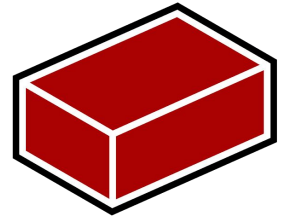


Dual Booting



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What is Dual booting?

“A dual boot system is a computer system in which two operating systems are installed on the same hard drive*, allowing either operating system to be loaded and given control.”

- splitting your hard drive into multiple independent sections → **partitioning**.
- Manage each of these sections separately.

* You can use different / multiple drives!

So many options

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

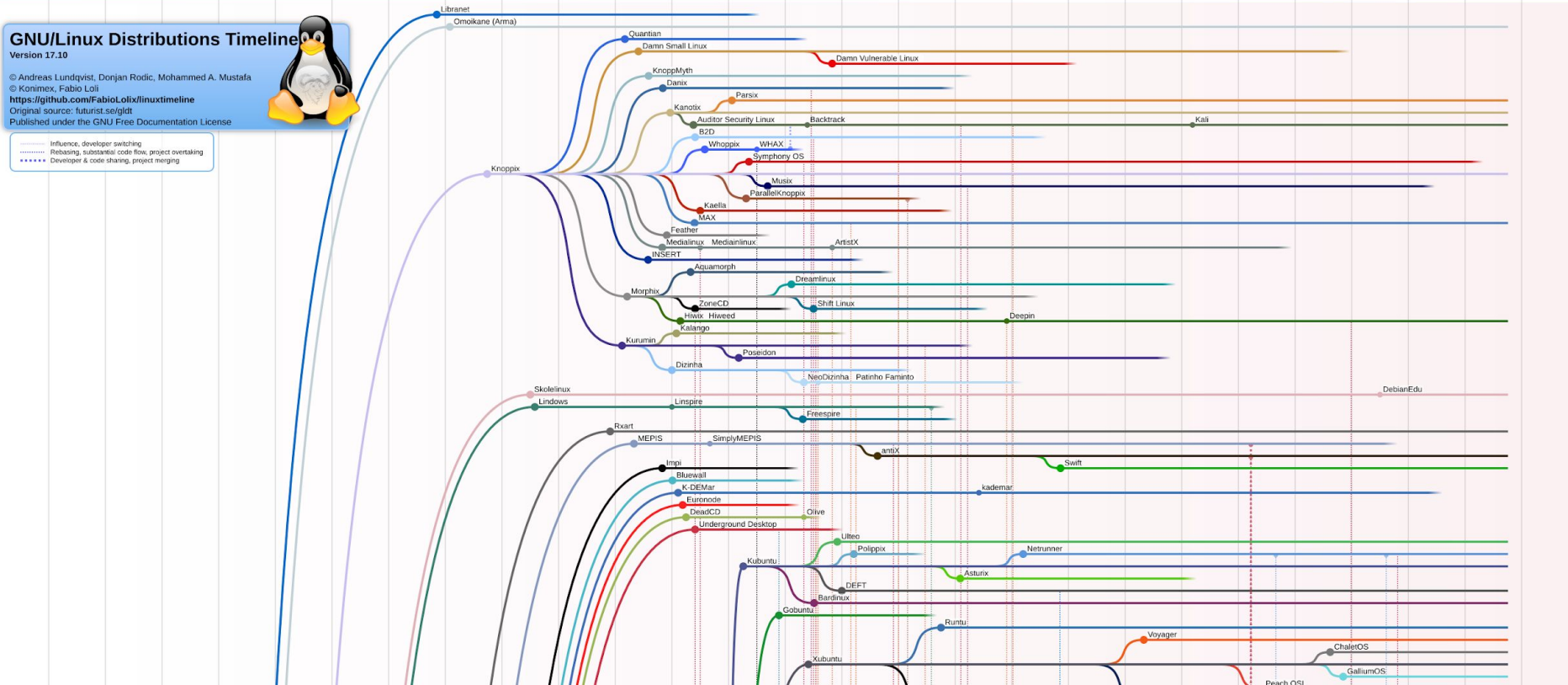
GNU/Linux Distributions Timeline

Version 17.10

© Andreas Lundqvist, Donjan Rodic, Mohammed A. Mustafa
© Konimex, Fabio Loli
<https://github.com/FabioLoli/linuxtimeline>
Original source: futurist.se/gidit
Published under the GNU Free Documentation License



..... Influence, developer switching
----- Relicensing, substantial code flow, project overtaking
..... Developer & code sharing, project merging





Redbrick even has one!



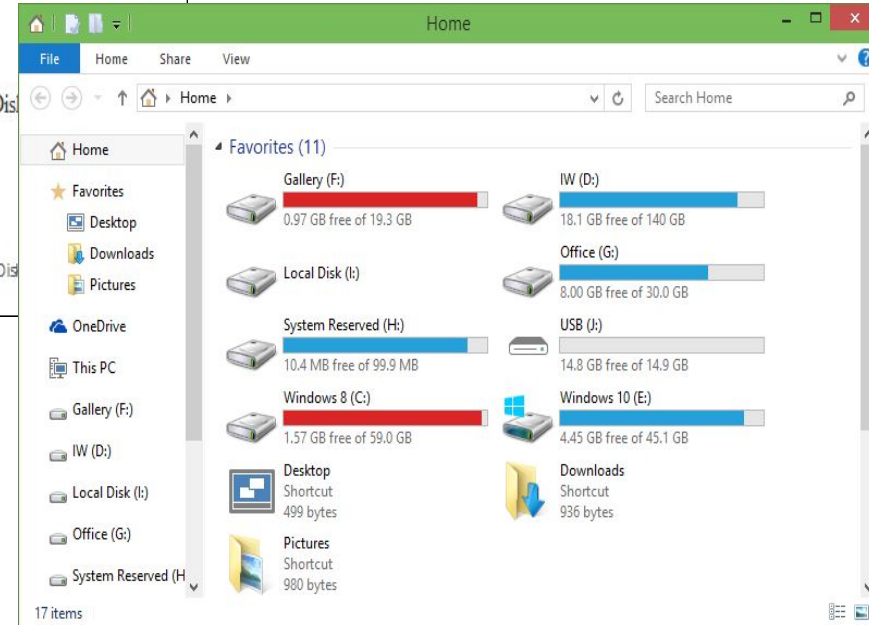
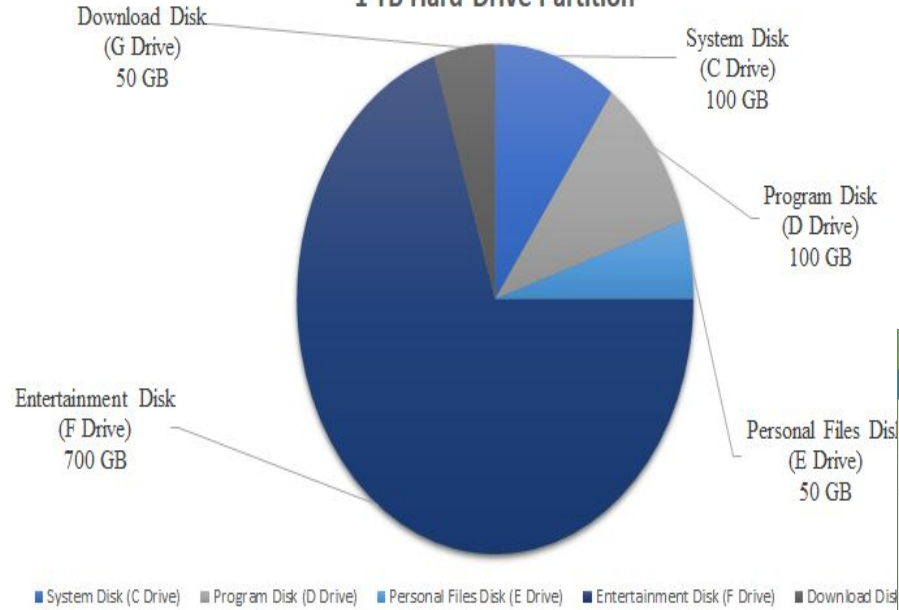
Why should I Dual Boot?

1. Best of both worlds
2. Platform specific applications / compatibility
3. Access to resources (Versus VM)
4. Learning and experimentation
5. Linux can be a better development environment
6. Gaming!
7. It's pretty easy

Partitions & Partition Tables

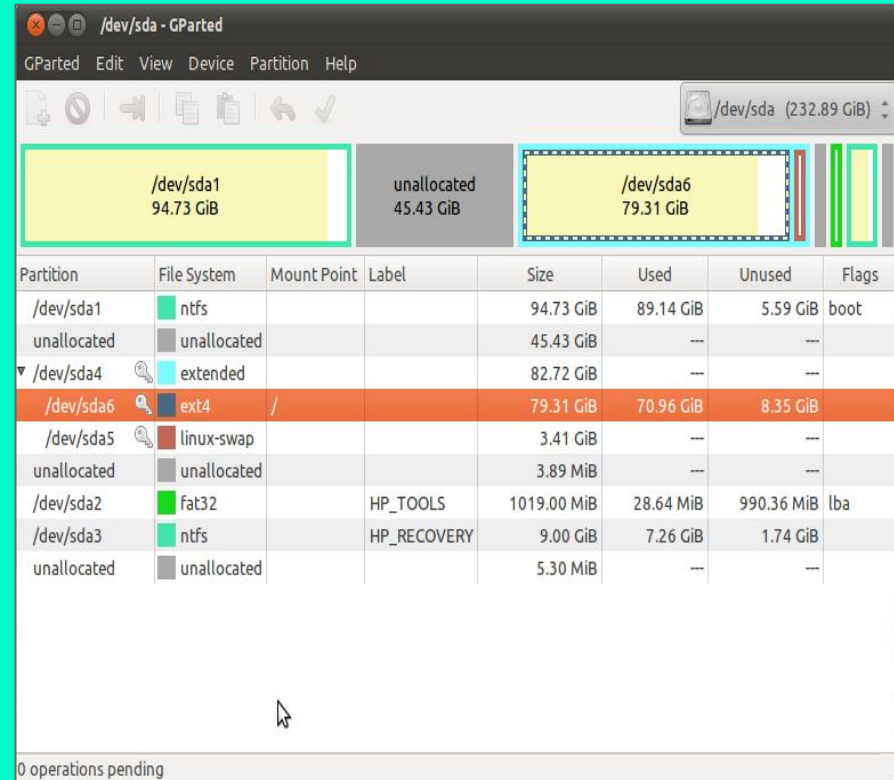
- A partition is a fixed-size subset of a disk drive.
- Splitting one physical HDD / SSD into multiple logical disks/volumes
- OS will treat these as completely separate physical drives
- Partitions can be created, resized, or deleted.

1 TB Hard Drive Partition



Partition Table

- A **partition table** is a table maintained on disk by the operating system describing the partitions on that disk.
- Partition table is read first on boot.



Partition	File System	Mount Point	Label	Size	Used	Unused	Flags
/dev/sda1	ntfs			94.73 GiB	89.14 GiB	5.59 GiB	boot
unallocated	unallocated			45.43 GiB	---	---	
▼ /dev/sda4	extended			82.72 GiB	---	---	
/dev/sda6	ext4	/		79.31 GiB	70.96 GiB	8.35 GiB	
/dev/sda5	linux-swap			3.41 GiB	---	---	
unallocated	unallocated			3.89 MiB	---	---	
/dev/sda2	fat32		HP_TOOLS	1019.00 MiB	28.64 MiB	990.36 MiB	lba
/dev/sda3	ntfs		HP_RECOVERY	9.00 GiB	7.26 GiB	1.74 GiB	
unallocated	unallocated			5.30 MiB	---	---	

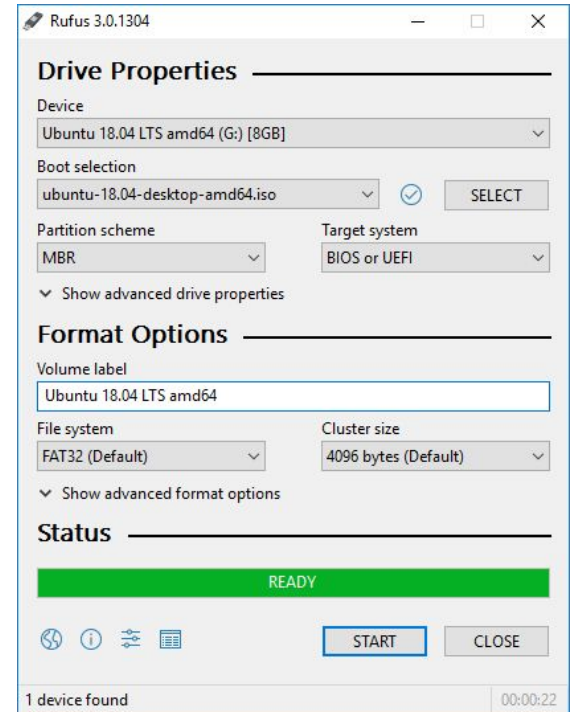
0 operations pending

The Process

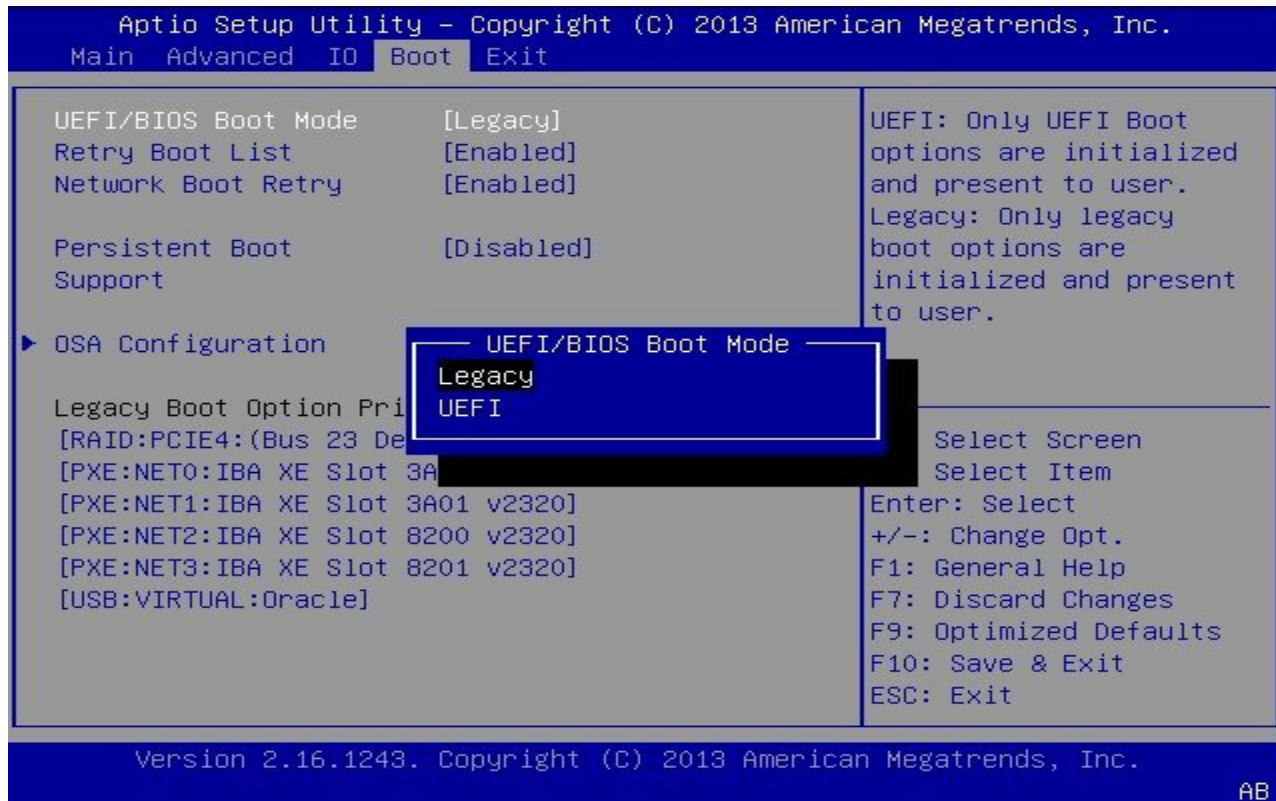
1. **Make a backup (recommended)**
2. **Create a bootable USB**
3. **Disable Fast Startup** [Optional]
4. **Change to UEFI through BIOS** [May be done]
5. **Disable Secure Boot**
6. **Begin the installation**
 - a. We will do this through Ubuntu. Can be done through Windows Disk Management
 - b. Manual / Auto (Guided) Partition
 - c. Fill in details.
7. **Reboot and you're done!**

Create Bootable USB

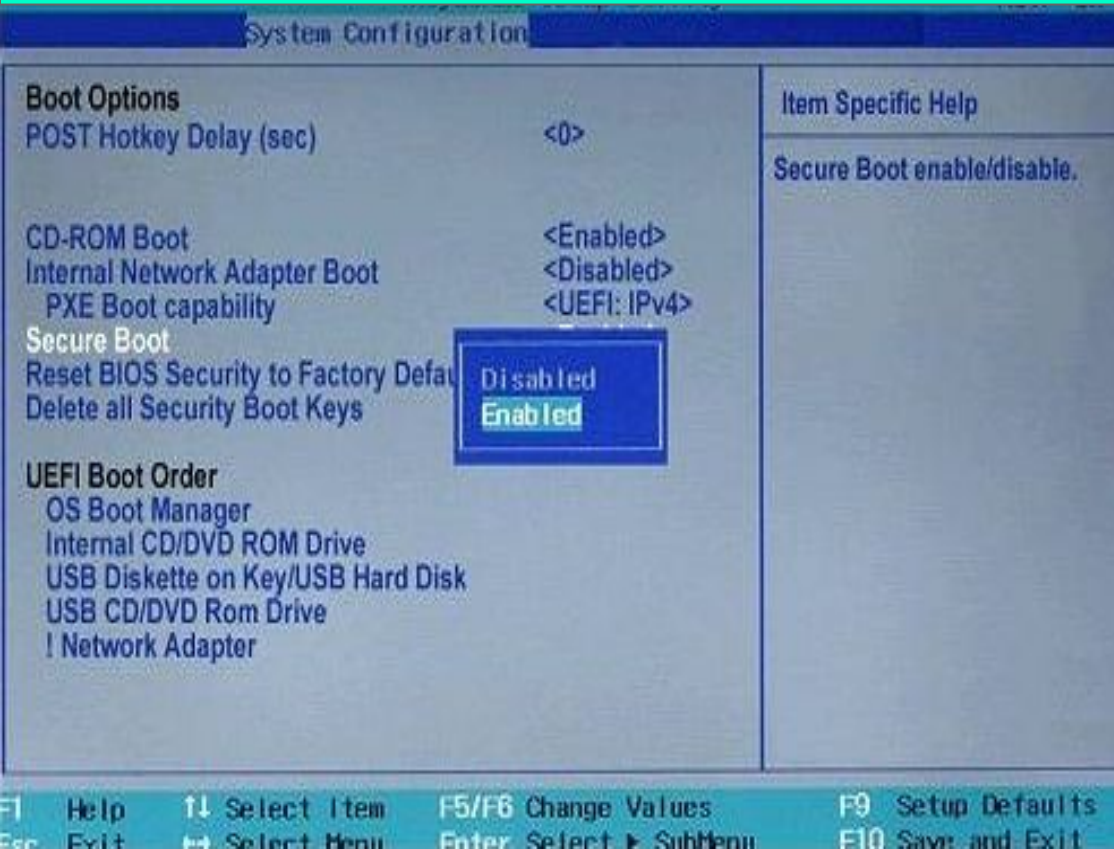
1. Download and Install Rufus → <https://rufus.ie/>
2. Download Ubuntu Desktop ISO → <https://ubuntu.com/download/desktop>
3. Create the bootable drive with Rufus!



Enable UEFI Boot



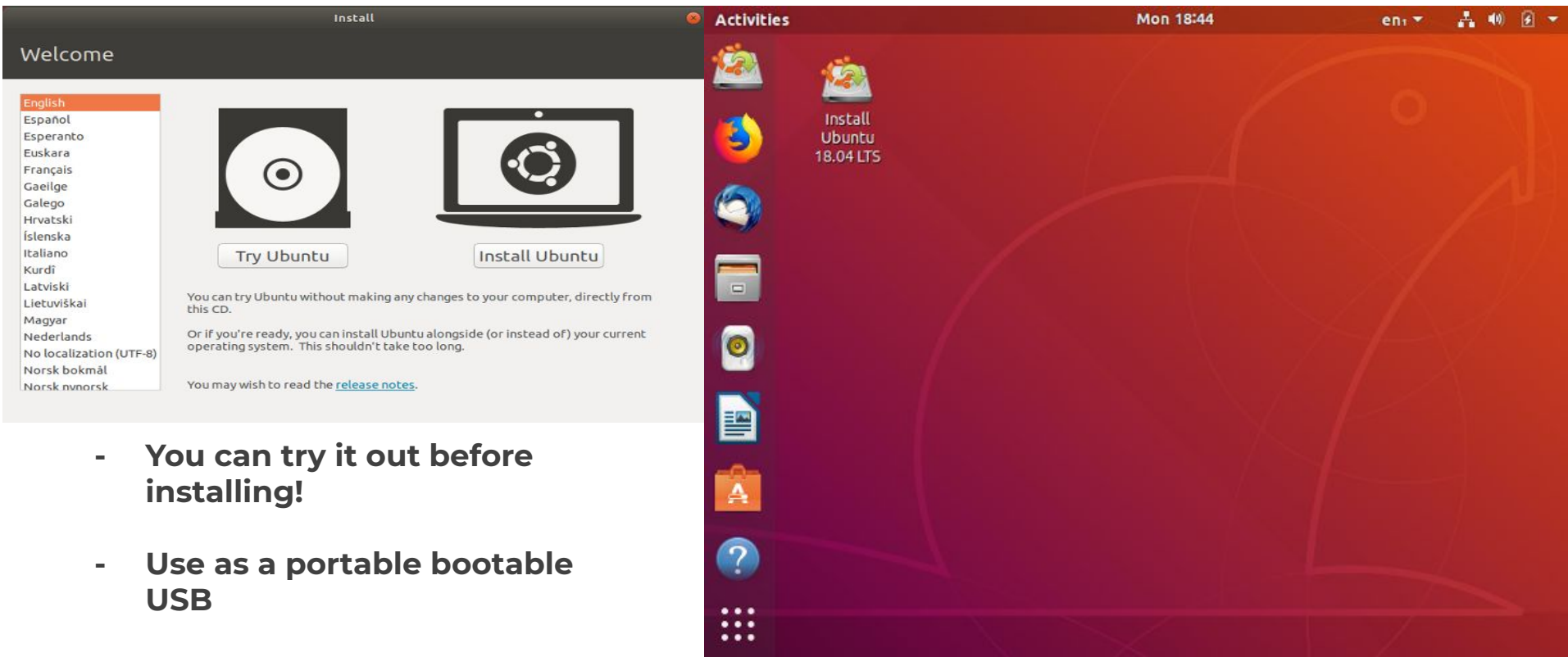
Disable Secure Boot



What is secure boot?

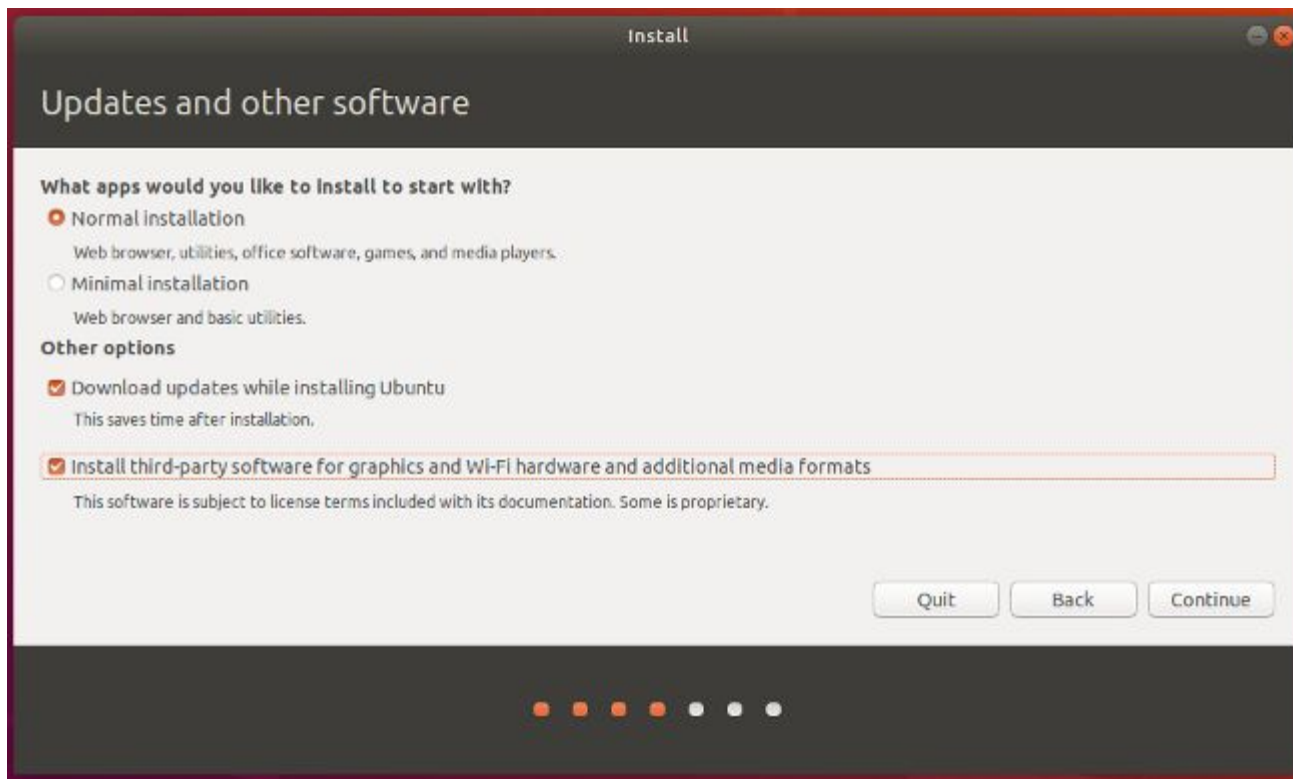
- Makes sure the machine only boots into safe / verified software.
- It's there to prevent rootkit viruses from running.
- **It treats Linux as a virus!**

Installation!

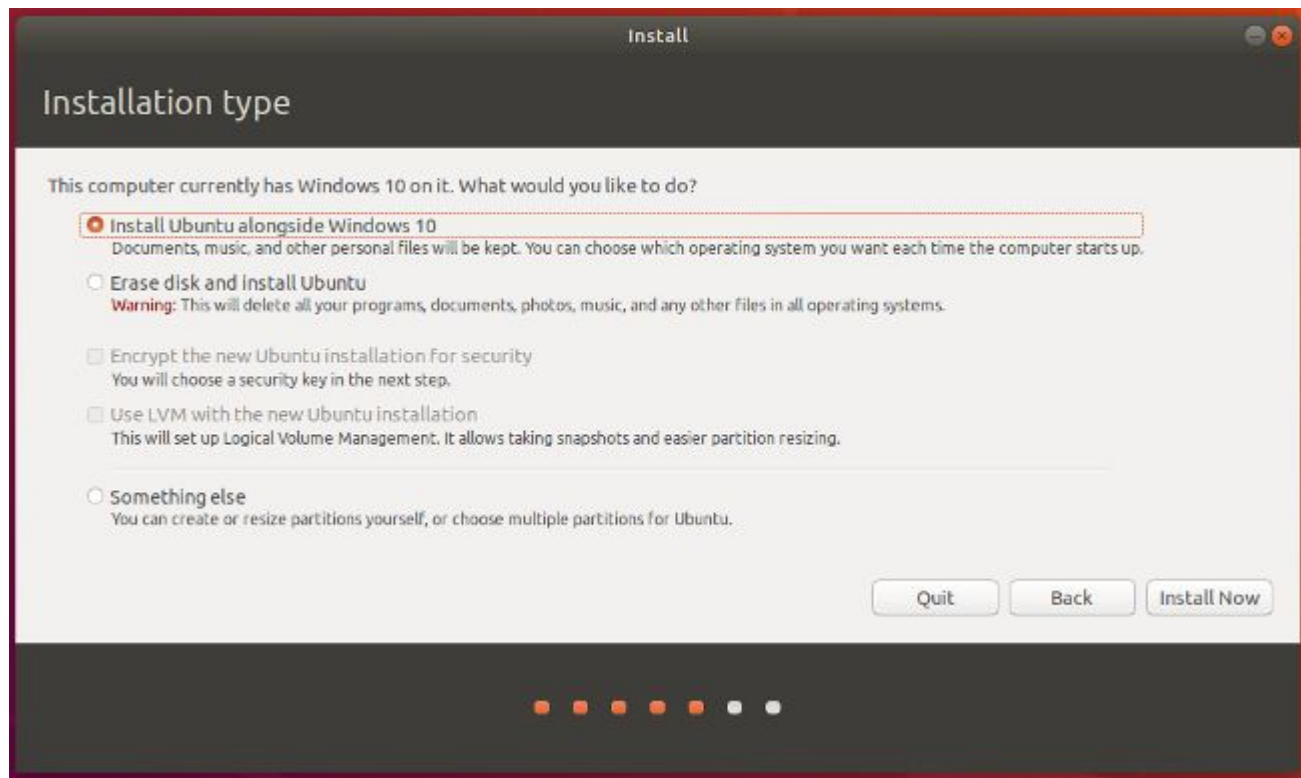


- You can try it out before installing!
- Use as a portable bootable USB

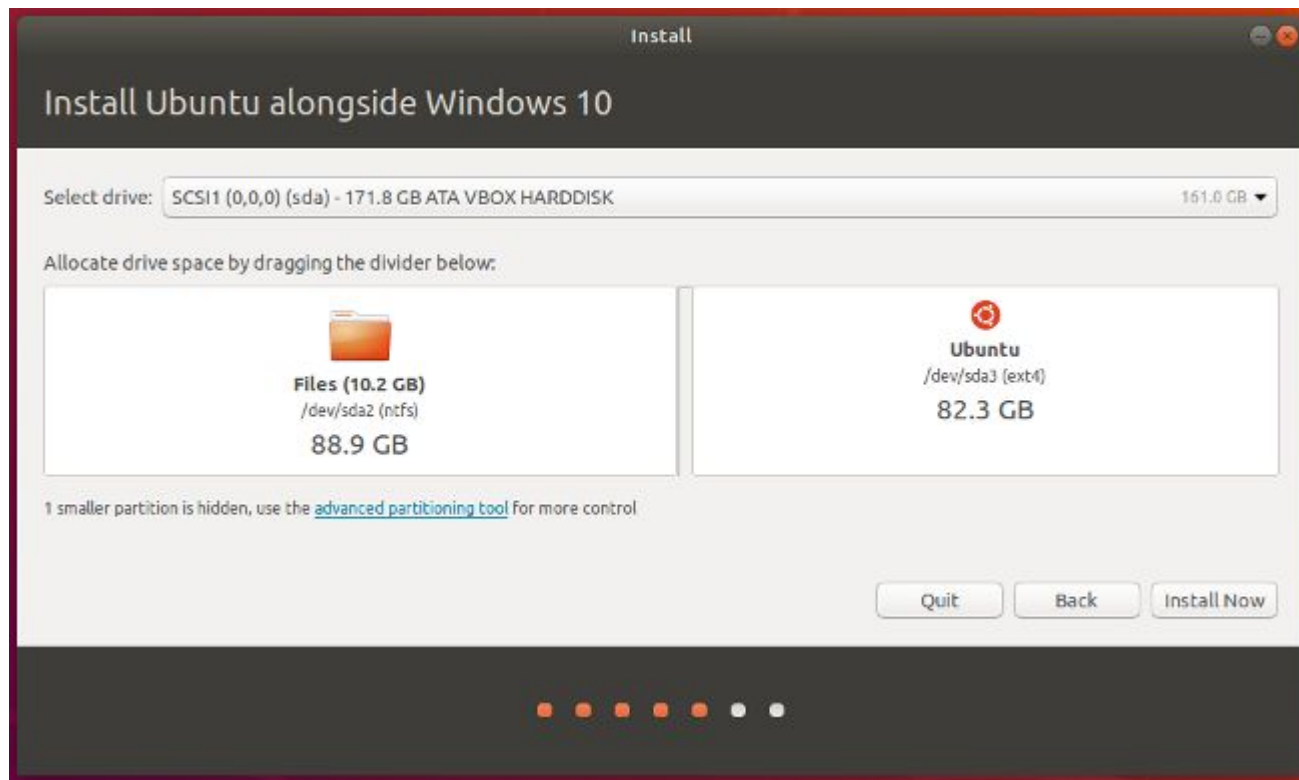
Installation!



Installation - Where?



Where & Size



Fill in your info

Install

Who are you?

Your name: Jay LaCroix ✓

Your computer's name: my-awesome-pc ✓
The name it uses when it talks to other computers.

Pick a username: jay ✓

Choose a password: ●●●●●●●● Fair password

Confirm your password: ●●●●●●●● ✓

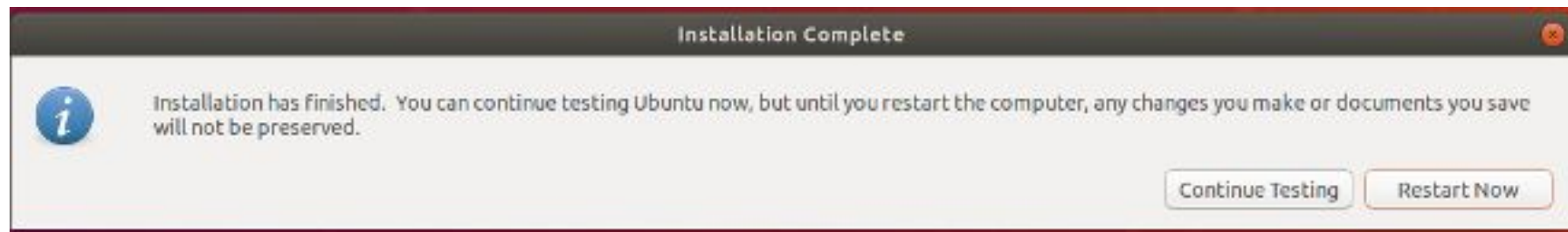
☐ Log in automatically

☒ Require my password to log in

Back Continue

● ● ● ● ● ● ● ●

Finish and Reboot



You're all done!

GNU GRUB version 2.02

*Ubuntu

Advanced options for Ubuntu

Memory test (memtest86+)

Memory test (memtest86+, serial console 115200)

Windows 10 (on /dev/sda1)

Use the ↑ and ↓ keys to select which entry is highlighted.

Press enter to boot the selected OS, 'e' to edit the commands before booting or 'c' for a command-line.

The highlighted entry will be executed automatically in 8s.

Thanks for coming!
Now let's get
started.