

Ask Ubuntu is a question and answer site for Ubuntu users and developers. It only takes a minute to sign up.

Sign up to join this community



Anybody can ask a question



Anybody can answer



The best answers are voted up and rise to the top



How to create a bootable Ubuntu USB flash drive from terminal?

Asked 6 years, 4 months ago Active 2 months ago Viewed 1.3m times



393



205



Is there any way to create a bootable Ubuntu USB flash drive from the terminal without using any third-party applications like [YUMI](#), [Unetbootin](#), [Startup Disk Creator](#), etc.

I tried to create a bootable Ubuntu flash drive with `dd` method,

```
sudo umount /dev/sdb
sudo dd if=/path/to/ubuntu.iso of=/dev/sdb bs=1M
```

It creates files on the USB disk, but when I try to boot the USB disk it shows an `Operating System Not Found` error.

command-line

system-installation

live-usb

portable

edited Jul 11 '18 at 19:42

community wiki

19 revs, 6 users 62%

Avinash Raj

8 Answers

Active

Oldest

Votes



You can use `dd`.

492

```
sudo umount /dev/sd<?><?>
```

By using our site, you acknowledge that you have read and understand our [Cookie Policy](#), [Privacy Policy](#), and our [Terms of Service](#).



It will look something like

```
sdb      8:16    1  14.9G  0 disk
├─sdb1   8:17    1   1.6G  0 part  /media/username/usb volume name
└─sdb2   8:18    1   2.4M  0 part
```

I would dismount sdb1.

Then, next (this is a destructive command and wipes the entire USB drive with the contents of the iso, so be careful):

```
sudo dd bs=4M if=path/to/input.iso of=/dev/sd<?> conv=fdatasync status=progress
```

where `input.iso` is the input file, and `/dev/sd<?>` is the USB device you're writing to (run `lsblk` to see all drives to find out what `<?>` is for your USB).

This method is fast and has never failed me.

EDIT: for those on a Mac ending up here, use lowercase for `bs=4m` :

```
sudo dd if=inputfile.img of=/dev/disk<?> bs=4m && sync
```

EDIT: If USB drive does not boot (this happened to me), it is because the target is a particular partition on the drive instead of the drive. So the target needs to be `/dev/sdc` and not `dev/sdc <?>` For me it was `/dev/sdb` .

Reference: <https://superuser.com/a/407327> and <https://askubuntu.com/a/579615/669976>

edited Jun 20 '19 at 20:56



rogerdpack

584 ● 6 ● 15

answered Nov 15 '13 at 17:29



Marc

7,740 ● 2 ● 15 ● 28



You're almost there with `dd` , but you're missing a step.

107



```
sudo umount /dev/sdX
sudo dd if=/path/to/ubuntu.iso of=/dev/sdX bs=4M && sync
```



where `sdX` is your usb device (this can be verified with `lsblk`).

The `sync` bit is important as `dd` can return before the write operation finishes.

answered Jan 30 '15 at 9:21

community wiki
user373766



Creating a bootable Ubuntu USB flash drive from terminal

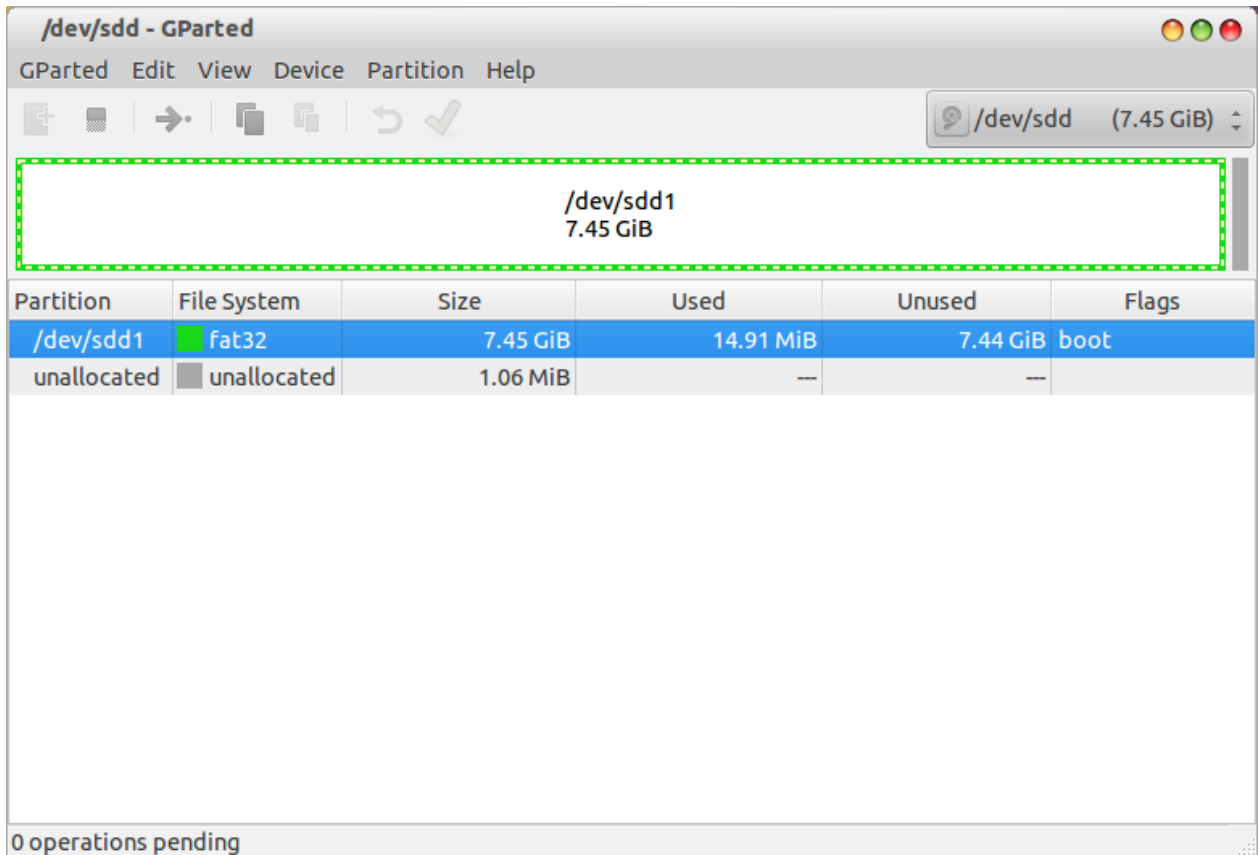
By using our site, you acknowledge that you have read and understand our [Cookie Policy](#), [Privacy Policy](#), and our [Terms of Service](#).





```
sudo mkdir /media/iso/
sudo mount -o loop /path/to/ubuntu.iso /media/iso
```

- Insert your USB flash drive. My drive is `/dev/sdd` . Here's a screenshot:



- Your drive may be automatically mounted inside `/media/` . Let's assume that it was mounted in `/media/xxx/` .
- Copy all files from `/media/iso/` to your mounted USB flash drive by running the below command (make sure to include the dot):

```
cp -a /media/iso/. /media/xxx/
```

- Next, you need the `ldlinux.sys` file in your USB flash drive to make the USB *bootable*. My USB partition is `/dev/sdd1` ; enter `lsblk` to see what's yours. Run the below commands:

```
sudo apt-get install syslinux mtools
sudo syslinux -s /dev/sdd1
```

- Navigate to the `/media/xxx` mount folder and rename the `isolinux` directory to `syslinux` . Then go into the renamed folder and rename the file `isolinux.cfg` to `syslinux.cfg` .
- Reboot your PC and change the boot order in BIOS to allow booting from a USB drive. Now your Ubuntu USB flash drive will boot and you can install it.

This method will work for any Linux distribution, not only Ubuntu. You don't need to install any third party software to make a Linux USB flash drive.





1

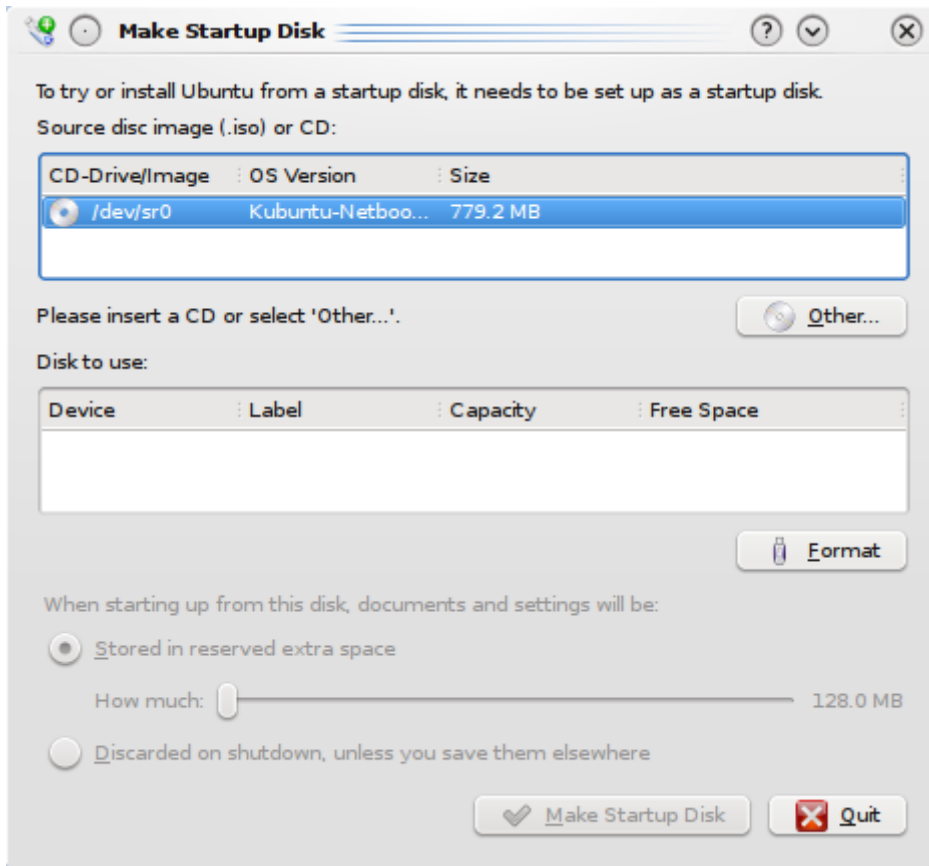


63.8k ● 48 ● 185 ● 232

You have two choices.

42

If you desire a graphical interface, use `usb-creator` (it is in the ubuntu repos)



If you want a command line tool, use `dd`

```
#Replace X accordingly in both commands

sudo umount /dev/sdX
sudo dd if=/path/to/ubuntu.iso of=/dev/sdbX bs=1M
```

Just be sure `/dev/sdX` is the flash drive you wish to use (it will destroy the data on the flash drive).

See <https://help.ubuntu.com/community/Installation/FromUSBStick> for additional information.

edited May 30 '17 at 15:30



You'reAGitForNotUsing
Git
13k ● 9 ● 38 ● 70

answered Nov 7 '13 at 18:19



Panther
87.1k ● 15 ● 170 ● 268

32

First, unmount the USB device and then use `lsblk` to verify the device.

Sometimes (usually older iso files) `dd` is not sufficient and the pendrive will not boot. In this case, you may need to install `syslinux`:

By using our site, you acknowledge that you have read and understand our [Cookie Policy](#), [Privacy Policy](#), and our [Terms of Service](#).





and then run the following commands:

```
sudo mkfs -t vfat -I /dev/sdX
```

You want to run that last command to `/dev/sdX` and *not* `/dev/sdX1` .

Then, proceed with the following commands:

```
isohybrid /path/to/file.iso --entry 4 --type 0x1c  
dd if='/path/to/file.iso' of=/dev/sdX bs=8M
```

or, to see progress of image write:

```
pv -tprep /path/to/file.iso | dd of=/dev/sdX bs=8M
```

or instead of `dd` , you can use `cat` instead:

```
sudo -s  
cat /path/to/file.iso > /dev/sdX
```

Rememeber to issue sync command to flush write cache

```
sync
```

web.archive.org/web/20140327085331/https://tails.boum.org/doc/first_steps/installation/manual/linux/index.en.html

edited Feb 11 '17 at 3:48

community wiki
5 revs, 3 users 82%
mchid



16

If by "third-party" you mean "GUI", [I suggest a lightweight script named bootiso](#) after [Avinash Raj](#) answer, because `dd` does not always work. The big plus is it's very secure (performs many security checks not to mess up with the system), easy to install and portable.



Also, `bootiso` will inspect the ISO file to choose from two modes: "image-copy" (`dd`) when the ISO file is hybrid (means: USB boot friendly). And "mount-rsync" mode when ISO file is non-hybrid, in which case a SYSLINUX bootloader will be automatically installed if supported [[more details about automatic behavior](#)].



How to use it

First option, just provide the ISO as first argument and you'll be prompted to select a drive amongst a list extracted from `lsblk` :

```
bootiso myfile.iso
```

Or provide explicitly the USB device:



Quick install

```
curl -L https://git.io/bootiso -O
chmod +x bootiso
sudo apt install wimtools
```

See it in action

```
jsamr@jsamr-Corsair /m/d/distros $ bootiso -ay manjaro-architect-17.1.7-stable-x86_64.iso
bootiso: Found hybrid ISO; choosing image copy 'dd' mode.
bootiso: Partition label automatically set to 'MJR01717'.
bootiso: You can explicitly set label with '-L, --label' option.
bootiso: Listing drives available in your system:
NAME      MODEL      VENDOR      SIZE TRAN  HOTPLUG
sdd       Patriot Memory  235.86  usb      1
bootiso: Autoselecting 'sdd' (only USB device candidate)
bootiso: The selected device '/dev/sdd' is connected through USB.
bootiso: Created ISO mount point at '/mnt/iso.P76'.
bootiso: About to wipe out the content of device '/dev/sdd'.
bootiso: Bypassing confirmation with '-y, --assume-yes' option.
bootiso: Erasing contents of '/dev/sdd'...
bootiso: Copying files from ISO to USB device with 'dd'
bootiso: Synchronizing writes on device '/dev/sdd'
bootiso: Took 4 seconds to perform [install-auto] action.
bootiso: ISO succesfully unmounted (/mnt/iso.P76).
bootiso: USB device succesfully ejected.
bootiso: You can safely remove it!
jsamr@jsamr-Corsair /m/d/distros $
```

edited Jan 26 at 15:51

community wiki
9 revs, 2 users 96%
Jules Randolph

+1; I did not know of your tool before :-)) – sudodus Jan 26 at 18:00

```
$ dd if=ubuntu-14.04.1-desktop-amd64.iso of=/dev/sdX bs=1MB
```

8

Don't use the path to bit.

1. Use the `cd` command to get to the folder that contains the .iso file
2. use the command `dd if=FILE NAME HERE.iso of=/dev/sdX bs=1MB`
3. Wait until the console output looks something like this:

```
1028+1 records in
1028+1 records out
1028653056 bytes (1.0 GB) copied, 55.4844 s, 18.5 MB/s
```

4. Boot from the usb.

Note: Make sure you write to the correct device a usb will not always be mounted at: `dev/sdX` where X can be any letter.

By using our site, you acknowledge that you have read and understand our [Cookie Policy](#), [Privacy Policy](#), and our [Terms of Service](#).

Title

1

How to create a bootable Ubuntu USB flash drive from terminal?



There are built-in text mode tools, that you can run from a text screen or a terminal window. `dd` or `cp` or `cat` can be used, but they are not safe because they do what you tell them to do without any question, and a minor typing error is enough to overwrite a drive with valuable data.

Fortunately there are also safer text mode tools, but you have to install them.

- [mkusb version 12 alias mkusb-dus](#) works also in text mode (not only in GUI mode).

Install mkusb via its PPA: If you run standard Ubuntu live, you need an extra instruction to get the repository Universe. (Kubuntu, Lubuntu ... Xubuntu have the repository Universe activated automatically.)

```
sudo add-apt-repository universe # only for standard Ubuntu

sudo add-apt-repository ppa:mkusb/ppa # and press Enter
sudo apt-get update
sudo apt-get install mkusb mkusb-nox usb-pack-efi
```

Installing this way will add not only mkusb but also some program packages that mkusb depends on.

- **If you want a small tool** or if you don't like PPAs or don't want any extra program packages, you can use [mkusb-min](#). This shellsript is very small compared to the other versions, yet it serves the purpose to wrap a safety belt around `dd`.

```
$ wc mkusb-min
208  736 5435 mkusb-min
```

It should be rather easy to see what the shellsript is doing simply by reading it in a text editor.

Download [mkusb-min from its Ubuntu help page](#). Run it locally or install it into a directory in `PATH`.

- [xorriso-dd-target](#) is a new tool, intended to be uploaded to a Debian repository. The purpose is to make it very safe to create boot drives (USB pendrives or memory cards). A special feature is the **plug-in method** to identify the target device. The man page is available [here](#). In January 2020 there is not yet any installer, but you can copy and paste from the links above and install the shellsript and man page manually.
- Finally I want to mention [bootiso](#) which is described by its developer in another answer.

Question

If we must look for text mode tools that are already installed in Ubuntu, I am afraid that there are no safe tools available. So in this case I can only suggest that you use `dd` or `cp` or `cat` according to many of the other answers here. But please **check and double-check that you are really pointing to the intended target device** before pressing the Enter key.

(By the way, the Ubuntu Startup Disk Creator belongs to Ubuntu (is not third party), but it needs a graphical desktop environment or at least a graphical window manager.)

edited Jan 27 at 7:35

community wiki

4 revs

sudodus



Highly active question. Earn 10 reputation in order to answer this question. The reputation requirement helps protect this question from spam and non-answer activity.

