option. The installer defaults to Limine. GRUB is a very mature and well documented option that's also easy to get help with.
 - ① The default option is the Limine, this is a newer option intended to work well with the snapshots feature of the default filesystem.
 - ① GRUB is a traditional option that may be preferred by long-time Linux users.
- Select the drive for install and choose to *Wipe the whole drive*. A filesystem for the root partition can also be selected.
 - ① The default option is btrfs, a filesystem with features like snapshots that allow users to revert the system to a previous state if, for example, an update fails.
- Select a desktop environment. Most of them are well described and have visual demonstrations to help selection.
 - ① The default option is KDE. This guide will assume you are using KDE Plasma going forward.

Step 9 — Finalizing CachyOS install



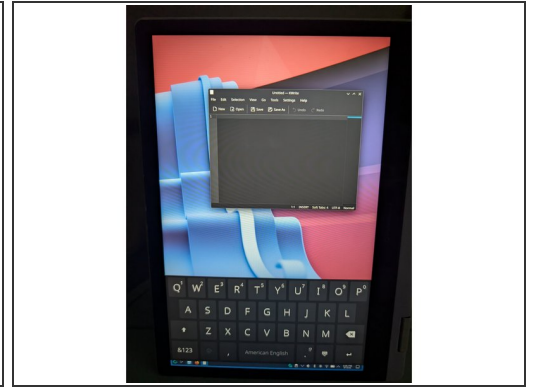
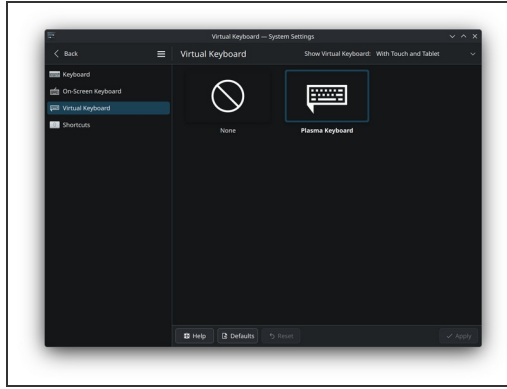
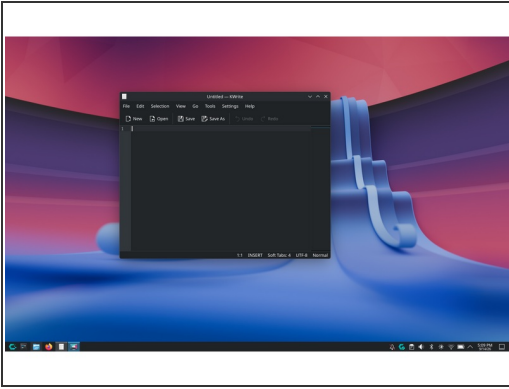
- There is an option selection for extra packages. While it isn't recommended to install multiple desktop environments or display managers, it is possible to do so.
 - ❗ This is where support for Printers can be installed
- Set up the primary user by filling out the Name, Username, and Password fields with the relevant information.
 - ❗ Unchecking "Use the same password for Administrator account" allows a separate password to be set for the root account.
- ⚠ Review all the details on the Summary slide. This is the last chance to change install options and data is written to the drive.
- After review, click *Install* then *Install Now* to finalize all selections and begin the install.

Step 10 — Configure the fingerprint reader

```
Using device /net/reactivated/Fprint/Device/0
Enrolling right-middle-finger finger.
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-remove-and-retry
Enroll result: enroll-stage-passed
Enroll result: enroll-remove-and-retry
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-remove-and-retry
Enroll result: enroll-remove-and-retry
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-stage-passed
Enroll result: enroll-completed
```

- ① The method to add, remove, or otherwise manage fingerprints will depend on interface.
- In KDE System Settings options for *Configure Fingerprint Authentication* are found under *Users* in the sidebar.
 - ⚠ While KDE allows for fingerprint unlock and fingerprint authentication for administrator permission prompts, it does not allow fingerprint on initial login for security reasons.
- Fingerprints can also be managed in a terminal using `fprintd-enroll` to add fingerprints, `fprintd-delete` to remove fingerprints, `fprintd-list` to list active fingerprints, and `fprintd-verify` to check that a fingerprint is enrolled and works.
- ① Specific fingers can be chosen by adding `-f` after the `fprintd-enroll` command. Fingers are named in all lower case with dashes used in place of spaces. For example `fprintd-enroll -f right-middle-finger`.
- ① Further information on the `fprint` can be found on the [Arch Wiki](#).

Step 11 — Completing Setup



- We're almost done. Please follow the links to your Framework Laptop 12.
 - Click here for the completion guide for [Framework Laptop 12 \(13th Gen\)](#)
 - Click here for the completion guide for [Framework Laptop 12 \(Core Series 3\)](#)
- Using Tablet Mode. Simply follow the appropriate link above matching your hardware to complete setup. Once that step is completed, you can then fold back the screen into tablet mode. The on-screen keyboard appears when you enter any text field like application search, text editing, etc.

⚠ [Stylus Setup and Troubleshooting on Linux](#)

Step 12 — Recommended: Updating to the latest firmware



- ✦ Update your BIOS/Firmware. Open the terminal, run the following command and follow the directions. If there are no updates available, that is completely fine. This just ensures you are current.
 - ⚠ **IMPORTANT:** We do NOT recommend updating BIOS and firmware using various GUIs. We recommend using fwupdmgr as provided in the step above. Using GUIs can potentially create issues that would not be present using fwupdmgr directly.
 - ⚠ LVFS may not update if the battery is at 100%. If you experience issues, discharge to 95%, plug AC back in, then re-run fwupdmgr update.
 - fwupdmgr refresh --force
 - fwupdmgr get-updates
 - fwupdmgr update

Enjoy using CachyOS on your Framework Laptop 12!