

# Install Tails from Debian or Ubuntu using the command line and GnuPG

5-6 minutes

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## Verify the Tails signing key

In this step, you will download and verify the *Tails signing key* which is the OpenPGP key that is used to cryptographically sign the Tails USB image.

To follow these instructions you need to have your own OpenPGP key.

To learn how to create yourself an OpenPGP key, see [Managing OpenPGP Keys](#) by Riseup.

This verification technique uses the OpenPGP Web of Trust and the certification made by official Debian developers on the Tails signing key.

1. Import the Tails signing key in your GnuPG keyring:

```
wget https://tails.net/tails-signing.key
```

```
gpg --import < tails-signing.key
```

2. Install the Debian keyring. It contains the OpenPGP keys of all Debian developers:

```
sudo apt update && sudo apt install debian-keyring
```

3. Import the OpenPGP key of [Chris Lamb](#), a former Debian Project Leader, from the Debian keyring into your keyring:

```
gpg --keyring=/usr/share/keyrings/debian-keyring.gpg --export chris@chris-lamb.co.uk | gpg --import
```

4. Verify the certifications made on the Tails signing key:

```
gpg --keyid-format 0xlong --check-sigs A490D0F4D311A4153E2BB7CADBB802B258ACD84F
```

In the output of this command, look for the following line:

```
sig!2          0x1E953E27D4311E58 2020-03-19  Chris Lamb
<chris@chris-lamb.co.uk>
```

Here, `sig!2` means that Chris Lamb verified and certified the Tails signing key with his key and a level 2 check.

It is also possible to verify the certifications made by other people. Their name and email address appear in the list of certification if you have their key in your keyring.

If the verification of the certification failed, then you might have downloaded a malicious version of the Tails signing key or our instructions might be outdated. Please [get in touch with us](#).

The line 175 signatures not checked due to missing keys or similar refers to the certifications (also called *signatures*) made by other public keys that are not in your keyring. This is not a problem.

5. Certify the Tails signing key with your own key:

```
gpg --lsign-key A490D0F4D311A4153E2BB7CADBB802B258ACD84F
```

## Download Tails

1. Download the USB image:

```
wget --continue https://download.tails.net/tails/stable/tails-amd64-6.5/tails-amd64-6.5.img
```

## Verify your download

In this step, you will verify your download using the Tails signing key.

1. Download the signature of the USB image:

```
wget https://tails.net/torrents/files/tails-amd64-6.5.img.sig
```

2. Verify that the USB image is signed by the Tails signing key:

```
TZ=UTC gpg --no-options --keyid-format long --verify tails-amd64-6.5.img.sig tails-amd64-6.5.img
```

The output of this command should be the following:

```
gpg: Signature made Mon Jul 15 15:41:00 2024 UTC
gpg:       using EDDSA key ADA2EDA956C296A70A6D7FF4FE2C600D5BB759B5
gpg:       Good signature from "Tails developers (offline long-
term identity key) <tails@boum.org>" [full]
gpg:       aka "Tails developers <tails@boum.org>" [full]
```

Verify in this output that:

- The date of the signature is the same.
  - The signature is marked as Good signature since you certified the Tails signing key with your own key.
1. Make sure that the USB stick on which you want to install Tails is unplugged.
  2. Execute the following command:

```
ls -l /dev/sd?
```

It returns a list of the storage devices on the system. For example:

```
dev/sda
```

3. Plug in the USB stick on which you want to install Tails.

All the data on this USB stick will be lost.

4. Execute again the same command:

`ls -l /dev/sd?`

Your USB stick appears as a new device in the list.

```
/dev/sda
/dev/sdb
```

5. Take note of the *device name* of your USB stick.

In this example, the device name of the USB stick is `/dev/sdb`. Yours might be different.

If you are unsure about the device name, you should stop proceeding or **you risk overwriting any hard disk on the system**.

6. Execute the following commands to copy the USB image that you downloaded earlier to the USB stick.

Replace:

- `tails.img` with the path to the USB image
- `device` with the device name found in step 5

```
dd if=tails.img of=device bs=16M oflag=direct status=progress
```

You should get something like this:

```
dd if=/home/user/tails-amd64-3.12.img of=/dev/sdb bs=16M oflag=direct status=progress
```

If no error message is returned, Tails is being copied on the USB stick. The copy takes some time, generally a few minutes.

If you get a `Permission denied` error, try adding `sudo` at the beginning of the command:

```
sudo dd if=tails.img of=device bs=16M oflag=direct status=progress
```

The installation is complete after the command prompt reappears.