

New2Linux: Writing bootable images and getting them started

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John Nash
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Why?

- We need to boot our “new” Linux operating system and/or to install it.
- Used to do this from
 - floppy disk – a long time ago
 - CD – in early 2000s
 - DVD – in mid 2000s
 - USB flash drive – last decade
 - (there is also network boot, but not for novices....)

Getting an image

- Generally offered as an “iso” file, but sometimes as a “bin”
 - ISO: taken from CD ISO 9660 standard for optical disk filesystems
 - “bin”: Binary.
- Usually can download with browser (<https>)
- May be quicker and less network intensive to use BitTorrent, and there are now “browser” plugins.

Tools to write to a USB stick

Windows: (because some novices don't yet have Linux)

- Rufus – open source
- RMPrepUSB (free non-commercial use)
- Unetbootin (Windows version)
- Balena-Etcher (perhaps more for SD cards)
- Apparently also Ventoy on Windows

Tools to write to a USB stick

Linux:

- CLI: “dd”
 - Need to know which device is to be written
 - And path to image file, e.g.,
`sudo dd if=myimage.iso of=/dev/sdx BS=1M`
- Main issue is danger of a fumble fingers

Linux ISO burn - GUI

- mintstick – Part of Linux Mint. Formats and writes.
 - Generally has worked very well for me.
- Unetbootin -- <https://unetbootin.org>
 - May have some write problems
- Ventoy -- <https://www.ventoy.net/en/index.html>
 - Once USB flash drive set up, just copy iso to the drive in right location
- Balena – Etcher -- <https://www.balena.io/etcher/>
- Startup disk creator (Ubuntu)
- Mkusb -- !!! 2 different tools
 - <https://github.com/lilyinstarlight/mkusb>
 - <https://help.ubuntu.com/community/mkusb>

Bootup issues

- Secure boot? -- need to get at BIOS setup
 - For novices, recommend turning SecBoot OFF
- How to select USB – more pain
 - ASUS: Esc
 - Many: F12, some F8, F10
 - May need to use DEL or Ctrl-ESC or watch post screen to enter BIOS setup to change boot order
- Probably worth novices getting some hand-holding, even if over phone.

“Persistent” live USB

- My experiences less than stellar
- NOT for New 2 Linux folk
 - May work OK with a static partition that accesses other partitions for data or persistent apps.
- MUCH, MUCH better to make a partition and install.
- Or use a VM under VirtualBox or

Side issue: making space

- If possible, install Linux on physically separate but permanently connected drive i.e., 2nd HD
 - If dual boot on SINGLE drive, need to make space
 - Do this with Windows tools FIRST
 - <https://www.diskgenius.com/how-to/resize-partition-windows-10.php>
 - Recently used Disk Management without issues.
 - Make an image and recovery DVD first!
 - (unclick) Control Panel/Power Options
 - Fast startup
 - Sleep
 - Lock
 - Worth finding and saving Windows “key”
 - Turn OFF Bitlocker encryption
 - Linux installs AFTER Windows (and EFI partition)
- THIS IS ONE OF THE MOST NON-NOVICE TASKS!