Bazzite Installation on the Framework Laptop 16

How to install Bazzite Linux on a Framework Laptop 16.

Written By: Matt Hartley



INTRODUCTION

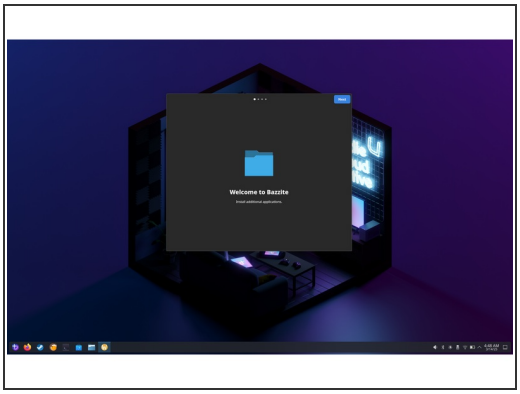
Once you have your Framework Laptop 16 set up following the Quick Start Guide, you're ready to install your preferred OS. The Framework Laptop 16 is running some very recent hardware, and we've worked with the team at Bazzite to improve support. Bazzite is one of the Linux distributions we recommend, as it has full hardware support with very little setup required, and it offers a great user experience overall.

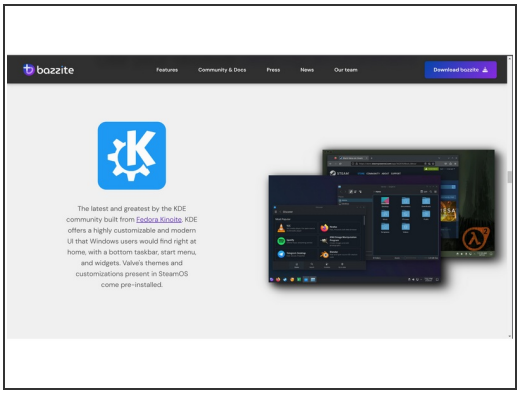
This is an Officially Supported Linux Distribution. Learn more here.

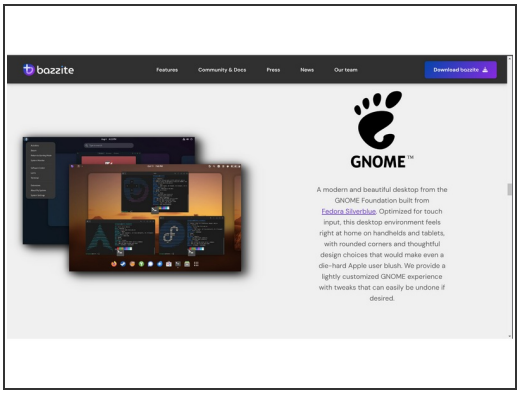
TOOLS:

- Storage Expansion Card (1)

Step 1 — Choosing Bazzite KDE Plasma or Bazzite GNOME





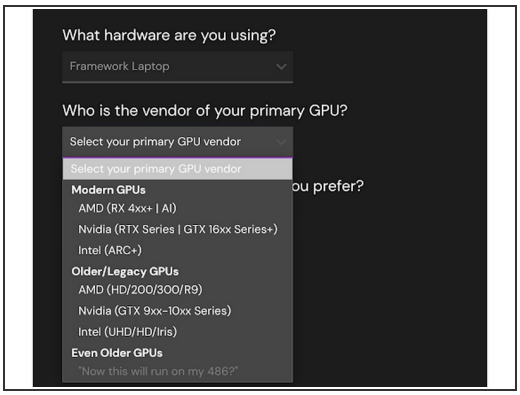


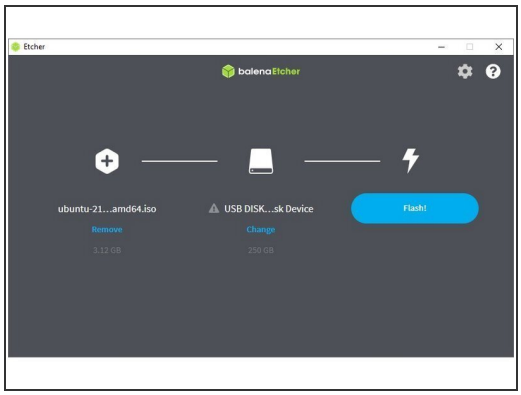
- KDE Plasma or GNOME? Unsure which is best for you? Both KDE Plasma or GNOME versions are a solid experience right out of the box.

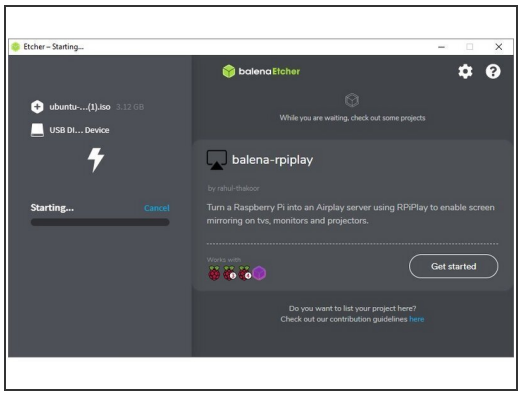
  For this guide, we will be using the Bazzite-GNOME installation.

  Let's continue on to preparing USB Bazzite Installation Media.

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







- First, download the latest Bazzite release from the Bazzite 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.

  ⓘ **Ryzen 7040 Series**, select: "AMD (RX 4xxx+ | AI)" from Modern GPUs section. With o without AMD dGPU, this is your recommended selection.

  ⚠ This also holds true if you are going to use the Ryzen AI 300 Series **without** a NVIDIA dGPU.

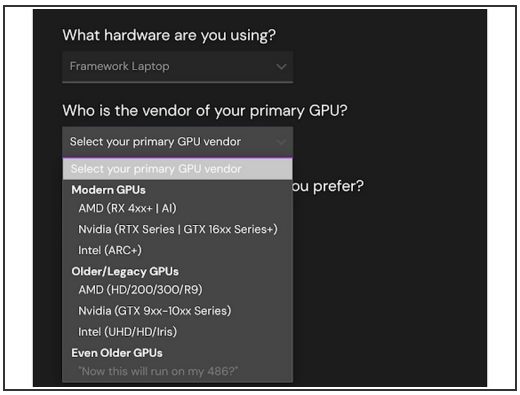
  ⓘ **Ryzen AI 300 Series with NVIDIA dGPU**, select NVIDIA RTX Series|GTX 16xx Series+.

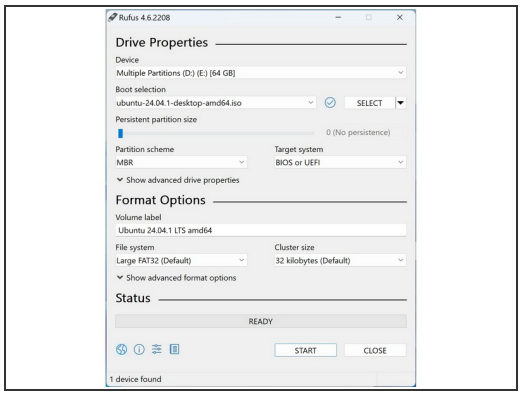
- Download balenaEtcher as a tool to create the USB installer from the ISO. balenaEtcher is available for MacOS. Install it.

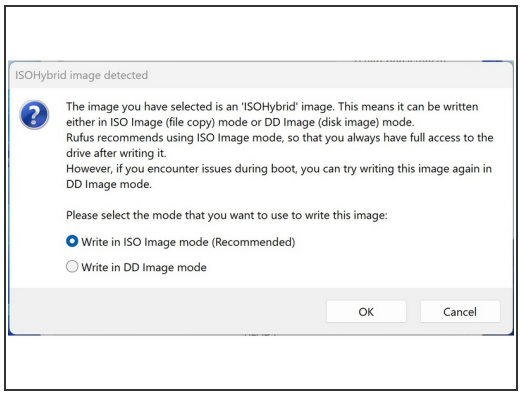
- Launch balenaEtcher. Insert your USB drive (8GB or larger). Click on "Flash from file" and select the Bazzite iso that you downloaded. Click on "Select target" and choose your USB drive. Click "Flash" and wait a minute or two for it to complete.

- Once the USB drive creation is complete, you can close balenaEtcher and eject the USB drive from your OS.

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







- First, [download the latest Bazzite release] from the Bazzite 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.

  ⓘ **Framework Laptop 16 with AMD dGPU or no dGPU** , select: "AMD (RX 4xxx+ | AI)" from Modern GPUs section.

  ⓘ **Framework Laptop 16 with NVIDIA dGPU** , select NVIDIA RTX Series|GTX 16xx Series+.

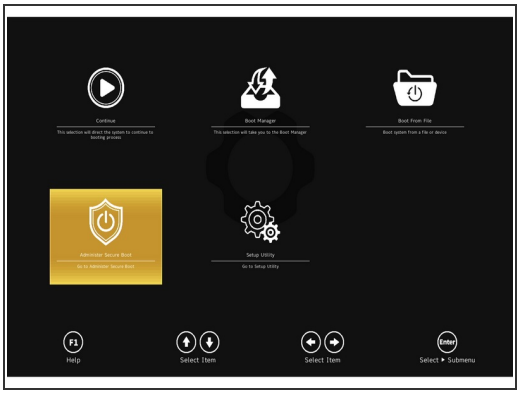
- Download [Rufus] as a tool to create the USB installer from the ISO - select the top download option from the link provided. Rufus is available for Windows. Install it.

  ⚠ 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*.

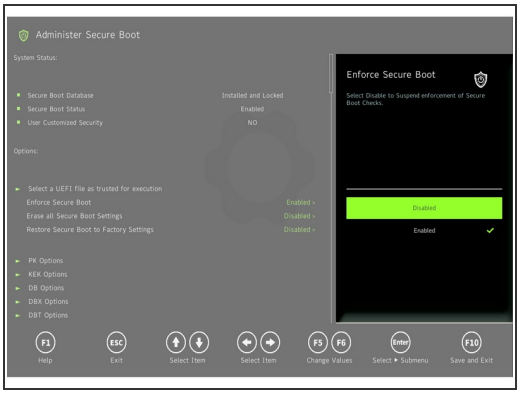
- Use the *Select* Button next to *Boot selection* to choose the downloaded Bazzite ISO. Set *Partition scheme* to *GPT* to ensure the live USB is properly recognized at boot.

- 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 — Secure Boot







ⓘ Bazzite works with Secure Boot. Bazzite Live USBs will boot regardless of whether or not it is disabled. Users who intend to dual-boot with Windows should not disable Secure Boot! More about secure boot here. There are Bazzite specific instructions here.

ⓘ To disable Secure Boot, boot the system into the BIOS menu:

- Power on, then tap F2 repeatedly before the Framework logo is visible.
- Select Administer Secure Boot tile on the screen. Press enter.
- Go to Enforce Secure Boot, it will show as Enabled. Click the enter key, arrow it to Disabled. Press F10 key to save and reboot.

  ⚠ **IMPORTANT:** Do not disable Secure Boot if a drive containing Windows is installed until confirming that Bitlocker is disabled. Disabling Secure Boot while Bitlocker is enabled can lock the user out of their drive and potentially result in data loss.

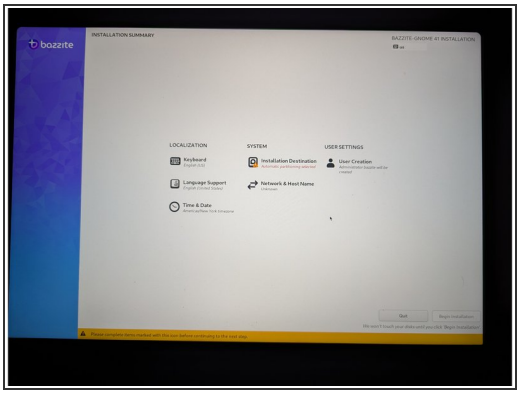
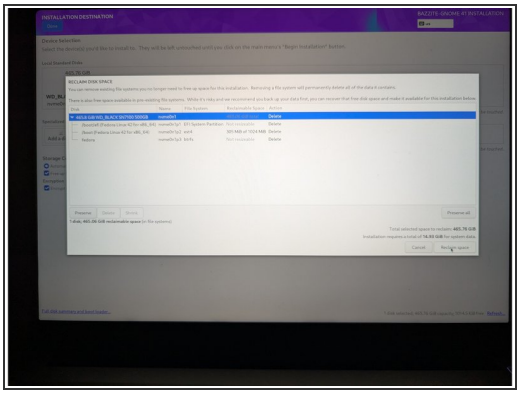
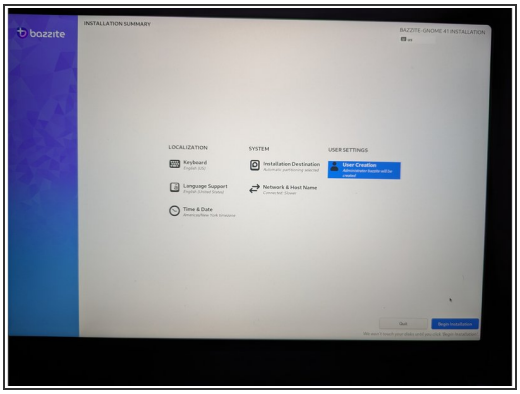
To enable Secure Boot again later in the future, repeat the above steps but select Enable this time.

Step 5 — Booting to the Bazzite USB Installer



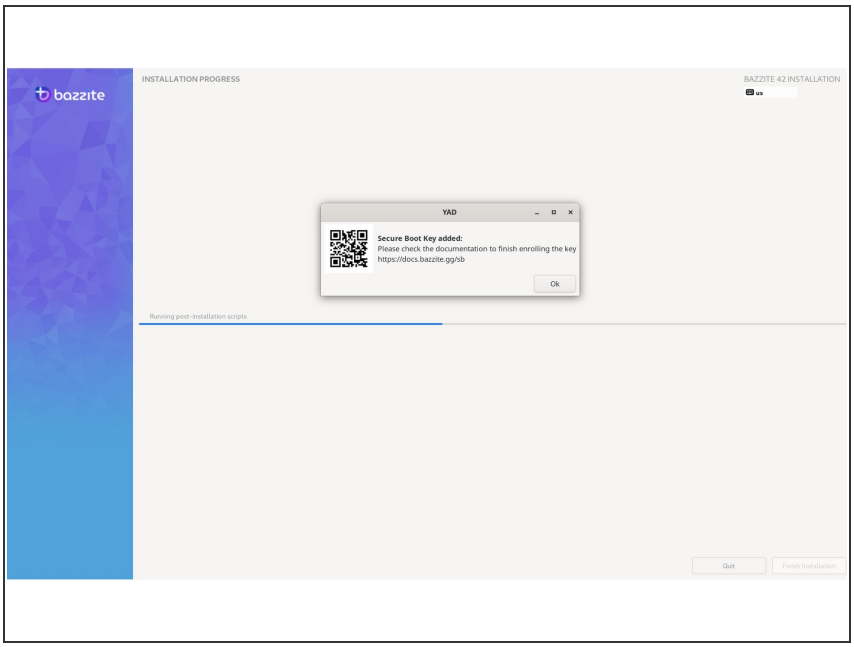
- Insert the USB drive into the powered off Framework Laptop 16, and then power on.
  - ⓘ If there is already an OS installed on the internal storage, enter the Boot Manager by tapping F12 after pressing the power button to turn the laptop on. Tap the F12 key until the message "F12 is pressed. Go to Boot Manager." is displayed.
- Select the USB drive, usually labeled "EFI USB Device (USB Disk)". Press the enter key.
  - ⚠ If Windows is already installed on the system attempting to boot into a Linux Live USB may result in a "Device is Active" error. This will provide guidance to overcome this error.
- Next select "Launch Bazzite Installer". Hit the enter key.
  - ⚠ Important for non-US keyboard users! Please open this link in a new tab and read carefully.
- If there is an OS already installed on the target drive, you'll need to follow the guided steps to delete the existing partitions.
- Click Finish Installation and then reboot into your new Bazzite install!

Step 6 — Installing Bazzite to a drive

- Select the keyboard language you'd like to use. Click Continue.
- Select Time & Date, select your time zone.
- Select Installation Destination, check Free up space by removing or shrinking existing partitions. Because we want this to be a dedicated installation on its own, select Delete all, then Reclaim space. Click Done.
  - ⓘ Encryption. When setting up Installation Destination, you may set up Encrypt My Data by checking the box, creating a passphrase. Then click Done.
- Select Network & Host Name. Select Network, connect to your wireless network. Once an IP address and DNS entries appear, click Done.
- Click user Creation. Provide the full name, leave the boxes checked, create a password. Click Done. (Short passwords will require you to click Done twice)
- Click the Begin Installation Button.

Step 7 — Secure Boot Key - NVIDIA dGPU

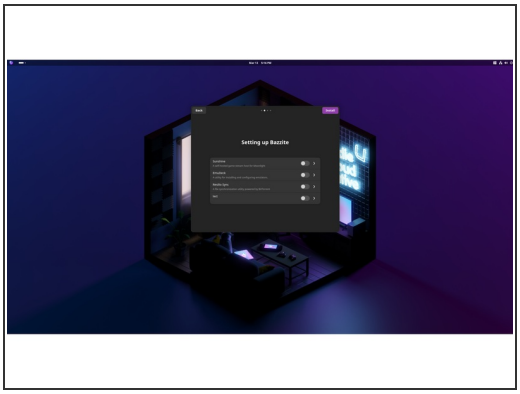


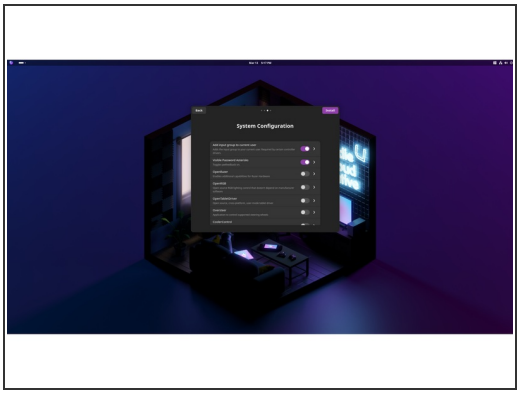
⚠ If you decided to leave secure boot enabled in BIOS, continue with this section.

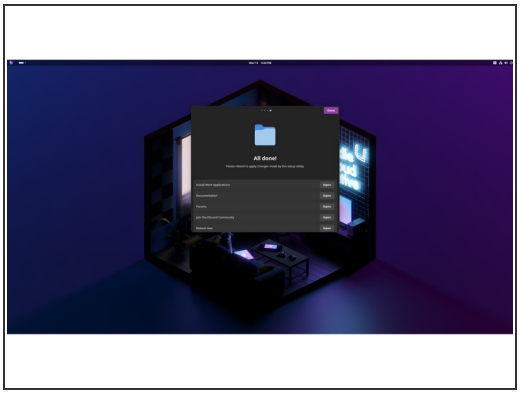
- As the installation begins, you will be presented with this dialog box during the install. This dialog will tell you to visit this page to finish enrolling your key.
- When you presented with the blue screen asking if you wish to enroll MOK, you will choose to enroll MOK.
- On the next page, it will ask you to view key or to continue. Choose continue.
- Next it will ask if you wish to enroll key, select yes.
- When asked for the password, enter *universalblue* (one word, as shown here).
- Reboot when prompted. Upon reboot, your NVIDIA driver is active and and working with secure boot enabled.

⚠ **NOTE:** As indicated in Step 4. Secure boot is optional.

Step 8 — Welcome to Bazzite - Setting Up

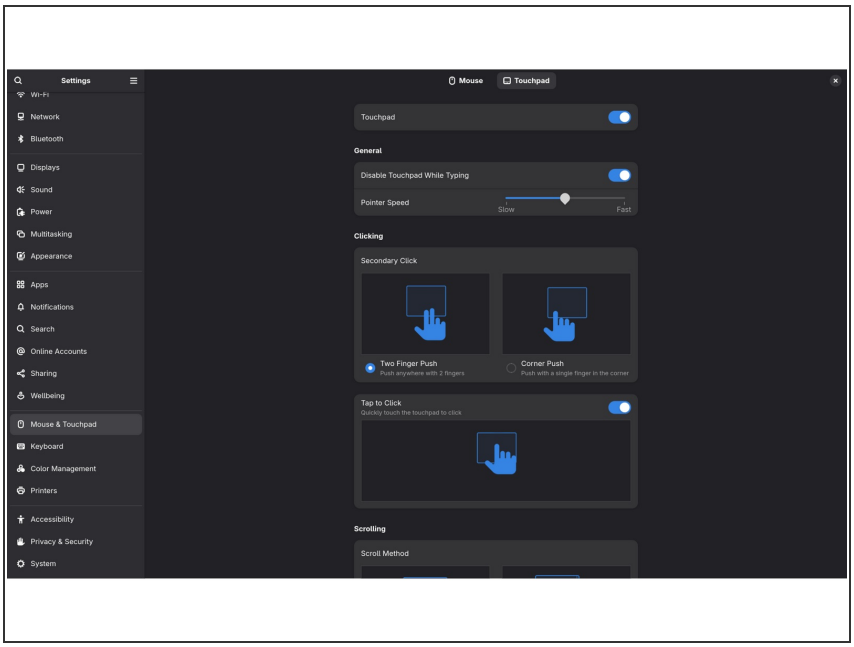






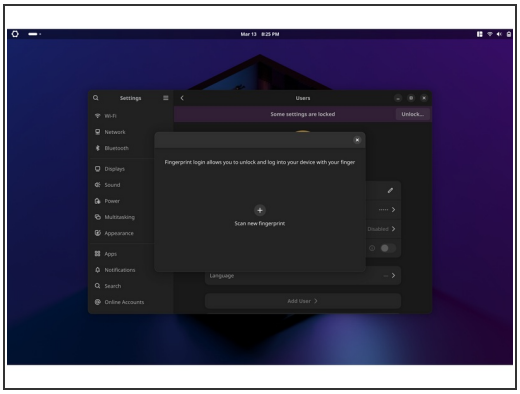
- At the initial start up, two things will appear. The first is the Steam installer. If you do not want to login or setup Steam right now, just close it at the X.
- Next we have Welcome to Bazzite! Click Next, make any sections that meet your needs or click Install to skip them altogether with the options unchecked. Ignoring the install throbbing line, click Next once again if no selections were made.
- System Configuration. There are options pre-selected for you. Leave them enabled, and also check additional features if you decide you want them. The additional features are optional. Click Install. When presented with *Allow Inhibiting Shortcuts* box, select allow enter your user password, then OK. When this is complete, click Next.

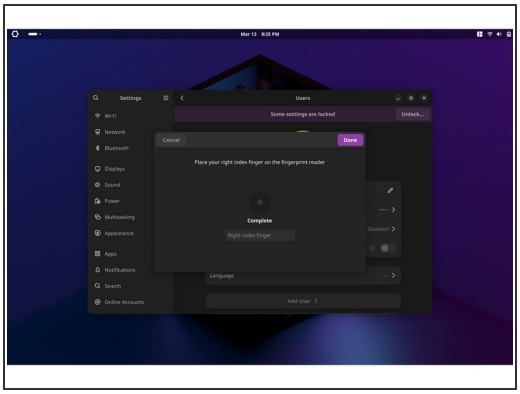
Step 9 — Touchpad Settings

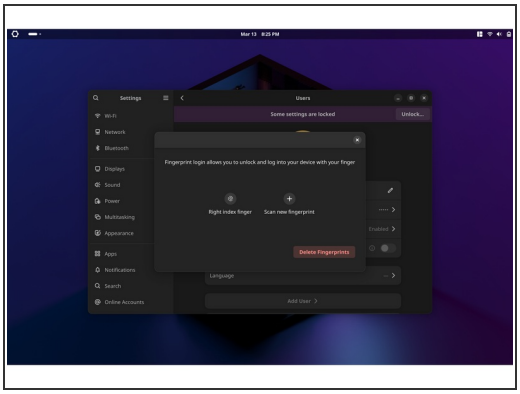


- To configure the touchpad to meet your needs:
- Go to Settings>Mouse and Touchpad.
- Select the Touchpad tile/button at the top of displayed window.
- There you can control Touchpad while typing behavior, pointer speed, secondary click options, tap to click, scrolling method, and scroll direction.

Step 10 — Configure the fingerprint reader



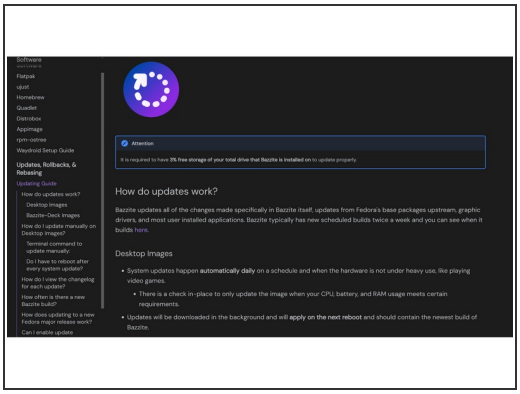


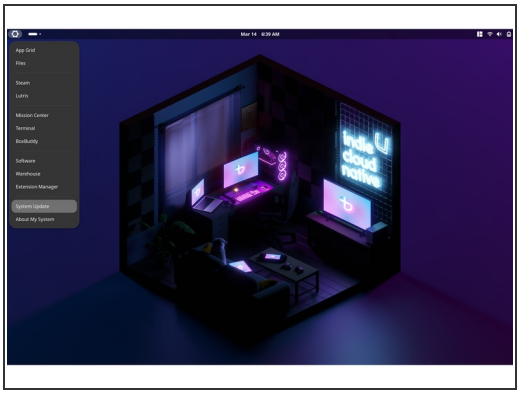


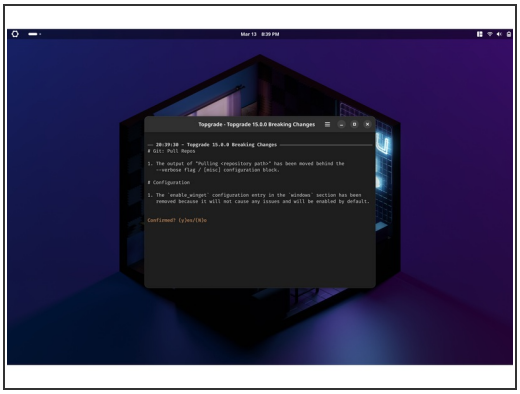
- Let's setup fingerprint login. Click on Activities, search for user.
- Choose Fingerprint Login. Then select Scan new fingerprint. Select your desired fingerprint. Carefully tap your finger tip on the sensor (power button). You may need to try a few attempts as everyone's prints are different.
- Once it's successful, you will see the word Complete.

⚠ If you're experiencing issues getting your fingerprint reader working, please contact support.

Step 11 — Getting to know Bazzite - Updates





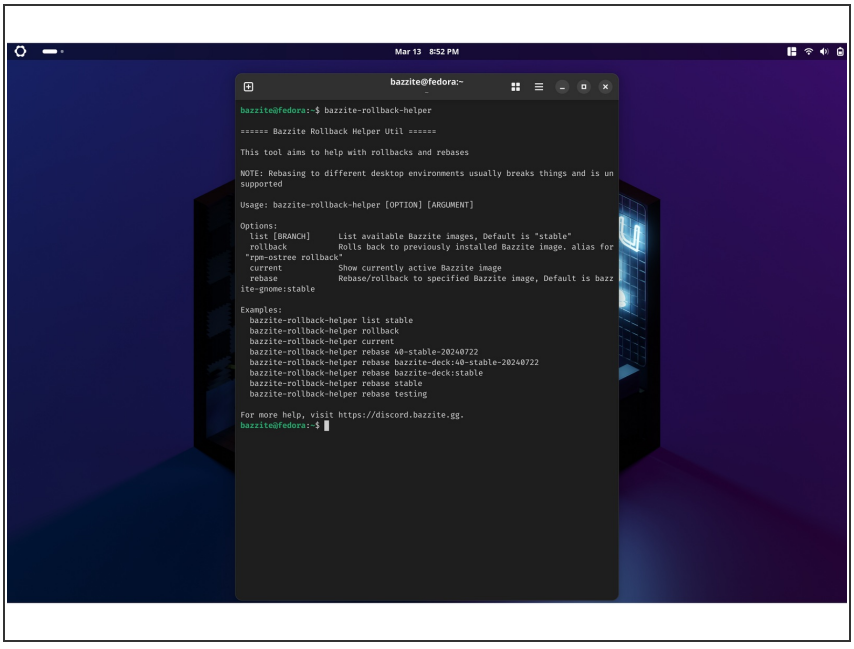


- Bazzite handles updates in two very specific ways. Automatically or Manually. If you never bother to manually update, Bazzite will do the work for you.

  ⓘ **Updates are completely automatic**. However, should you wish to run them manually, you can do so from the Framework icon you see in your upper left corner, select System Update.

  You will be asked to press Y for update. Press Y - no other keys are needed, it's updating. The update process checks for updates for your core system, Distrobox, Flatpacks and firmware.

Step 12 — Getting to know Bazzite - Rollbacks



- Bazzite is atomic and by its nature, is resilient. However, should something not work as expected due to a suspected regression - you can roll back your installation to a previous state. This is an automatic feature provided by Bazzite.

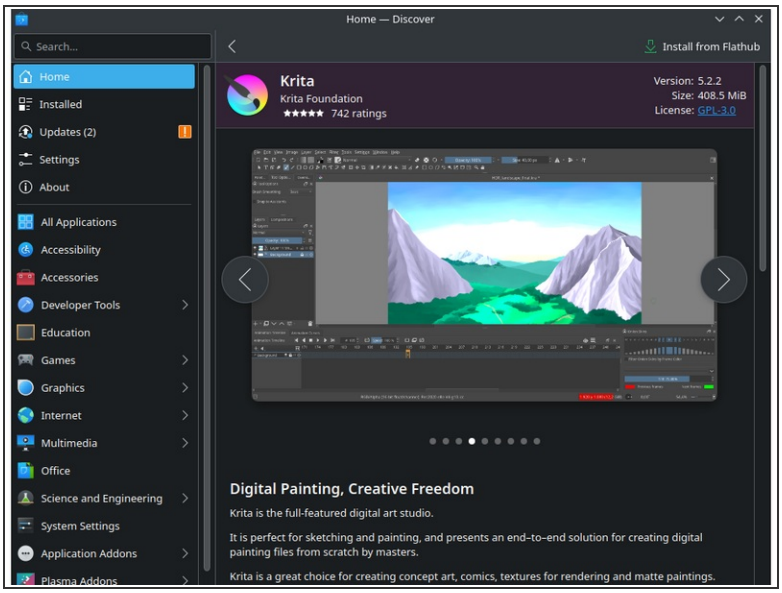
ⓘ Roll back to the image of your OS before the most recent batch up updates. Just run *bazzite-*

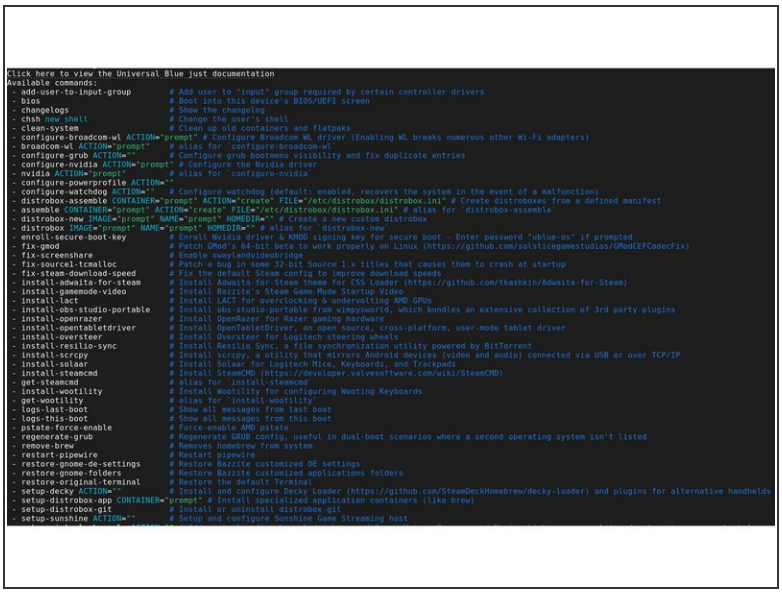
rollback-helper rollback in a terminal. Press enter, reboot when prompted.

⚠ You should not try pinning releases or moving to rebasing unless it is suggested by support or by someone from the Bazzite team.

ⓘ You can learn more about how the rollback system works here.

Step 13 — Getting to know Bazzite - Installing Software

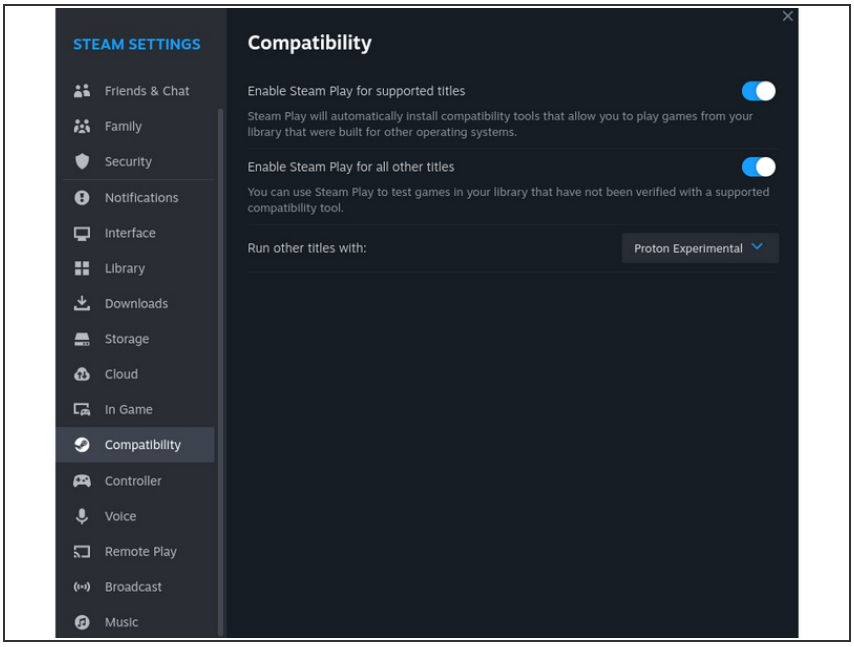




- Flatpaks. Installing Flatpaks is the recommended method to installing software. This is the primary method of installing applications on Bazzite and is recommended to use Flatpak over other formats for most software when possible.
- Ujust. Technically *ujust* is not a package format, but are convenience commands that automate tasks using scripts which can be utilized to install specific software.
- Homebrew. This is a package manager that installs packages to their own prefix, and is used strictly for command-line interface (CLI) and terminal user interface (TUI) applications. Do not install graphical applications or anything that may override system-level packages with Homebrew.

- Quadlet. Unlike the above options, this is a features of podman that allows a user to run a container as systemd units. It works by using a declarative syntax like docker compose but integrates to systemd and use podman as a backend.
- Distrobox. Run other minimal variants of popular Linux distributions in Bazzite inside of a container, and access each distribution's packages without any of their dependencies and libraries affecting the host machine.
- AppImage. A a universal package format that attempts to bundle every dependency that an application needs into one portable file. Applications installed as an AppImage can integrate with your desktop and be managed with Gear Lever which is pre-installed on Bazzite.
- Manage OS Rollbacks and Install RPMs. Bazzite uses bootc for core system image management and rpm-ostree for layered package and kernel argument modifications, maintaining a balance between an Atomic base and user customization.

Step 14 — Getting to know Bazzite - Gaming



- Steam. In Bazzite, Steam is installed and configured out of the box. It can run Windows games on Linux. It utilizes a wide range of projects and patches all packed into a piece of software built-in to Steam called Proton for Windows compatibility.

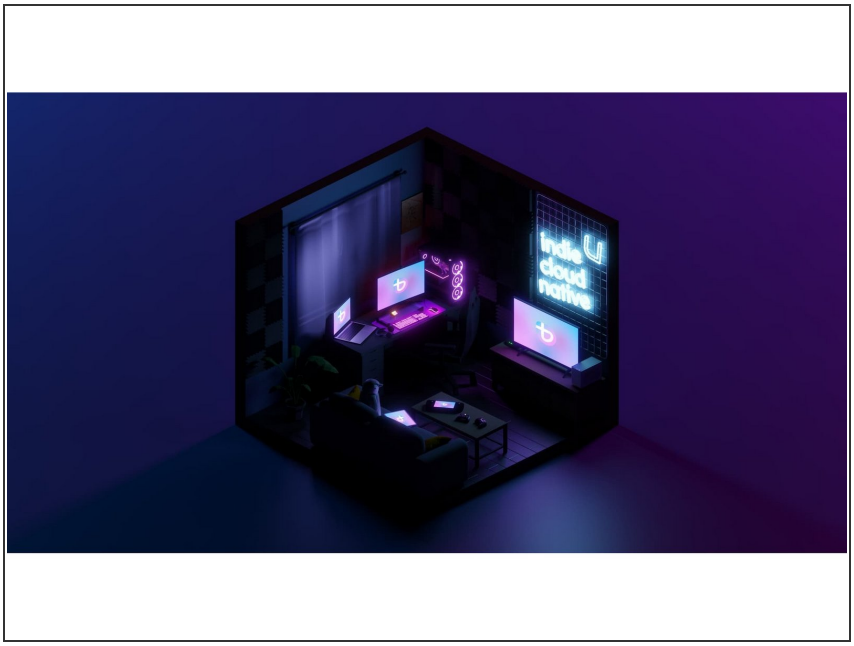
  ⚠ Currently Steam only allows whitelisted games to run by default on the desktop Steam client. You can change this by enabling this in Settings > Compatibility > Enable Steam Play for all other titles.

  ⓘ Common Gaming Issues. This provides a guide for some common issues and explains what your options are.

- **Auto-Mounting Game Drives**. Read the Auto-Mounting Secondary Drives Guide for more information. It is also recommended to do your own research on drive mounting on Linux.

- Lutris. A game management software that doubles as a WINE front-end for Windows games. Several games and launchers can be installed by searching for the title and using one of the installer scripts for it.

Step 15 — Completing Setup



- Making sure you are on the latest firmware. Bazzite automatic updates should handle this for you on Ryzen 7040 Series, Ryzen AI 300 Series, Intel® Core Ultra and other platforms with firmware updates provided by LVFS. As an alternative, you can also check for this manually by attaching to power, then running System Update manually again.
- So what additional installation tweaking needs to be done? That is it, you're done. Curious what else Bazzite can do? Take a look at their user guide here.

Step 16 — Understanding Graphics Modes - NVIDIA Hybrid Mode



- [x] Your Framework Laptop 16 with the NVIDIA dGPU module can operate in two primary graphics modes you will want to explore. You can switch between them in your laptop's BIOS settings.

⚠ To access this section of your BIOS: Tap F2 when you boot and see your Framework Splash screen (Framework logo). Arrow over to Setup utility. Click enter. Down arrow to Advanced on the left side. Right arrow to NVIDIA Mux. Enter key. Make your selection, press enter. Press F10 and press enter again to save changes and reboot.

⚠ The third option, Advanced Optimus, behaves like NVIDIA Hybrid Mode on Linux. So we will forgo it for this guide.

ⓘ NVIDIA Hybrid Mode (Traditional Optimus): This is the default and most battery-efficient mode.

- Display Path: The integrated AMD GPU (iGPU) is always connected to the display. When the NVIDIA GPU (dGPU) is used for a demanding task, it renders the frames and copies them to the iGPU to be shown on the screen.
- Switching: Applications run on the power-saving iGPU by default. Steam uses dGPU this automatically for games.
- Performance: Small but measurable latency and FPS penalty compared to direct dGPU output because every frame must traverse the iGPU.

- Power Behavior: The iGPU remains on at all times. The dGPU powers up only when needed and typically idles around 4–6 W (P8 power state). This is the most battery-efficient configuration.

Step 17 — Understanding Graphics Modes - NVIDIA GPU-Only (Discrete Mode)



Your Framework Laptop 16 with the NVIDIA dGPU module can operate in two primary graphics modes you will want to explore. You can switch between them in your laptop's BIOS settings.

⚠ To access this section of your BIOS: Tap F2 when you boot and see your Framework Splash screen (Framework logo). Arrow over to Setup utility. Click enter. Down arrow to Advanced on the left side. Right arrow to NVIDIA Mux. Enter key. Make your selection, press enter. Press F10 and press enter again to save changes and reboot.

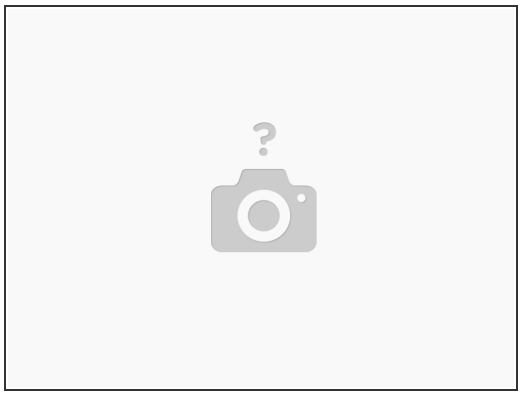
⚠ The third option, Advanced Optimus, behaves like NVIDIA Hybrid Mode on Linux. So we will forgo it for this guide.

ⓘ NVIDIA GPU-Only (Discrete Mode)

- Display Path The dGPU drives the panel 100% of the time. The iGPU is fully disabled.

- Switching: No switching possible without reboot — you must go back into BIOS or flip the MUX manually to return to Hybrid mode.
- Performance: Maximum performance and lowest latency, because there is no iGPU in the pipeline.
- Power Behavior Highest power draw. The dGPU cannot power down and battery life is significantly shorter, even at idle.

Step 18 — Recommended: Updating to the latest firmware

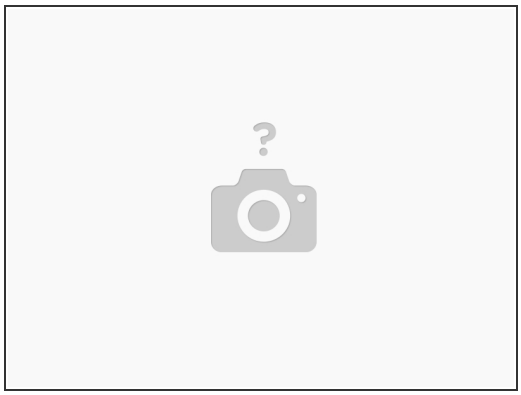


- Want to check the BIOS version? Go to and click upper left corner where you see the Framework gear launcher, click Terminal. Type in *ujust bios-info*, click the enter key.
- The output will tell you which Framework Laptop 16 you have and also which BIOS version you're using. This section is best suited for both LVFS and EFI options, depending on your hardware. While LVFS is part of the Bazzite update process, you can still do this manually as well.

⚠ Framework Laptop 16 (AMD Ryzen™ 7040 Series), you can check here for the latest firmware.

⚠ For Framework Laptop 16 AMD Ryzen AI 300 Series, you can check here for the latest firmware.

Step 19 — Bazzite Troubleshooting



- As a general rule, your Bazzite installation experience should be nearly flawless. That said, there are exceptions.
  - Bazzite's Installation Troubleshooting Guide.
  - Bazzite Maintenance Scripts.
  - Bazzite Troubleshooting Scripts.
  - When reaching out to Support, indicate you are running Bazzite and then create the following text files below, include them in your reply to support's first email to you:
    - *ujust logs-last-boot > last-boot.txt*
    - *ujust logs-this-boot > this-boot.txt*
    - *sudo bootc status > bootc.txt*

Enjoy using Bazzite on your Framework Laptop 16!