



LINUX MINT 22 · CINNAMON · APT · FLATPAK

Linux Mint Handbook

Installation guide

Install Linux Mint step by step. Making the install USB with Rufus, starting from the USB, every installer screen, the first start, the Update Manager, installing alongside Windows and common problems.

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Yellow italic text (like *<package>*) marks the parts you fill in. In the terminal, paste is Ctrl+Shift+V and copy is Ctrl+Shift+C. Commands that start with `sudo` change the system; read what they do before running them.



sudogrimoire.com/mint/

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Before you start

Set aside half an hour for these. Most installation problems come from skipping them.

TIP System requirements. 64-bit processor, at least 2 GB RAM (4 GB recommended), at least 20 GB of disk (100 GB recommended).

TIP Back up. Installing can erase the disk. Copy your documents, photos and browser bookmarks to an external drive or the cloud, and open one or two files from the copy to be sure it worked.

TIP A USB drive of 8 GB or more. Writing erases everything on it, so use an empty one.

TIP Your Wi-Fi password. Write it down; the installer asks for it.

TIP Keeping Windows on the same computer? Save your BitLocker recovery key first. On your phone, open aka.ms/myrecoverykey, sign in with the Microsoft account you use on this computer, and take a photo of the key. Windows may ask for it once after you install Linux.

TIP Download the ISO: linuxmint.com/download.php. Choose the **Cinnamon Edition** (the most popular) and download it from a mirror near you. Xfce is lighter for older computers.

Keep Windows or not?

Decide this before you start. It changes one choice in the installer.

Not sure yet

The Mint USB drive starts a live desktop first. Use Mint from the USB drive without installing; your computer stays exactly as it is.

Only Linux Mint

Back up your files, then let the installer use the whole disk. This is the simplest path. It erases Windows and everything else on the disk.

Linux Mint and Windows

Follow “Installing alongside Windows” below. Set aside an extra half hour: you first make room on the disk in Windows, then share it in the installer.

Making the install USB

You can't simply copy the downloaded file (the ISO) onto the USB drive. A small program writes it so the computer can start from it.

1 Download Rufus

Get Rufus from **rufus.ie**; the "Portable" version needs no installing. Download the Linux Mint ISO from **linuxmint.com/download.php** (Cinnamon Edition). Plug in the USB drive.

2 Open Rufus

In **File Explorer** > **Downloads**, double-click **rufus**. When Windows asks for permission, click **Yes**.

3 Pick the USB drive and the ISO

Under **Device**, make sure your USB drive is selected. Click **SELECT**, pick the Linux Mint ISO and click **Open**.

4 Start

Rufus fills in the other settings by itself. Leave them as they are, and click **START**.

5 Keep ISO Image mode

Keep **"Write in ISO Image mode (Recommended)"**, and click **OK**.

6 Confirm and wait

Rufus warns that it will erase everything on the USB drive. Check the name and size, then click **OK**. When the bar turns green and says **READY**, click **CLOSE**.

TIP On macOS or Linux, use **balenaEtcher** (etcher.balena.io), or the **USB Image Writer** app on another Mint computer.

WARNING Writing erases the selected drive completely. Before you press the final button, check that the drive name and size belong to your USB drive and not to your backup disk.

Starting the computer from the USB

A computer normally starts from its own disk. To start it from the USB drive, you open a one-time boot menu.

1 Plug in the USB and restart

Leave the USB drive plugged in and restart the computer.

2 Press the boot menu key

As soon as the screen turns on, tap the key for your brand (see the list below) again and again until a menu appears.

3 Choose the USB drive

Select your USB drive with the arrow keys and press Enter. If it appears twice, choose the one that starts with "UEFI:".

Boot menu key

Dell F12 · HP F9 or Esc · Lenovo F12 (Novo button on some models) · ASUS F8 or Esc · Acer F12 · MSI F11 · Gigabyte F12

TIP No luck with the key? Start from Windows instead: Settings > System > Recovery > Advanced startup > **Restart now**, then **Use a device** and pick your USB drive.

TIP Secure Boot. Linux Mint starts with Secure Boot on, so you don't need to change anything. Drivers added later, such as NVIDIA's, need one extra step, covered in the Advanced tab.

TIP If the USB drive isn't in the menu, or the installer later says it can't find a disk, see **Installation problems** near the end.

Installing alongside Windows (optional)

Only for the "Linux Mint and Windows" path. If Linux Mint will be the only system, skip this section.

1 Turn off Fast Startup

Windows' Fast Startup leaves the disk half shut down, and that can damage files. Open **Control Panel > Power Options > Choose what the power buttons do**. Click **Change settings that are currently unavailable**, clear **Turn on fast startup** and click **Save changes**.

2 Open Disk Management

Right-click the **Start** button and click **Disk Management**.

3 Shrink the C: drive

Right-click the **C:** partition and click **Shrink Volume**. In **Enter the amount of space to shrink in MB**, type at least **51200** (50 GB); 102400 (100 GB) gives you more room. Click **Shrink**.

4 Leave the new space empty

A black bar labeled **Unallocated** appears next to C:. Leave it as it is: do not create a partition and do not format it. The installer uses this space.

5 Pick the free space in the installer

In the installer, choose "Install Linux Mint alongside Windows Boot Manager". Never choose the option that erases the whole disk.

6 Choose the system at every start

After installing, a menu appears at every start. Pick Linux Mint or Windows with the arrow keys and press Enter. If the computer goes straight into Windows, see "Installation problems".

TIP If Windows asks for the BitLocker recovery key once after this, type the key you saved in "Before you start".

Installation steps

Start the computer from the USB drive. Mint first opens a live desktop, so you can try it before installing. These steps are for Linux Mint 22.3 Cinnamon.

1 Start menu

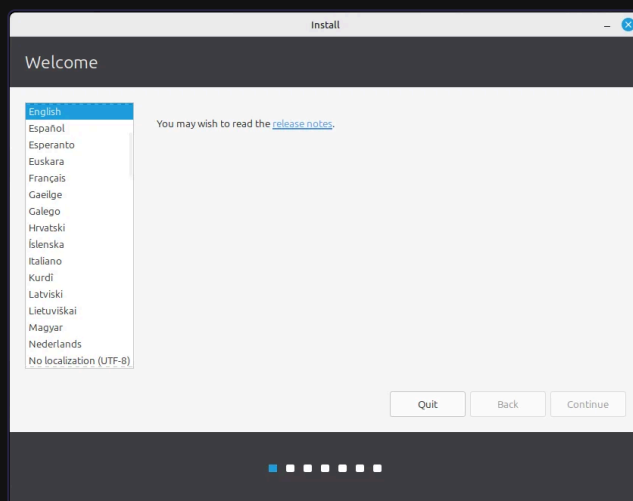
In the first menu, keep **“Start Linux Mint”** and press Enter. The live desktop opens after a minute or two.

2 Open the installer

Double-click **Install Linux Mint** on the desktop.

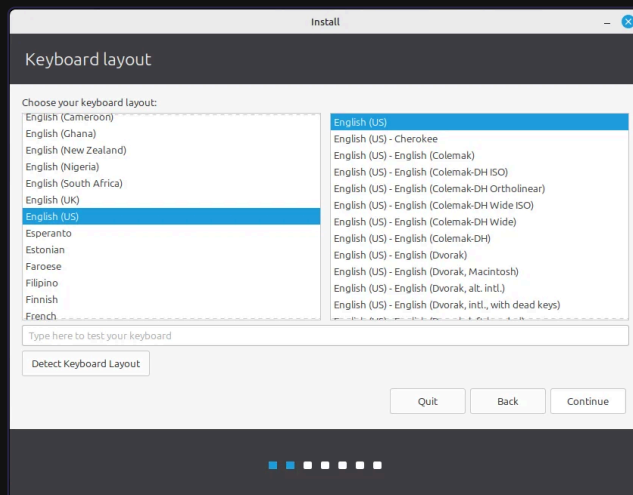
3 Language

Choose your language, and click **Continue**.



4 Keyboard

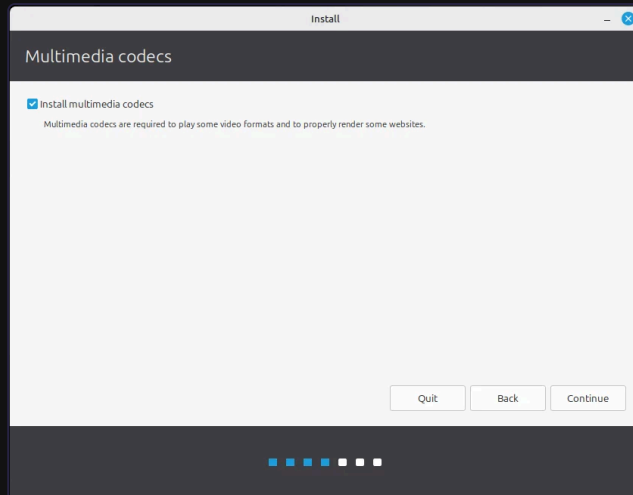
Pick your keyboard layout. You can test it in the box below. Click **Continue**.



5

Multimedia codecs

Tick **“Install multimedia codecs”** so videos, music and some websites work right away. Click **Continue**.

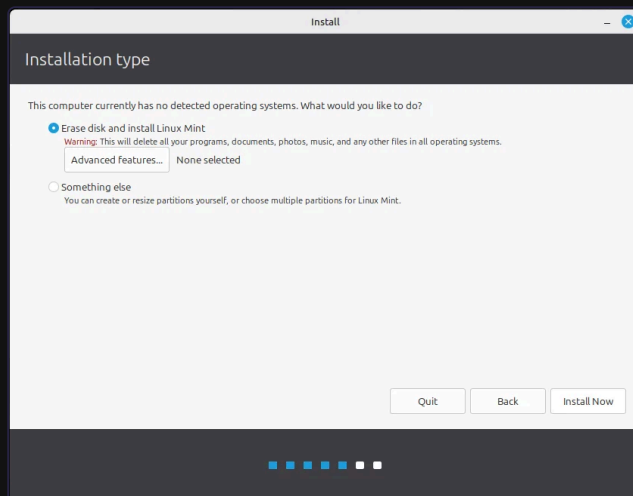


6

Installation type

“Erase disk and install Linux Mint”

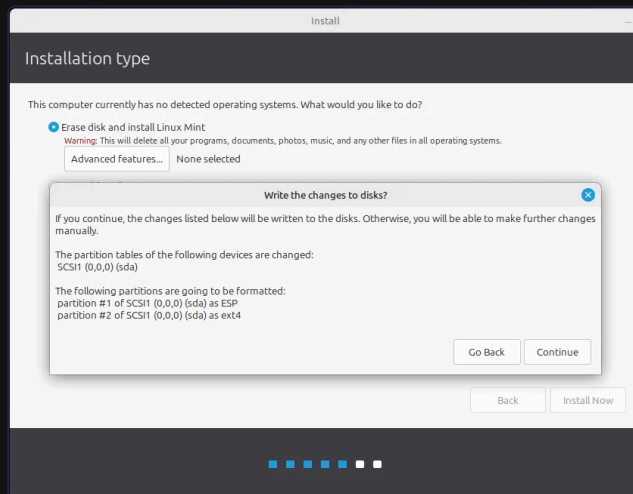
uses the whole disk and deletes everything on it. To keep Windows, follow **“Installing alongside Windows”** instead. **Advanced features** offers LVM and disk encryption. Click **Install Now**.



7

Confirm the changes

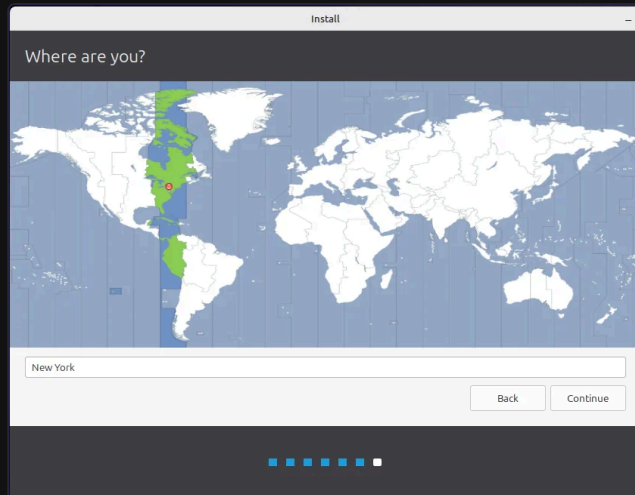
Mint lists the partitions it will create. Click **Continue**.



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Time zone

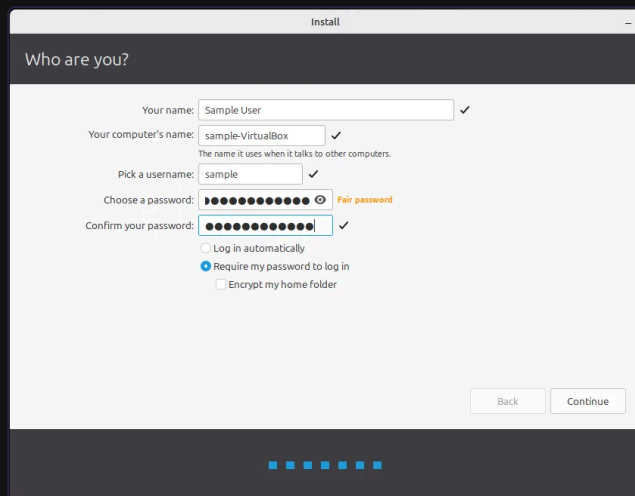
Click the map, or type your city. Click **Continue**.



9

Your account

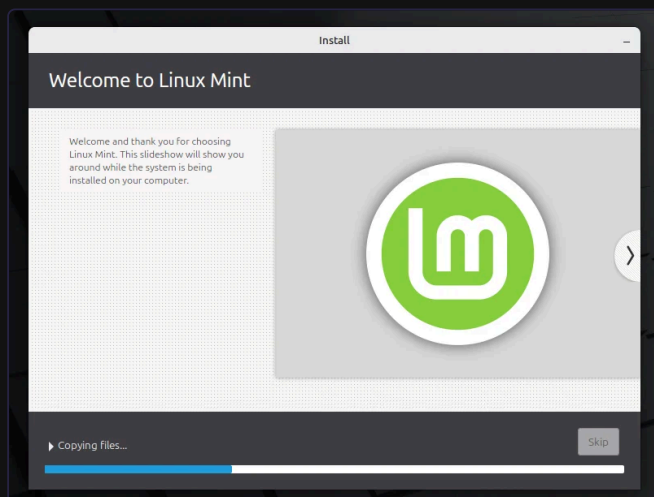
Type your name; Mint fills in the computer name and the username. Type a password twice. You use it to log in and to install software. Click **Continue**.



10

Wait while it installs

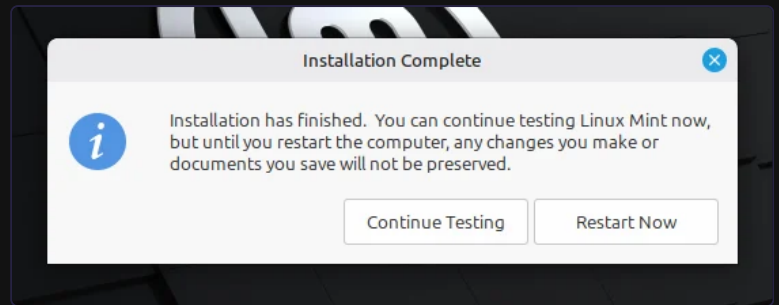
Mint copies its files and shows a short slideshow. This takes 10 to 20 minutes.



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Restart

When it says **Installation Complete**, click **Restart Now**.

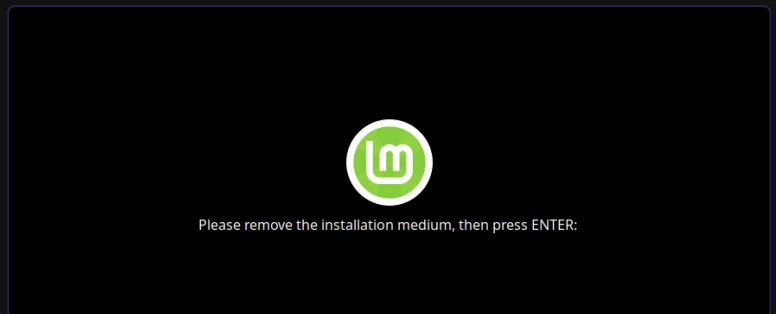


First start

After the restart, Mint starts from the disk and shows a Welcome screen with useful first steps.

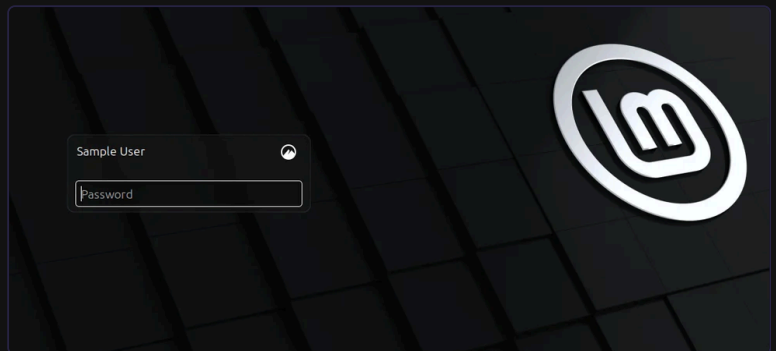
1 Remove the USB drive

When you see "Please remove the installation medium", pull out the USB drive and press Enter.



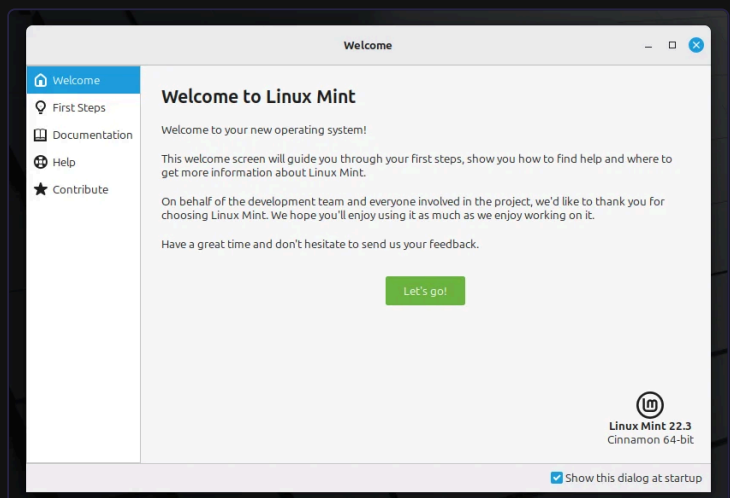
2 Log in

Type your password and press Enter.



3 Welcome

The Welcome screen opens. **First Steps** covers desktop colors, Timeshift system snapshots, the Driver Manager and the firewall. You can come back to it from the menu at any time.



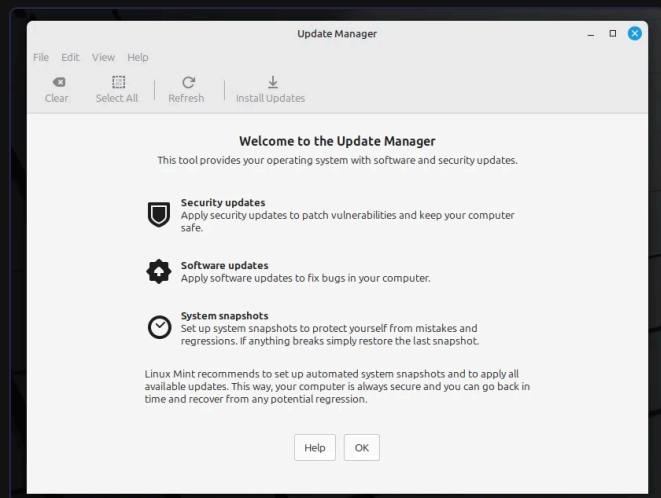
TIP Mint sends no usage or crash data; there are no privacy questions to answer.

Right after installing

Your new system is ready. Do these two things first, then carry on with the Beginner book.

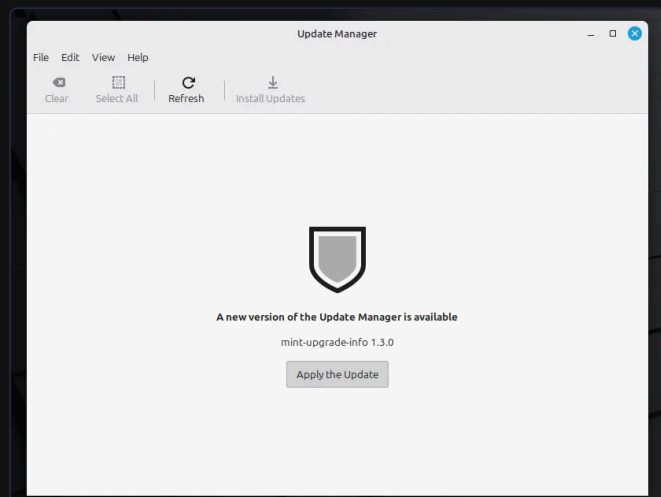
1 Open the Update Manager

Click the shield icon at the bottom right of the panel. The first time, read the welcome page and click **OK**.



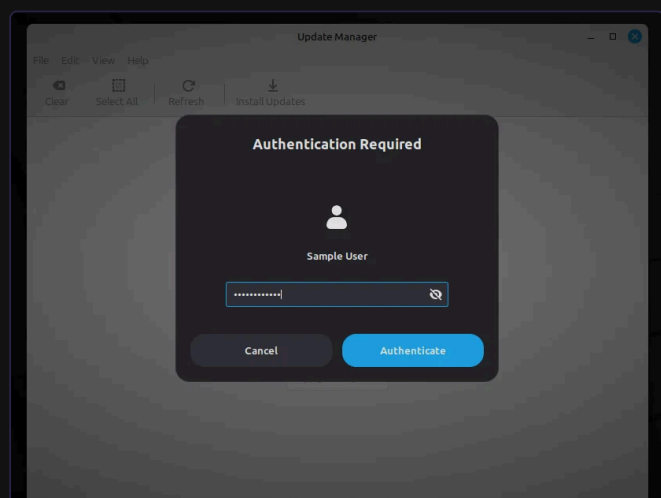
2 Update the Update Manager

If it says a new version of the Update Manager is available, click **Apply the Update** first. Mint may ask whether to switch to a local mirror; **No** is fine.



3 Type your password

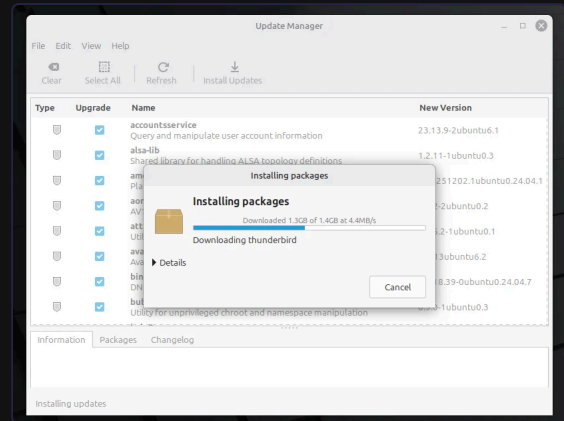
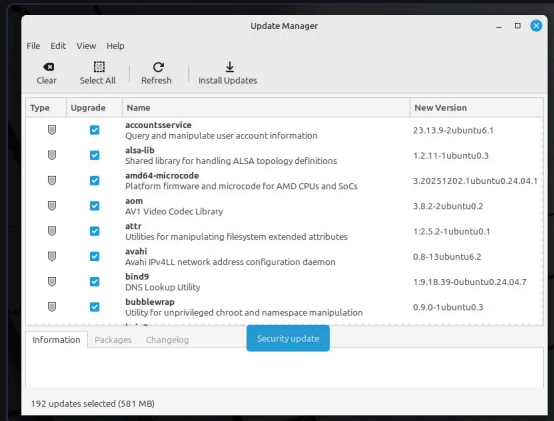
Type your password, and click **Authenticate**.



4

Install Updates

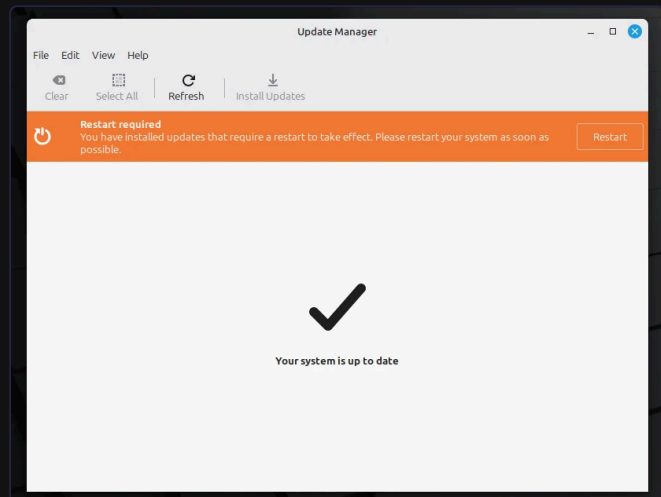
The list of updates appears. Click **Install Updates**, and type your password again if asked.



5

Restart

When it says “Your system is up to date” and shows **Restart required**, restart the computer.



TIP Next, open the **Beginner** tab. Its “After installing” section walks you through apps, drivers and settings one step at a time.

Installation problems

TIP The USB drive isn't in the boot menu. Plug it into another port (on a desktop, one on the back) and try again. If it still doesn't show, write the USB drive again.

TIP Black screen or freeze while starting from the USB (common with NVIDIA cards). In the USB drive's first menu, choose **Start Linux Mint (compatibility mode)**. After installing, set up the graphics driver as shown in the Beginner book.

TIP The installer can't find a disk. Many new laptops keep the disk in a mode called Intel RST or VMD. You can change it in the firmware settings, but if Windows is on the same disk, Windows may stop starting. Read "Intel RST / VMD" in the last section before changing anything.

TIP Secure Boot or signature error. The download may be damaged. Download the ISO again and write the USB drive again. On very old computers, turning Secure Boot off in the firmware settings also helps.

TIP No Wi-Fi in the installer. Use a network cable, or connect your phone with a USB cable and turn on USB tethering. You can install the missing Wi-Fi driver afterwards.

TIP The computer goes straight into Windows. Open the boot menu (see "Starting the computer from the USB") and pick Linux Mint. To make it permanent, move Linux Mint (or "GRUB", "Linux Boot Manager") to the top of the boot order in the firmware settings (F2 or Delete at startup).

TIP Windows asks for a BitLocker recovery key. Type the key you saved. It happens once.

For experienced users (optional)

A normal installation needs nothing from this section. It collects command-line alternatives and fixes for special cases.

```
$ sha256sum <file>.iso
```

Checks the downloaded ISO on Linux. The result must match the CHECKSUM/SHA256 value on the download page.

```
PS> Get-FileHash <file>.iso -Algorithm SHA256
```

The same check in Windows PowerShell.

```
$ shasum -a 256 <file>.iso
```

The same check on macOS.

```
$ lsblk
```

On Linux, find the USB drive's name (e.g. /dev/sdb). Use the disk itself, not a partition (sdb1).

```
$ sudo dd if=<file>.iso of=/dev/<sdX> bs=4M  
status=progress oflag=sync
```

Writes the ISO straight to the USB drive on Linux.

WARNING `dd` erases the selected disk without asking. Check the name twice.

TIP Ventoy: prepare the USB drive once, then copy several ISO files onto it and pick one at startup. Handy for trying several systems.

TIP Rufus write mode. If a USB drive written in ISO mode doesn't start, write it again and choose "DD image mode" when Rufus asks.

```
PS> manage-bde -protectors -get C:
```

Shows the BitLocker recovery key (Terminal as administrator).

```
PS> Suspend-BitLocker -MountPoint C: -  
RebootCount 3
```

Pauses BitLocker for the next three restarts so boot changes don't trigger the recovery screen.

```
PS> powercfg /h off
```

Turns off Fast Startup and hibernation in one go.

```
PS> reg add  
HKLM\SYSTEM\CurrentControlSet\Control\TimeZoneIn  
formation /v RealTimeIsUniversal /t REG_DWORD /d  
1 /f
```

Fixes the wrong clock in Windows after using Linux (Windows then keeps the hardware clock in UTC like Linux).

TIP nomodeset by hand. In the USB drive's boot menu, highlight the entry, press `e`, add `nomodeset` to the end of the line that starts with `linux`, and start with Ctrl+X (or F10). It applies to that start only.

TIP Intel RST / VMD. In the firmware, set SATA mode to AHCI or turn VMD off. If Windows is on the same disk, first make Windows start once in Safe Mode (`bcdedit /set {current} safeboot minimal`, restart, change the firmware setting, then `bcdedit /deletevalue {current} safeboot` in Safe Mode) or Windows won't start.

```
$ sudo apt update && sudo apt upgrade && flatpak  
update
```

Installs all updates from the terminal.

```
$ lsblk -f && df -h /
```

Shows the partitions and free space after installing.

```
$ ls /sys/firmware/efi
```

If the folder exists, you installed the system in UEFI mode.

Commands are written for Linux Mint 22 Cinnamon (based on Ubuntu 24.04 LTS; APT, Flatpak). Most of them also work on the Xfce and MATE editions. Menu names follow the English interface. Commands that start with `sudo` change the system; read what they do before running them.