New2Linux: Writing bootable images and getting them started

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for
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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)

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

- 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

  - 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

- 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!