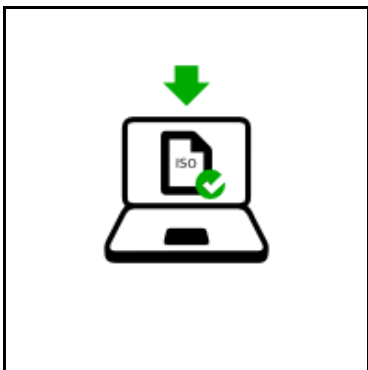()

Installation Assistant

Installing Tails on a USB stick from Linux

Start in Linux.

7. Download and verify the Tails ISO image

In this step you will download Tails as an ISO image: a single file containing the whole operating system. For your security, it is very important to also verify your download. We propose you two techniques to do this verification automatically.

We detected that you are running Firefox or Tor Browser.
You can download the ISO image via our Firefox add-on. The add-on verifies your download
.

> The verification is based on a cryptographic checksum downloaded from our website.

Install Firefox add-on   **No restart**
(https://addons.mozilla.org/firefox/downloads/latest-beta/673020/addon-673020-latest.

or

> Your BitTorrent client verifies your download automatically based on a cryptographic checksum in the Torrent file.
> Download Torrent file (https://tails.boum.org/torrents/files/tails-i386-1.8.2.torrent)

7. Install an intermediary Tails

In this step, you will install an intermediary Tails by copying the Tails ISO image on a first USB stick using a program called *GNOME Disks*.

> On this intermediary Tails you won't benefit from important features like automatic security upgrades or the possibility to store some of your documents and configuration in an encrypted storage.

> All the data on this USB stick will be lost.
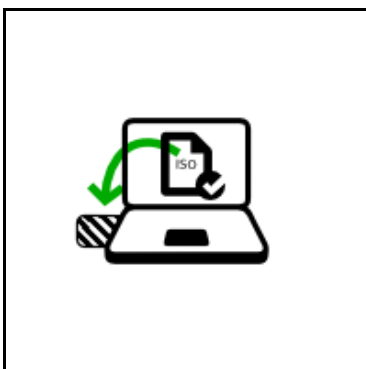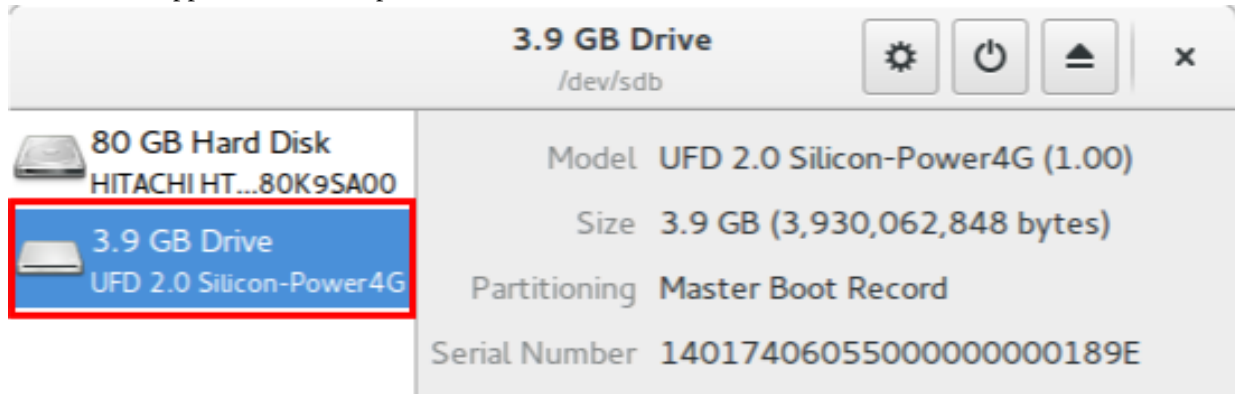
1. Install *GNOME Disks*.

- If you are using the GNOME desktop environment, *GNOME Disks* should be installed by default.
- Otherwise, install the `gnome-disk-utility` package using the usual installation method for your Linux distribution.

2. Start *GNOME Disks* (also called *Disks*).

   For example, you can choose **Applications ▸ Utilities ▸ Disks**.
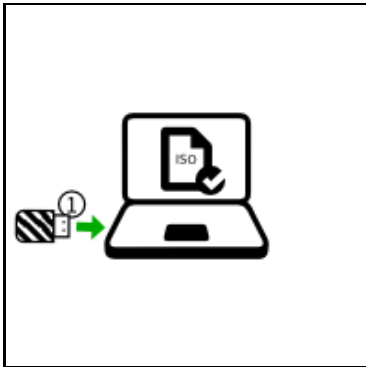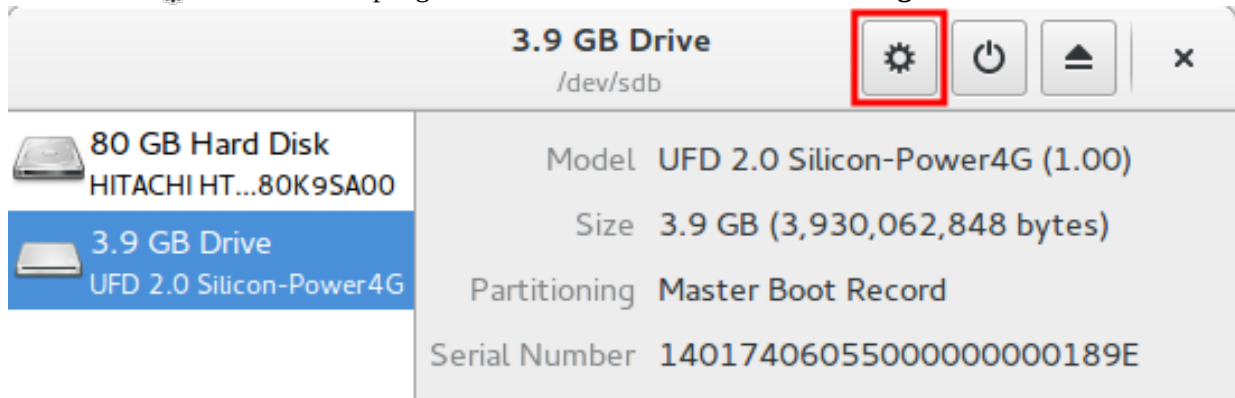

3. Plug the first USB stick in the computer.

   A new drive appears in the left pane. Click on it.

4. Click on the ⚙ button in the top-right corner and choose **Restore Disk Image…**.

If your version of *GNOME Disks* is old and has no ⚙ button, you have to .

Install an intermediary Tails using the command line

1. Take note of the *device name* of the first USB stick as displayed in the right pane. The device name should be something like `/dev/sdb` , `/dev/sdc` , etc.

> If you are not sure about the device name, you should stop proceeding or you risk overwriting any hard disk on the computer.

1. Open a terminal.
2. Execute the following command, replacing `[tails.iso]` with the path to the ISO image that you want to install and `[device]` with the device name found in step 1.

```
dd if=[tails.iso] of=[device] bs=16M && sync
```

Here is an example of command to execute, yours is probably different:

```
dd if='/home/amnesia/tails-2.0.iso' of=/dev/sdc bs=16M && sync
```

> If you are not sure about the path to the ISO image or if you get a **No such file or directory** error message, you can first type `dd` , followed by a space, and then drag and drop the icon of the ISO image from a file browser onto the terminal. Doing so should insert the correct path to the ISO image in the terminal. Then complete the command and execute it.

1. If no error message is returned, Tails is being install on the USB stick. The installation takes a few

minutes.

You can now continue with the next step and Open these instructions on another device (./usb.html#intermediary).

5. In the **Restore Disk Image** dialog, click on the file selector button and choose the ISO image that you downloaded earlier.
6. Click on the **Start Restoring…** button.
7. In the confirmation dialog click **Restore**. The installation takes a few minutes.
8. After the installation is finished, click on the ⏏ button.

Intermediary Tails

Cool, you now have an intermediary Tails on your first USB stick. You will soon have to restart your computer on this USB stick. It can be a bit tricky, so good luck!

7. Open these instructions on another device
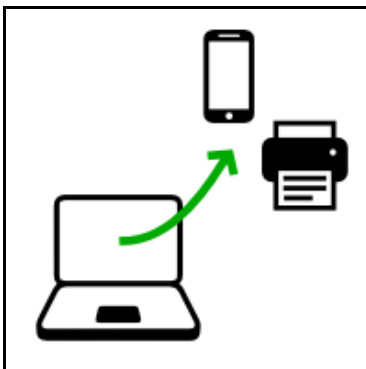
In the next step, you will shut down the computer. To be able to follow the rest of the instructions afterwards, we recommend you either:

- Open this page on your smartphone, tablet, or another computer (recommended).
- Print the rest of the instructions on paper.
- Take note of the URL of this page to be able to come back later:
  `https://tails.boum.org/install/linux/usb/`

7. Restart on the intermediary Tails

1. Shut down the computer while leaving the first USB stick plugged in.
2. Switch on the computer.
3. If the computer starts on Tails, the **Boot Tails** menu appears. Choose **Live** and press **Enter**.

Most computers do not start on Tails by default. If it does you are lucky.
Otherwise, if the computer starts on Linux, refer to the troubleshooting section
about .

Tails does not start at all (troubleshooting)

The following section applies if the **Boot Tails** menu does not appear when starting on a USB
stick.

It is quite common for computers not to start automatically on a USB stick with Tails installed.
Here are two troubleshooting techniques. You should try them one after the other.

GETTING TO THE BOOT MENU

On most computers, you can press a *boot menu key* to display a list of possible devices to start
from. The following instructions explain how to display the boot menu and start on the USB stick.
The following screenshot is an example of such boot menu:

1. Shut down the computer.
2. Make sure that the first USB stick is plugged in the computer.
3. Identify the potential boot menu keys for the computer depending on the computer manufacturer
   in the following list:

Manufacturer	Key
Acer	Esc, F12, F9
Asus	Esc, F8
Dell	F12
Fujitsu	F12, Esc
HP	Esc, F9
Lenovo	F12, Novo, F8, F10
Samsung	Esc, F12, F2
Sony	F11, Esc, F10
Toshiba	F12
others…	F12, Esc

4. Switch on the computer.
   Immediately press several times the first potential boot menu key identified in step 3.
   a. If a boot menu with a list of devices appears, select your USB stick and press **Enter**.
   b. If the computer starts on another operating system, then:
   1. Shut down the computer.
   2. Press-and-hold the potential boot menu key identified in step 3.
   3. Switch on the computer again while holding the potential boot menu key pressed.
   a. If a boot menu with a list of devices appears, select your USB stick and press **Enter**.
   b. If the computer starts on another operating system or returns an error message, then shut down the

computer again and repeat step 4 for all the potential boot menu keys identified in step 3.
If none of the potential boot menu keys identified in step 3 work or if the USB stick does not
appear in the list, then try the second troubleshooting technique described below.

EDIT THE BIOS SETTINGS

You might need to edit the BIOS settings of the computer.

> Search for the user manual of the computer on the website of its
> manufacturer to learn how to edit the BIOS settings: Acer
> (http://us.acer.com/ac/en/US/content/drivers](http://us.acer.com/ac/en
> /US/content/drivers) , Asus (https://www.asus.com/us/support/](https:
> //www.asus.com/us/support/) , Dell (https://www.dell.com/support
> /home/us/en/19/Products/](https://www.dell.com/support/home/us/en/19
> /Products/) , Fujitsu (https://www.fujitsu.com/global/support/products
> /software/manual/](https://www.fujitsu.com/global/support/products
> /software/manual/) , HP (https://support.hp.com/us-en/products/](https:
> //support.hp.com/us-en/products/) , Lenovo (http://support.lenovo.com
> /us/en/](http://support.lenovo.com/us/en/) , Samsung
> (http://www.samsung.com/us/support/downloads](http:
> //www.samsung.com/us/support/downloads) , Sony
> (http://esupport.sony.com/US](http://esupport.sony.com/US) , or
> Toshiba (http://support.toshiba.com/support/products?cat=Computers]
> (http://support.toshiba.com/support/products?cat=Computers) .

In the BIOS settings, try to apply the following changes one by one and restart the computer after
each change. Some changes might not apply to certain computer models.

> Take note of the changes that you apply to the BIOS settings, to be able to
> revert them if they prevent the computer to start on its usual operating
> system.

1. Edit the **Boot Order**. Depending on the computer model you might see an entry for **removable
   devices** or **USB media**. Move this entry to the top of the list to force the computer to try to start
   from the first USB stick before starting from the internal hard disk.
2. Disable **Fast boot**.
3. If the computer is configured to start with **legacy BIOS**, try to configure it to start with **UEFI**.
   Else, if the computer is configured to start with **UEFI**, try to configure it to start with **legacy
   BIOS**. To do so, try any of the following options if available:
   - Enable **Legacy mode**
   - Disable **Secure boot**
   - Enable **CSM boot**

- Disable **UEFI**

4. Try to upgrade the BIOS to the latest version provided by the manufacturer.
   If none of these options work, please report the problem to our support team (../../doc/first_steps /bug_reporting/tails_does_not_start.html).

> We are sorry but you might not be able to use Tails on this computer.

---

4. After 30–60 seconds, another screen called *Tails Greeter* appears.
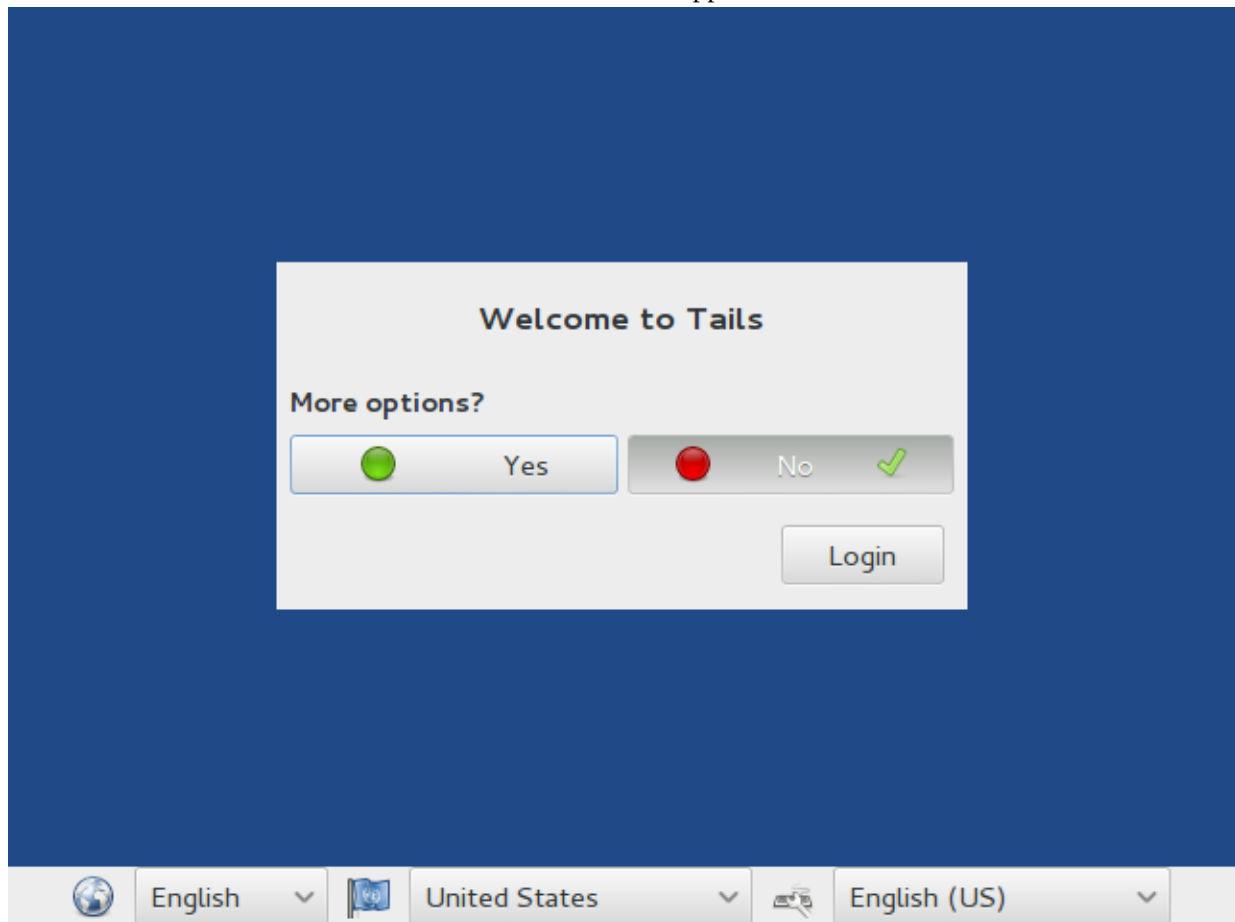
> If the computer stops responding or displays error messages before getting to *Tails Greeter*, refer to the troubleshooting section about .

Tails does not start entirely (troubleshooting)

The following section applies if the **Boot Tails** menu appears but not *Tails Greeter* when starting Tails.

1. Restart the computer on the first USB stick.
2. In the **Boot Tails** menu, choose the **failsafe** mode which might work better on some computers.
3. If the **failsafe** mode does not work better, restart the computer again on the first USB stick.
4. In the **Boot Tails** menu, press **TAB**. A command line with a list of boot options appears at the bottom of the screen.


5. Press the **Backspace** key several times to remove the `quiet` option from the command line.
6. Type `debug nosplash` to add these options to the command line.
7. To start Tails, press **Enter**.
8. Hopefully, error messages now appear when starting Tails. You can send them to our support team by email (../../support/talk.html), for example by taking a picture of the last screen and error messages.
9. If the error message is `/bin/sh: can't access tty; job control turned off` followed by `(initramfs)`, then try removing the `live-media=removable` option from the boot command line.

   If removing `live-media=removable` allows you to start Tails, please report the problem to our support team (../../support/talk.html). This contributes to improving the list of problematic

USB sticks (../../support/known_issues.html#problematic-usb-sticks). Then try installing Tails on another USB stick.

> Removing the `live-media=removable` option might be dangerous.
> If an adversary had access to the computer and installed a malicious Tails
> on an internal hard disk, the computer might start on the malicious Tails
> instead of on the USB stick.

5. In *Tails Greeter,* select your preferred language in the drop-down list on the bottom left of the screen. Click **Login**.
6. After 15–30 seconds, the Tails desktop appears.
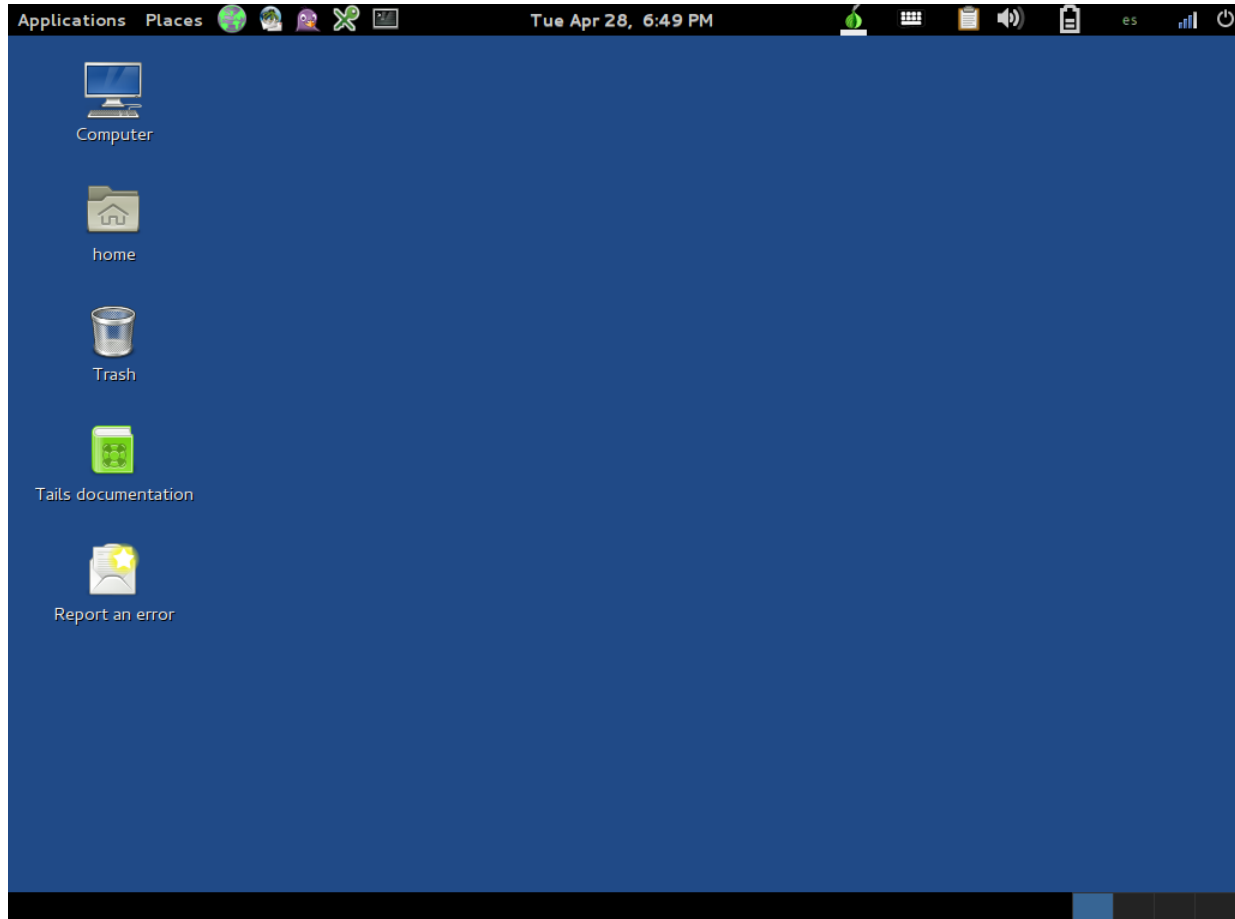
> The most difficult part is over! Now grab your second USB stick
> as it is time to install the final Tails on it.
> It is important to install the final Tails as it allows you to store

some of your documents and configuration and benefit from automatic security upgrades.
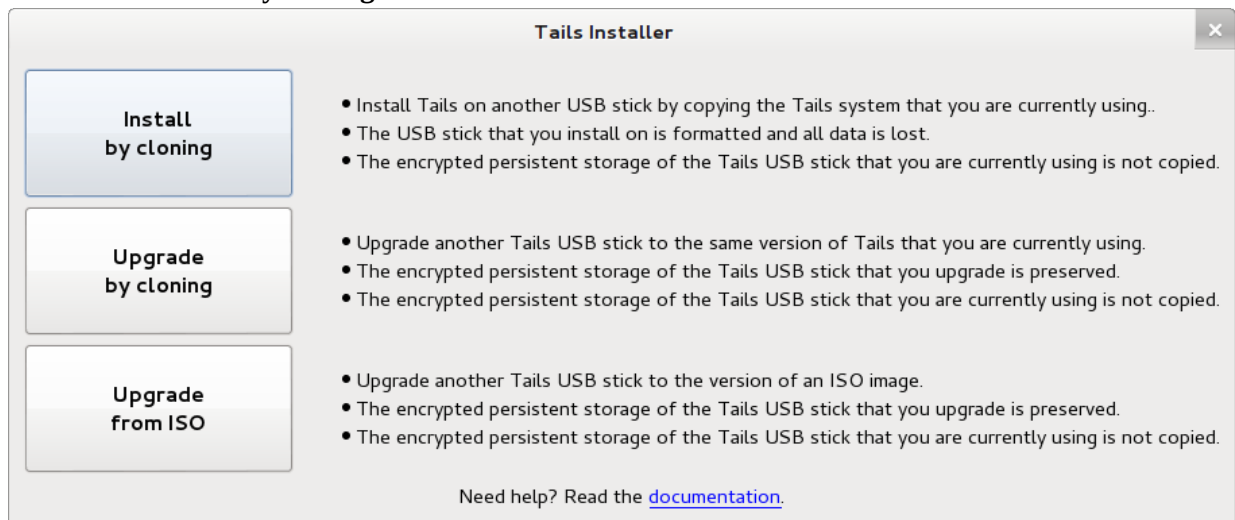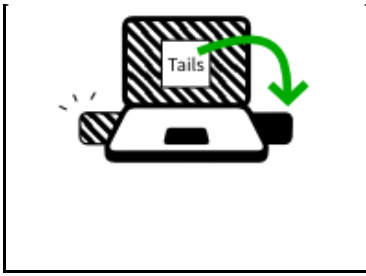
7. Install the final Tails

In this step, you will install the final Tails on a second USB stick using *Tails Installer*.

All the data on this USB stick will be lost.
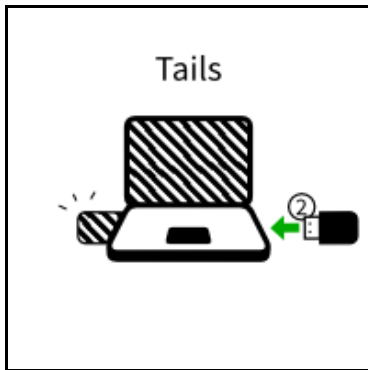
1. Plug the second USB stick in the computer.
2. Choose **Applications ▸ Tails ▸ Tails Installer** to start *Tails Installer*.
3. Click on the **Install by cloning** button.

4. Choose the second USB stick in the **Target Device** drop-down list.

5. To start the installation, click on the **Install Tails** button.

6. Read the warning message in the pop-up window. Click **Yes** to confirm.

   The installation takes a few minutes. At the end of the installation, you are asked for your administration password.

   > The progress bar usually freezes for some time around 95 percent while synchronizing data on disk.

7. Close *Tails Installer*.

'7. Restart on the final Tails

1. Shut down the computer.
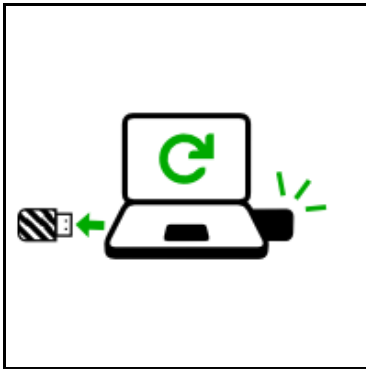
2. Unplug the first USB stick and leave the second USB stick plugged in.

3. Switch on the computer.

   > Some computers start successfully on the intermediary Tails but fail to start on the final Tails. If this is your case, refer to the troubleshooting section about .

Tails does not start at all (troubleshooting)

The following section applies if the **Boot Tails** menu does not appear when starting on a USB stick.

It is quite common for computers not to start automatically on a USB stick with Tails installed. Here are two troubleshooting techniques. You should try them one after the other.

GETTING TO THE BOOT MENU

On most computers, you can press a *boot menu key* to display a list of possible devices to start from. The following instructions explain how to display the boot menu and start on the USB stick. The following screenshot is an example of such boot menu:

1. Shut down the computer.
2. Make sure that the first USB stick is plugged in the computer.
3. Identify the potential boot menu keys for the computer depending on the computer manufacturer in the following list:

Manufacturer	Key
Acer	Esc, F12, F9
Asus	Esc, F8
Dell	F12
Fujitsu	F12, Esc
HP	Esc, F9
Lenovo	F12, Novo, F8, F10
Samsung	Esc, F12, F2

Sony	F11, Esc, F10
Toshiba	F12
others…	F12, Esc

4. Switch on the computer.

   Immediately press several times the first potential boot menu key identified in step 3.

   a. If a boot menu with a list of devices appears, select your USB stick and press **Enter**.

   b. If the computer starts on another operating system, then:

1. Shut down the computer.

2. Press-and-hold the potential boot menu key identified in step 3.

3. Switch on the computer again while holding the potential boot menu key pressed.

   a. If a boot menu with a list of devices appears, select your USB stick and press **Enter**.

   b. If the computer starts on another operating system or returns an error message, then shut down the computer again and repeat step 4 for all the potential boot menu keys identified in step 3.

   If none of the potential boot menu keys identified in step 3 work or if the USB stick does not appear in the list, then try the second troubleshooting technique described below.

EDIT THE BIOS SETTINGS

You might need to edit the BIOS settings of the computer.

> Search for the user manual of the computer on the website of its manufacturer to learn how to edit the BIOS settings: Acer (http://us.acer.com/ac/en/US/content/drivers](http://us.acer.com/ac/en/US/content/drivers) , Asus (https://www.asus.com/us/support/](https://www.asus.com/us/support/) , Dell (https://www.dell.com/support/home/us/en/19/Products/](https://www.dell.com/support/home/us/en/19/Products/) , Fujitsu (https://www.fujitsu.com/global/support/products/software/manual/](https://www.fujitsu.com/global/support/products/software/manual/) , HP (https://support.hp.com/us-en/products/](https://support.hp.com/us-en/products/) , Lenovo (http://support.lenovo.com/us/en/](http://support.lenovo.com/us/en/) , Samsung (http://www.samsung.com/us/support/downloads](http://www.samsung.com/us/support/downloads) , Sony (http://esupport.sony.com/US](http://esupport.sony.com/US) , or Toshiba (http://support.toshiba.com/support/products?cat=Computers](http://support.toshiba.com/support/products?cat=Computers) .

In the BIOS settings, try to apply the following changes one by one and restart the computer after each change. Some changes might not apply to certain computer models.

> Take note of the changes that you apply to the BIOS settings, to be able to revert them if they prevent the computer to start on its usual operating system.

1. Edit the **Boot Order**. Depending on the computer model you might see an entry for **removable devices** or **USB media**. Move this entry to the top of the list to force the computer to try to start from the first USB stick before starting from the internal hard disk.
2. Disable **Fast boot**.
3. If the computer is configured to start with **legacy BIOS**, try to configure it to start with **UEFI**. Else, if the computer is configured to start with **UEFI**, try to configure it to start with **legacy BIOS**. To do so, try any of the following options if available:
   - Enable **Legacy mode**
   - Disable **Secure boot**
   - Enable **CSM boot**
   - Disable **UEFI**
4. Try to upgrade the BIOS to the latest version provided by the manufacturer.
   If none of these options work, please report the problem to our support team (../../doc/first_steps /bug_reporting/tails_does_not_start.html).

> We are sorry but you might not be able to use Tails on this computer.

---

4. In the **Boot Tails** menu, choose **Live** and press **Enter**.
5. After 30–60 seconds, *Tails Greeter* appears.
6. In *Tails Greeter*, select your preferred language in the drop-down list on the bottom left of the screen. Click **Login**.
7. After 15–30 seconds, the Tails desktop appears.
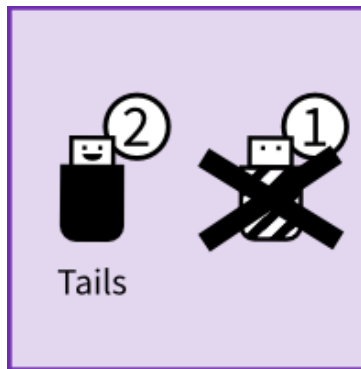
Yeah, you are done installing Tails!
If you want to save some of your documents and configuration in an encrypted storage on the final Tails USB stick, follow our instructions until the end. Otherwise, have a look at our final recommendations (./usb.html#recommendations).

₇. Create an encrypted persistent storage (optional)
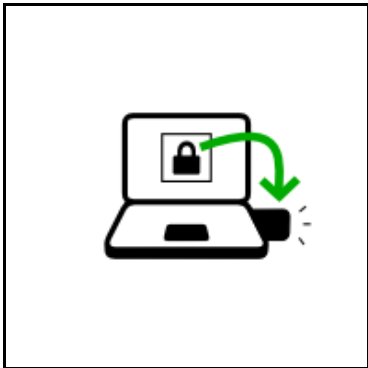
You can optionally create an *encrypted persistent storage* in the remaining free space on the final Tails USB stick to store any of the following:

- Your personal files and working documents
- Some of your settings
- Your encryption keys

The data in the encrypted persistent storage:

- Remains available across separate working sessions.
- Is encrypted using a passphrase of your choice.

The encrypted persistent storage is not hidden. An attacker in possession of the USB stick can know whether it has an encrypted persistent storage. Take into consideration that you can be forced or tricked to give out its passphrase.

It is possible to open the encrypted persistent storage from other operating systems, but it might break your security. Other operating systems should probably not be trusted to handle sensitive information or leave no trace.

Create the persistent storage

1. Choose **Applications ▸ Tails ▸ Configure persistent volume**.
2. Specify a passphrase of your choice in both the **Passphrase** and **Verify Passphrase** text boxes.

> We recommend choosing a long passphrase made of five to seven random words. Learn more. (https://theintercept.com/2015/03/26/passphrases-can-memorize-attackers-cant-guess/)

3. Click on the **Create** button.
4. Wait for the creation to finish.

> If you close the assistant before the creation finishes, you might not be able to start Tails from this USB stick anymore.

5. The assistant shows a list of the possible persistence features. Each feature corresponds to a set of files or settings to be saved in the encrypted persistent storage.
   We recommend you to only activate the **Personal Data** persistence feature for the time being. You can activate more features later on according to your needs.
6. Click **Save**.

Restart and activate the persistent storage

1. Shut down the computer and restart on the final Tails USB stick.
2. In *Tails Greeter*:
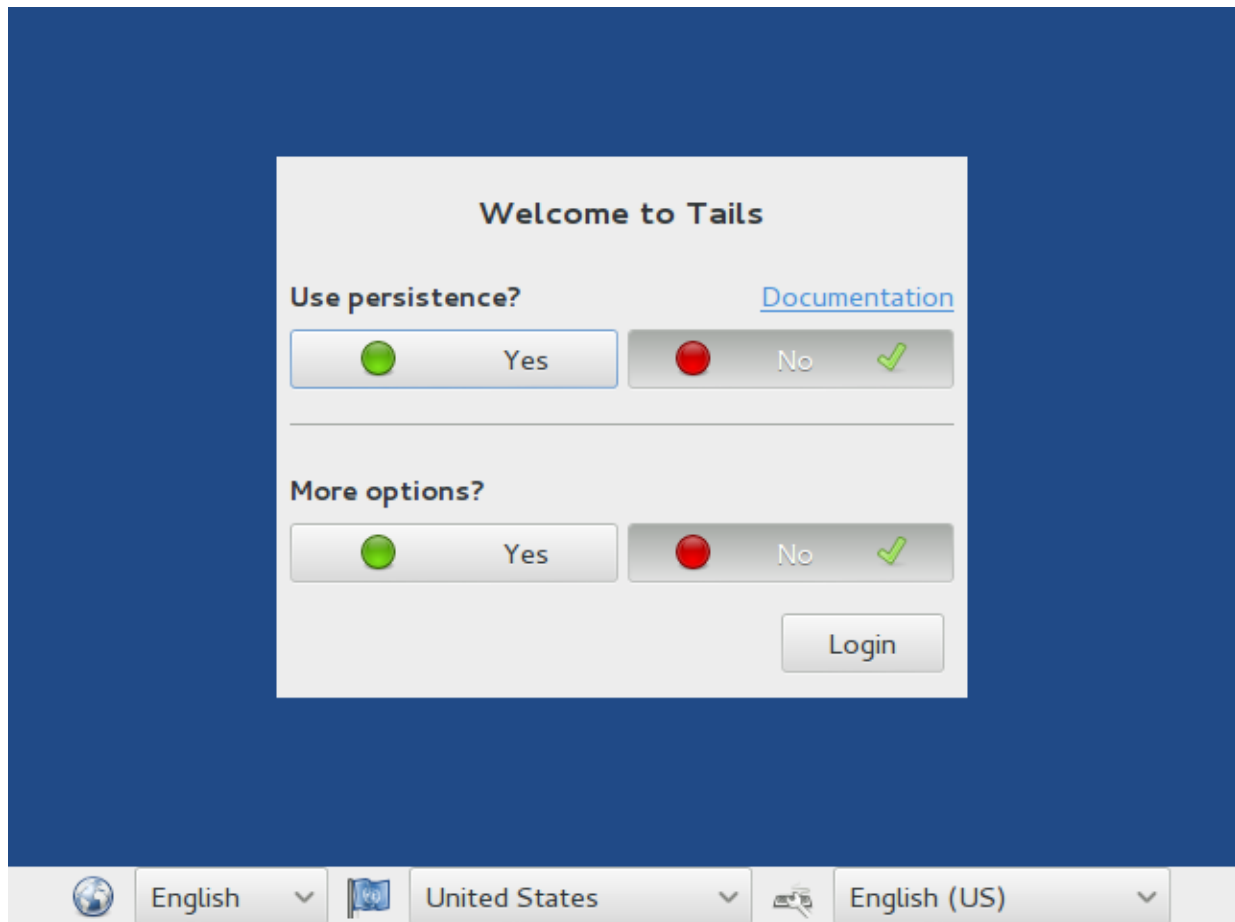
- Select your preferred language in the drop-down list on the bottom left of the screen.
- In the **Use persistence?** section, choose **Yes** to activate the encrypted persistent storage for the current working session.
- Enter the passphrase of the persistent volume in the **Passphrase** text box.
- Click **Login**.

3. After 15–30 seconds, the Tails desktop appears.
4. You can now save your personal files and working documents in the **Persistent** folder. To open the
   Persistent folder choose **Places ▶ Persistent**.

Tails with
persistent storage

You now have a working Tails, congrats!
FINAL RECOMMENDATIONS

Tails does not protect you from everything! Have a look
at our warnings (../../doc/about/warning.html).

If you face any problem, use the **Report an error**
launcher on the Tails desktop or visit our support pages
(../../support.html).

We hope you enjoy using Tails :)