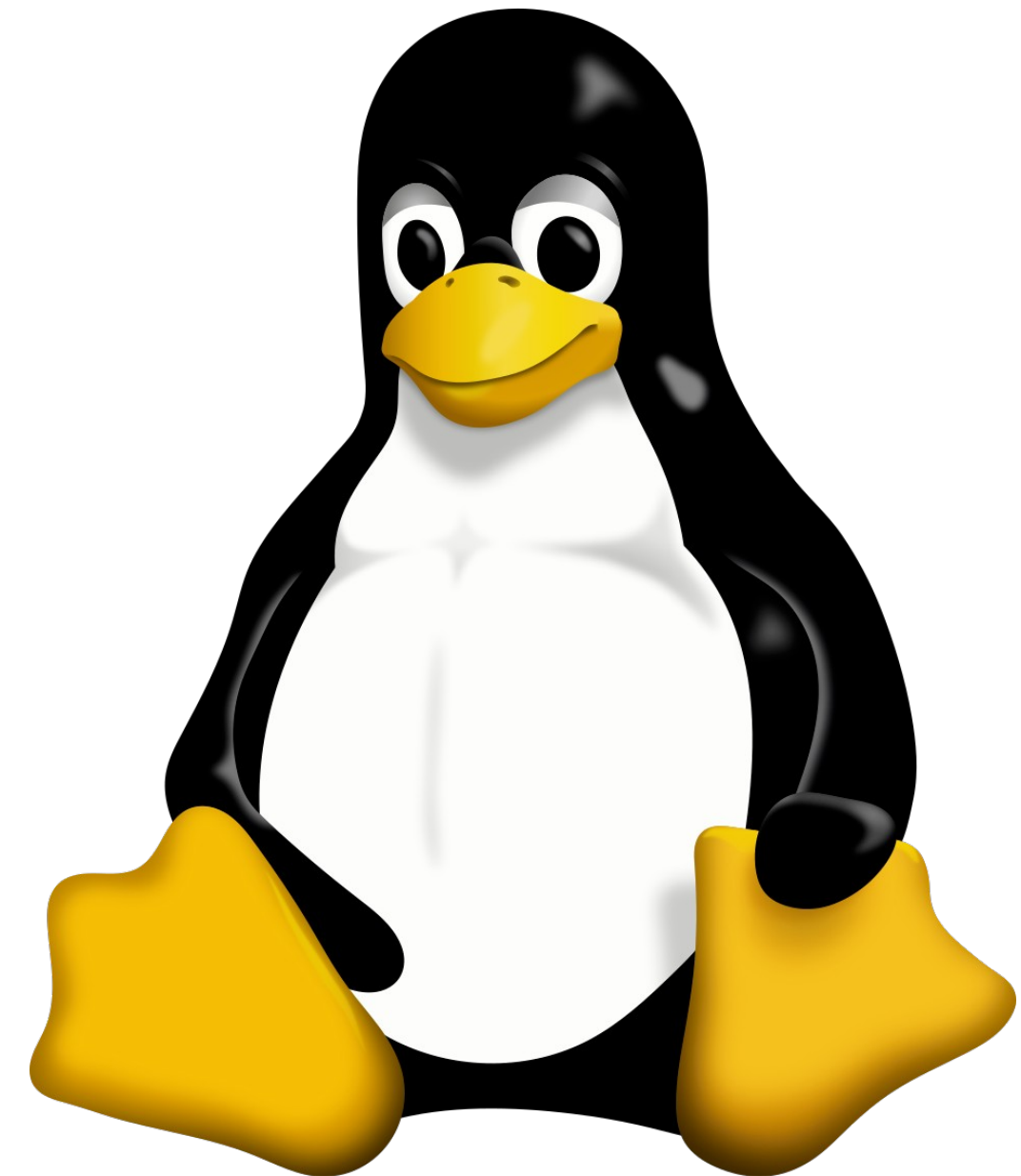




Introduction to Linux

The What, Why, and How



Workshop Goals

[intentions]

- To learn:
 - What are operating systems
 - A bit of computing history
 - What is Linux, why should you use it
 - Methods of Usage
 - Live USB (practical)
 - Terminal commands / Kiddo CTF (Capture the Flag)
- Shout out to VPS-ed.com for CTF support and to the volunteers from Reboot Coding Institute!

VPSed

[Training](#) > [System Administration](#) > [Introduction to Linux \(LFS101\)](#)

 TRAINING COURSE

Introduction to Linux (LFS101)

Develop a good working knowledge of Linux using both the graphical interface and command line across the major Linux distribution families with this free training course.

Este curso también está disponible en español. [Haga clic aquí para Introducción a Linux.](#)



\$0

Login Using My Portal Before Enrolling

[Enroll Today](#)



Who Is It For

This Introduction to Linux course is designed for experienced computer users who have limited or no previous exposure to Linux, whether they are working in an individual or [enterprise environment](#).

[read more](#)



What You'll Learn

This course explores the various tools and techniques commonly used by Linux system administrators and end users to achieve their day-to-day work in a Linux environment. You will [gain a good working knowledge](#)

[read more](#)









What It Prepares You For

Upon completion of this Introduction to Linux training you should have a good working knowledge of Linux, from both a graphical and command line perspective, allowing you to [easily navigate through any of](#)

[read more](#)

Includes

-  Online, Self Paced
-  60 Hours of Course Material
-  Hands-on Labs & Assignments
-  Discussion Forums
-  Unlimited Access to Online Course
-  Digital Badge

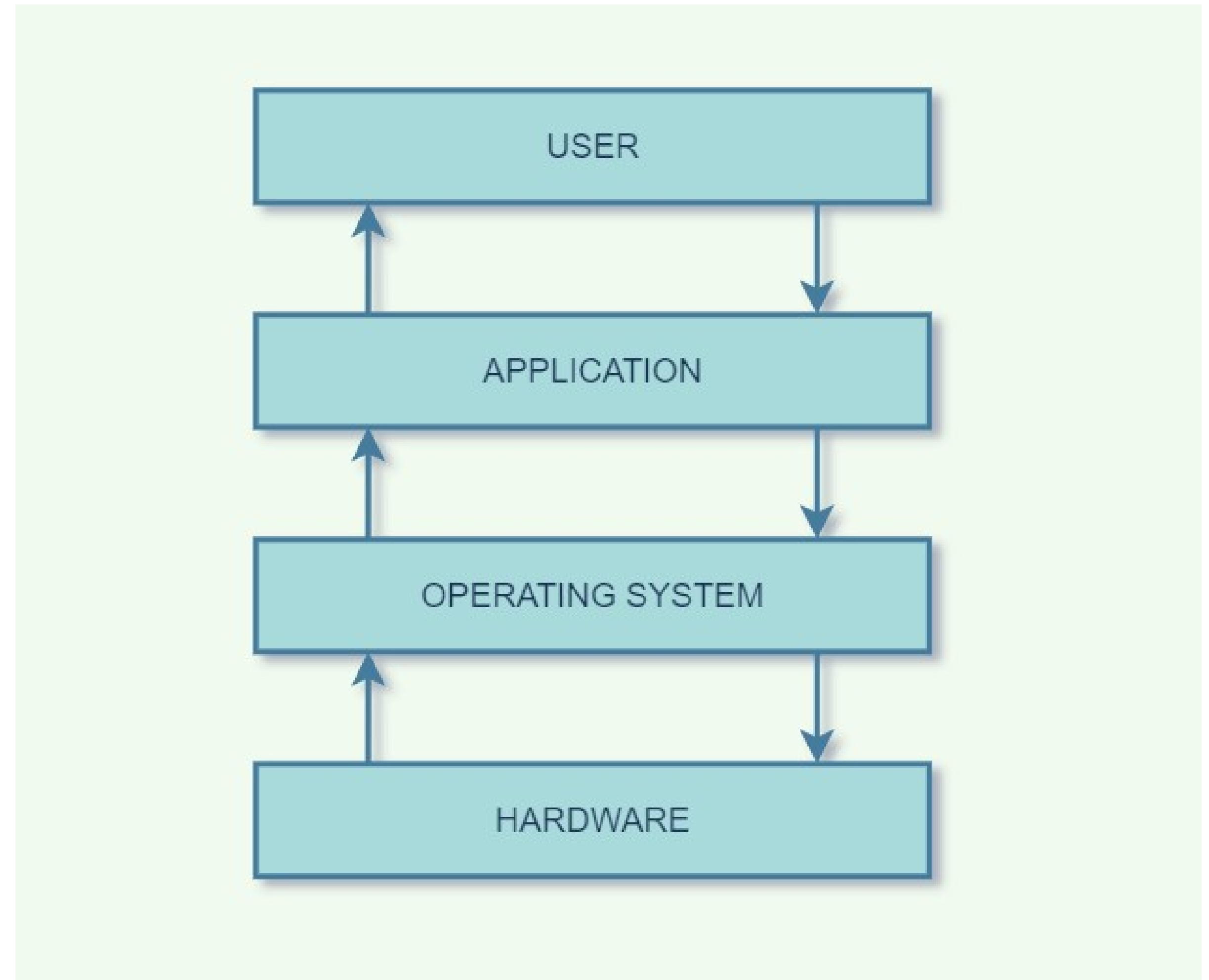
Course Rating

★★★★★ 4.6/5 Stars

Course Outline

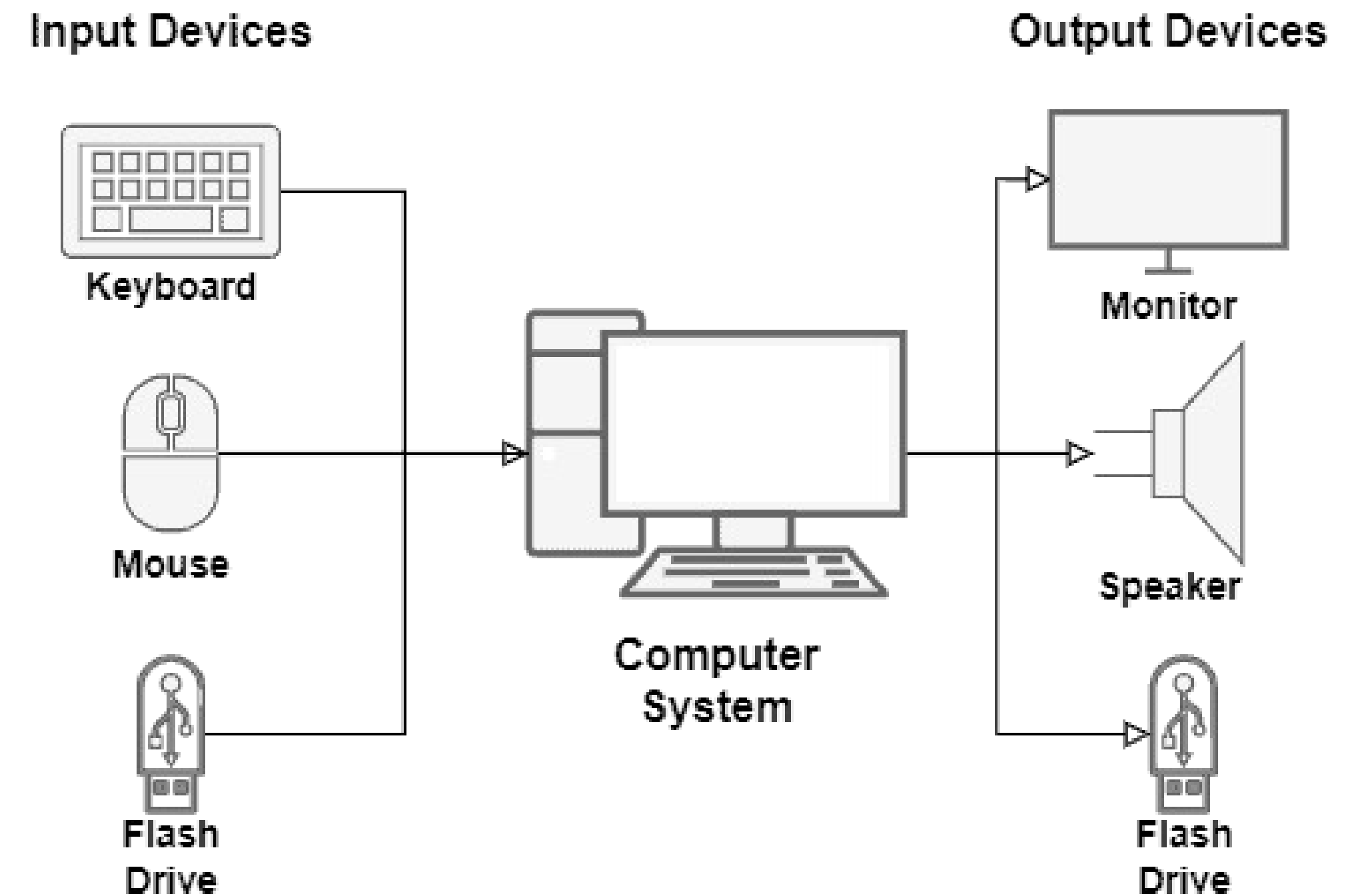
What is an OS (Operating System)?

- Software that makes a computer or device work when you first switch it on
- The most important program that runs on your computer. It manages all other programs on the machine.
- Every PC has to have one to run other applications or programs. It's the first thing "loaded".



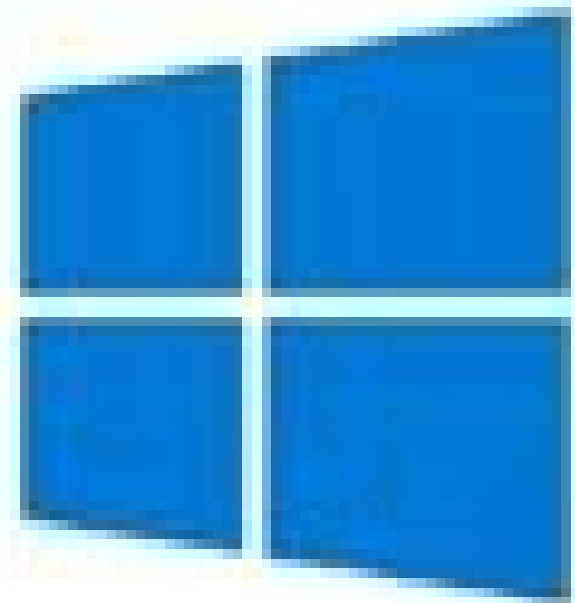
What is an OS (Operating System)?

- It performs basic tasks, such as:
 - Keeping track of files and directories on the disk,
 - Recognizing input from the keyboard or mouse,
 - Sending output to the monitor,
 - Controlling peripheral devices such as disk drives and printers.

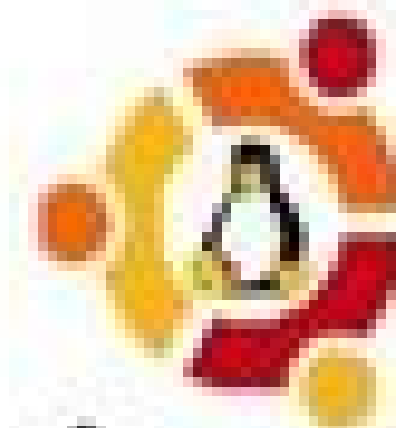


Operating Systems Everywhere

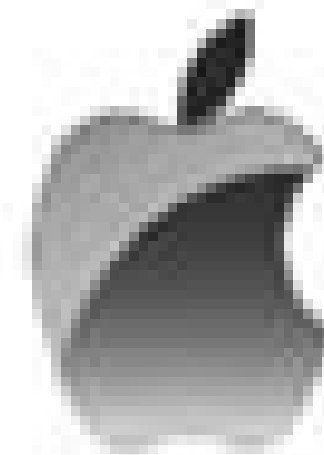
Examples of Operating systems



chromeOS



ubuntu



iOS

symbian
OS

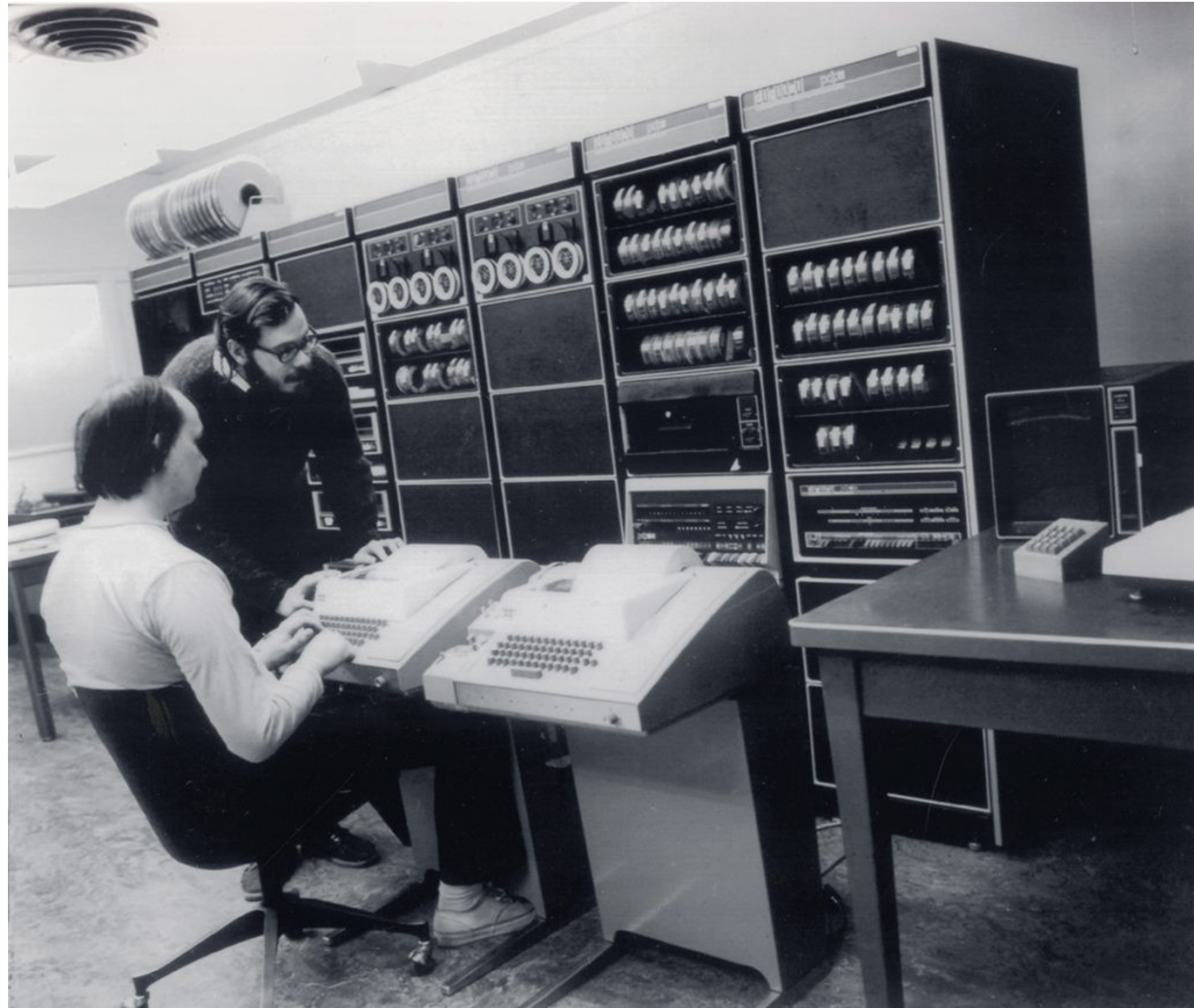


UNIX

www.linuxcomputing.com

Unix - some history

- MIT, Bell Telephone labs, and General Electric developed Multics for a mainframe (GE-645).
- Honeywell supported Multics until 2000.
- Bell Telephone Labs staff (mainly Ken Thompson and Dennis Ritchie) started working on a new system, Unix
- Unix is the grandpa of Android, Linux, BSD Unix, MacOS, iOS



GNU Project

“Free as in Freedom”

- The GNU project set a goal in 1984 to create a free Unix-like system
- Free as in:
 - Freedom to run the program as you wish
 - Freedom to study the source code and make changes to it
 - Freedom to redistribute copies of the program if needed
 - Freedom to distribute modified version of a program to others
- They made progress and created many utilities, but faced difficulties with the kernel (the part that integrates with the hardware)

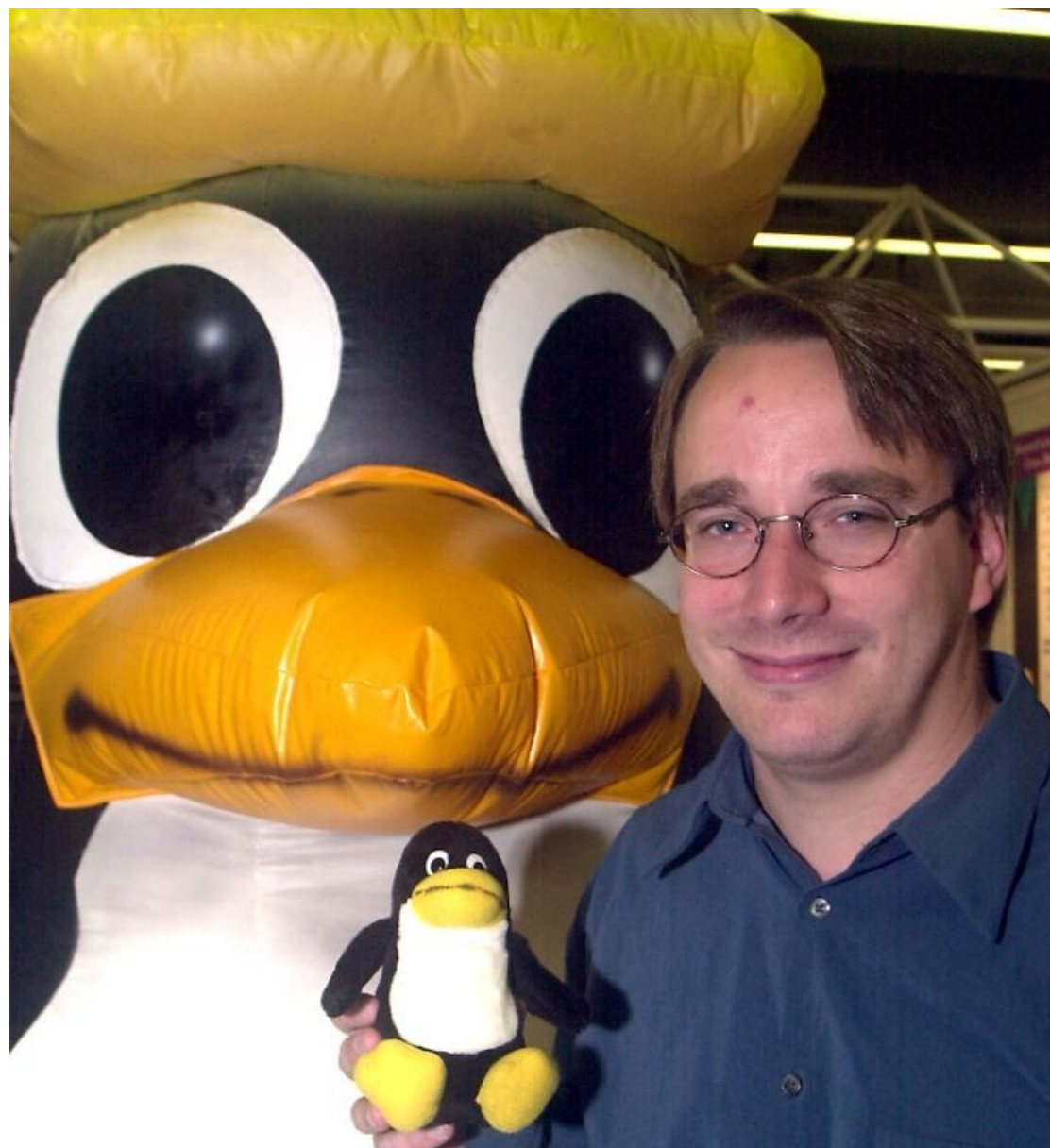




The gnu is also an animal similar to a buffalo. The more you know!

Linux Kernel

- On August 25, 1991, Linus Torvalds, a computer science student from Finland, announced he was working on Linux, a UNIX-like OS. A collaboration between the GNU project and Linus led to the creation of GNU/Linux, with tools and utilities developed by GNU, and a Linux kernel.

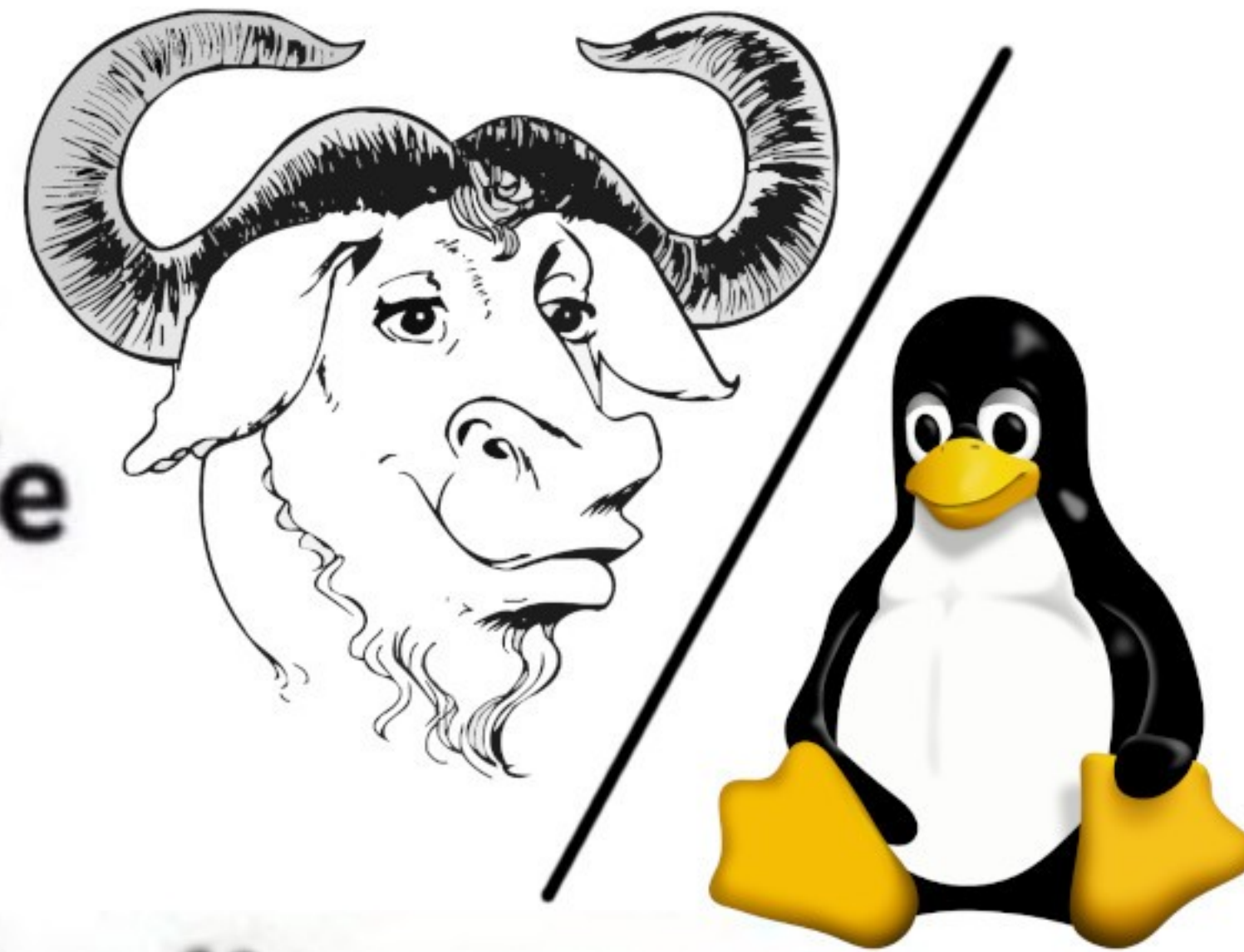


From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: What would you like to see most in minix?
Summary: small poll for my new operating system
Message-ID: <1991Aug25.205708.9541@klaava.Helsinki.FI>
Date: 25 Aug 91 20:57:08 GMT
Organization: University of Helsinki

Hello everybody out there using minix -
I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system(due to practical reasons) among other things). I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)
Linus (torvalds@kruuna.helsinki.fi)
PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT portable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-/.



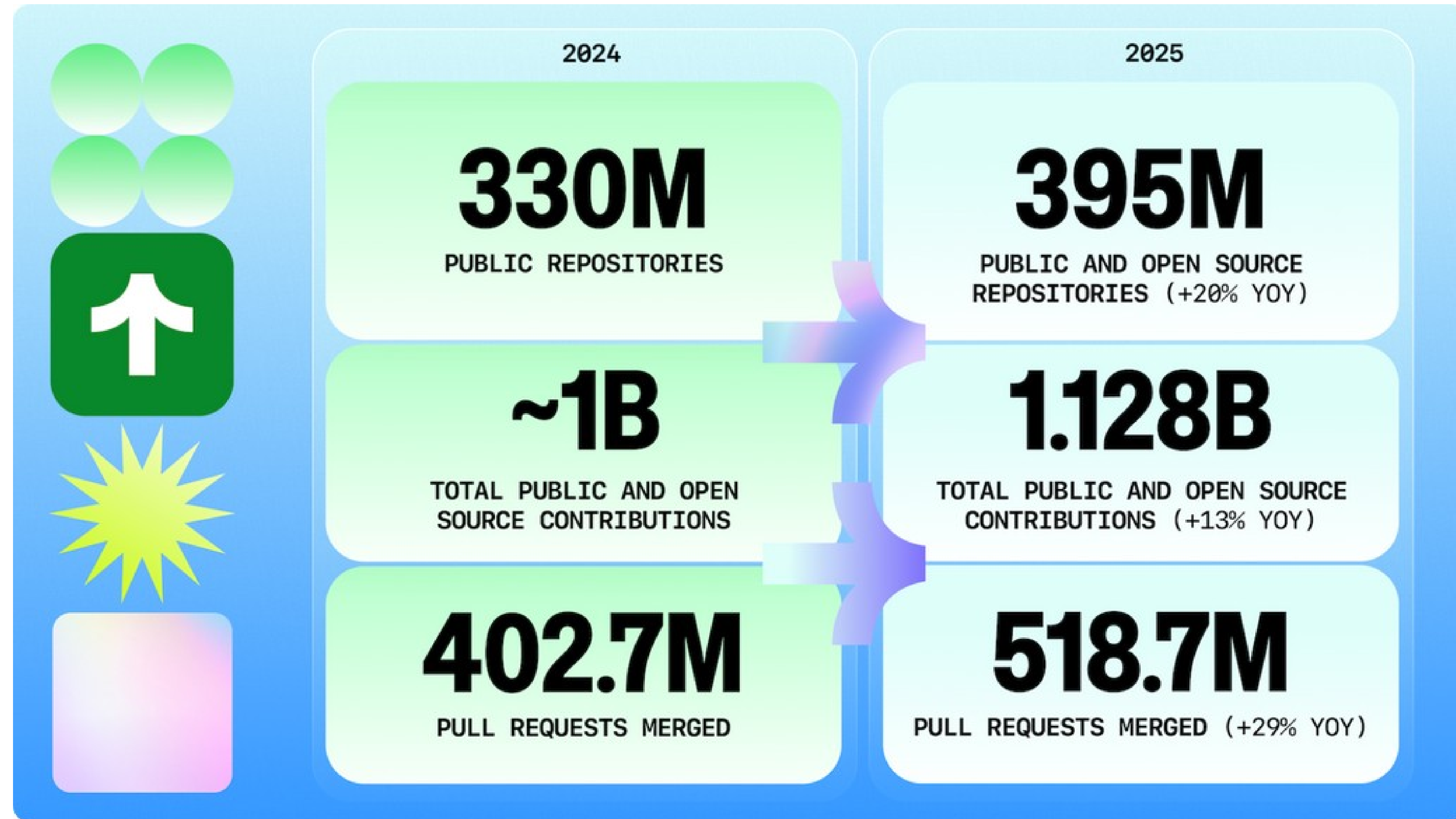
**thank you for
changing my life**



**i'm literally a clone of
a 1970s mainframe
operating system**

Open Source

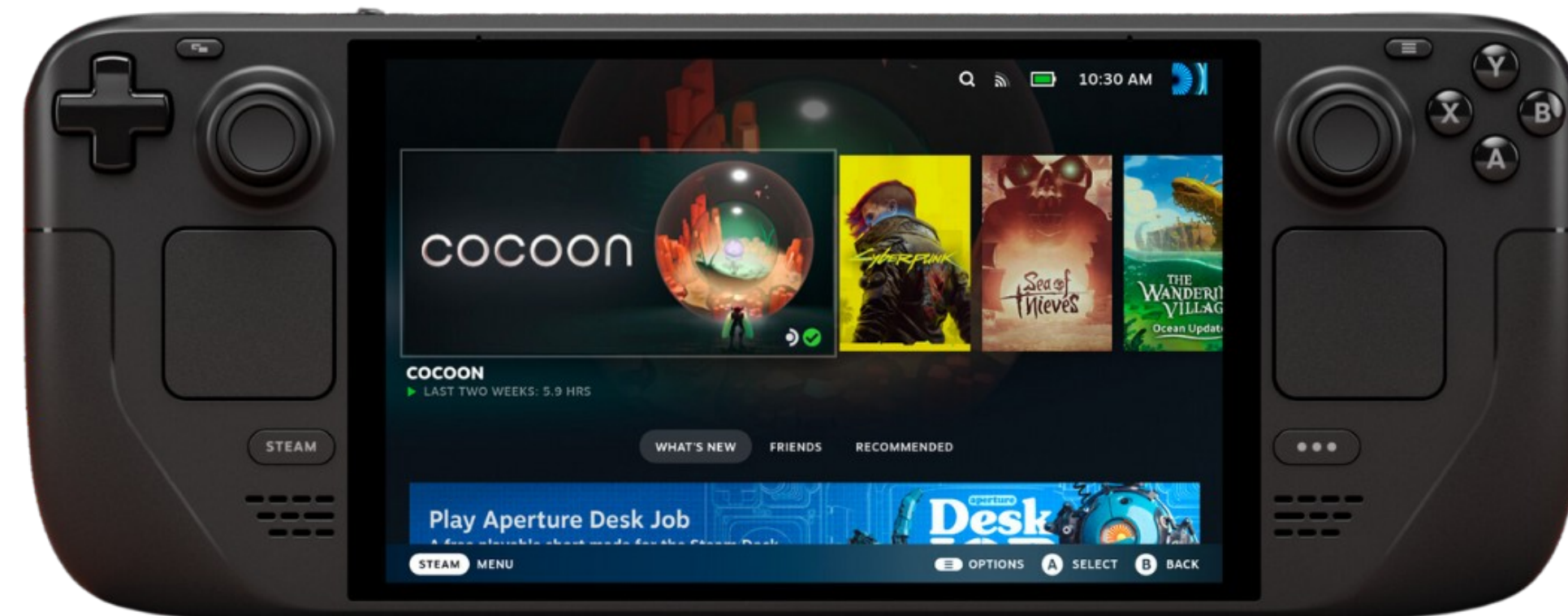
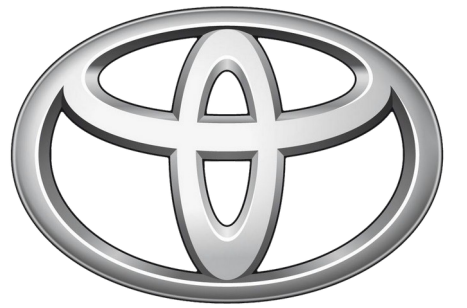
- Free software is about user freedom and ethics; open source is about practical collaboration and code quality.



Linux Usage



- Servers: Powers >90% of the public cloud and web servers
- Mobile: Android has ~70% market share
- Supercomputers: 100% of the Top 500 supercomputers run Linux.
- Embedded Systems: Routers, smart TVs, IoT devices, cars, even your microwave!
- Desktops & Laptops: Growing fast, especially among developers, designers, and privacy-focused users.



Why should YOU use it?

Compatibility and affordability

<https://endof10.org>



Why should YOU use it?

Sustainability

- Court case - Eric Lundgren.
Look him up



Why should YOU use it?

Privacy

*Computer sitting idle.
Network traffic:*

Linux

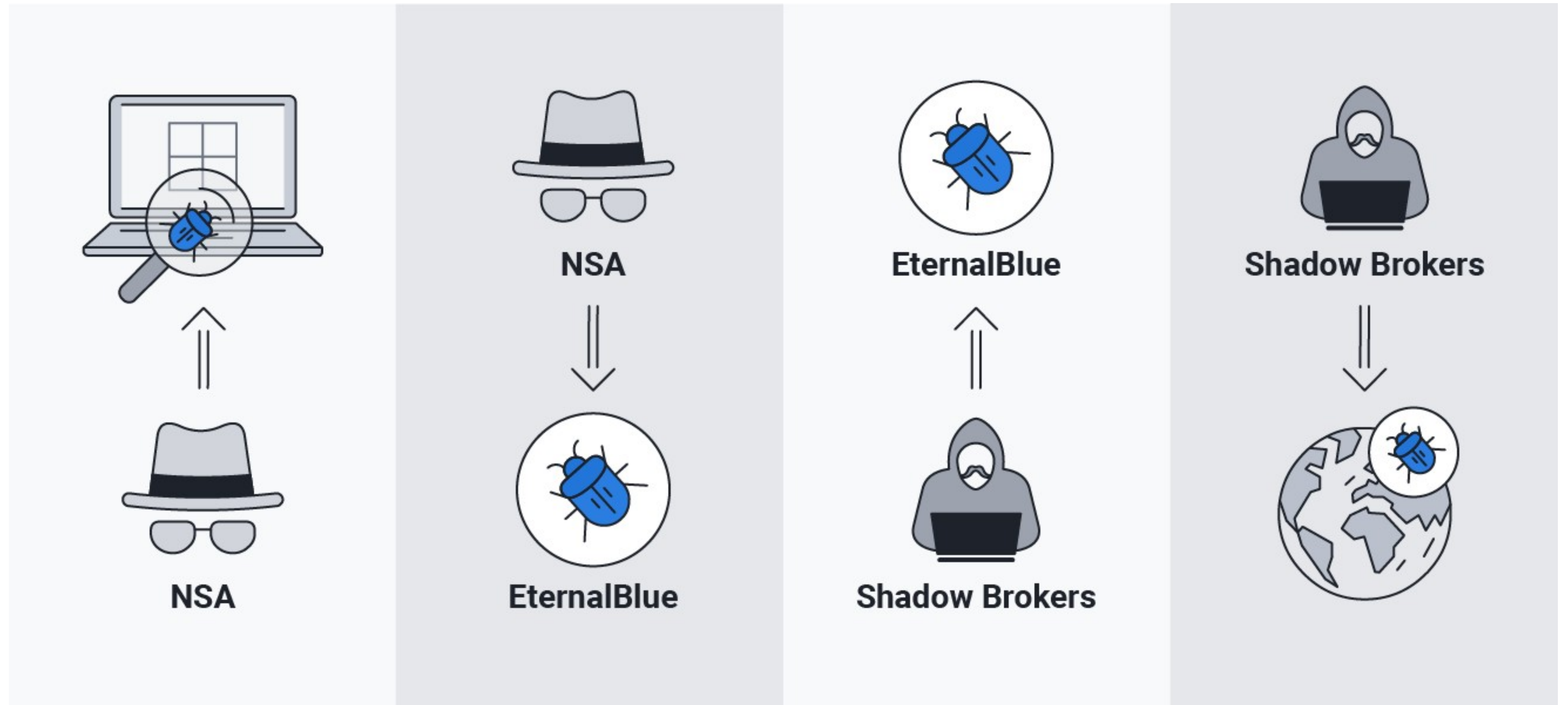


Windows



Why should YOU use it?

Security



Distributions / Distros

So many choices!

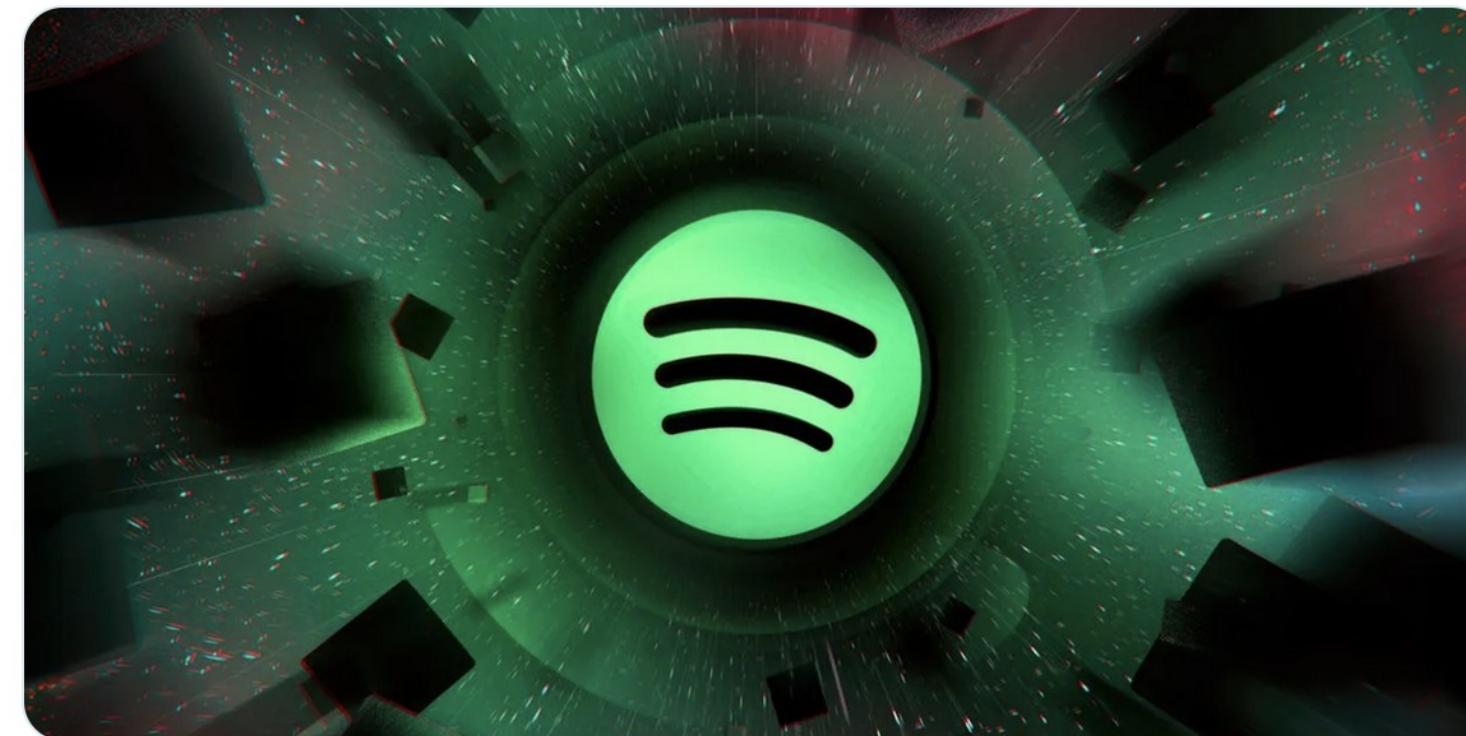
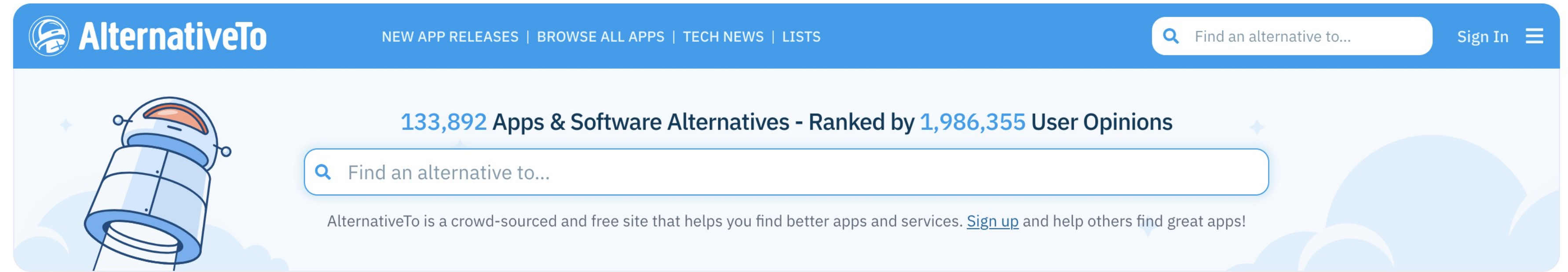
- <https://img-blog.csdn.net/20140419125512500?watermark/2/txt/aHR0cDovL2Jsbn2cuY3Nkbi5uZXQveGtmejAwOA==/font/5a6L5L2T/fontsize/400/fill/I0JBQkFCMA==/dissolve/70/gravity/Ce nter>

- Zorin
 - Elementary OS
 - Linux Mint
 - Ubuntu
 - KDE Neon
 - Fedora
 - Arch
 - Kali Linux
- And many desktop environments for each distribution



Finding alternatives to common programs

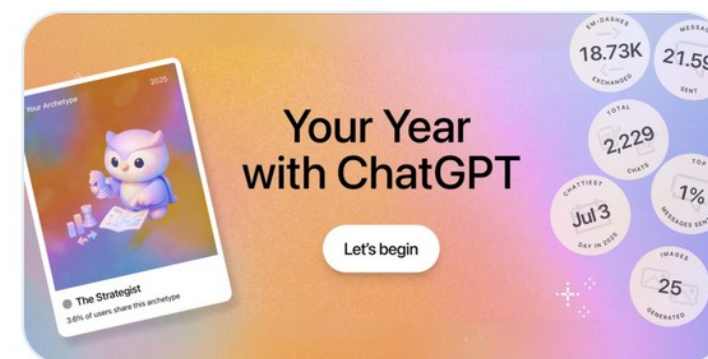
- alternativeto.com
- <https://www.reddit.com/r/linuxquestions/>
- <https://www.reddit.com/r/linux4noobs/>
- Any search engine you like



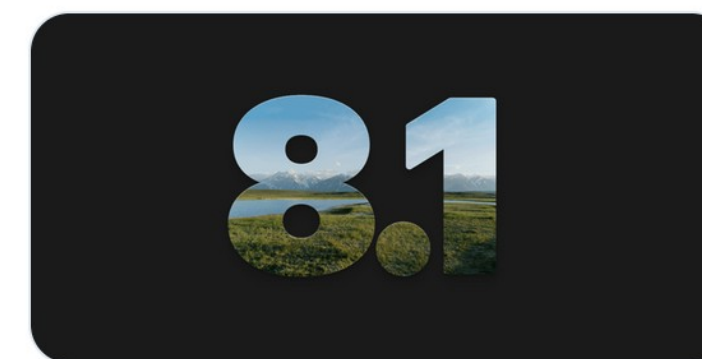
SPOTIFY | ALTERNATIVES DEC 23, 2025 🔥💬
Spotify library reportedly fully scraped by Anna's Archive in 300TB torrent release



INKSCAPE | ALTERNATIVES DEC 23, 2025 🔥💬
Beyond Adobe's pricey products: my graphic designer's toolbox on Linux



CHATGPT YESTERDAY 🔥💬
OpenAI launches yet another annual recap for ChatGPT, inspired by Spotify Wrapped



ELEMENTARY OS YESTERDAY 🔥💬
elementary OS 8.1 is out with over 1,100 fixes, Linux 6.14, ARM64 support, and more



POSTMARKETOS DEC 23, 2025 🔥💬
postmarketOS 25.12 brings Alpine 3.23 base, GNOME 49, Plasma Mobile 6.5 & kernel updates

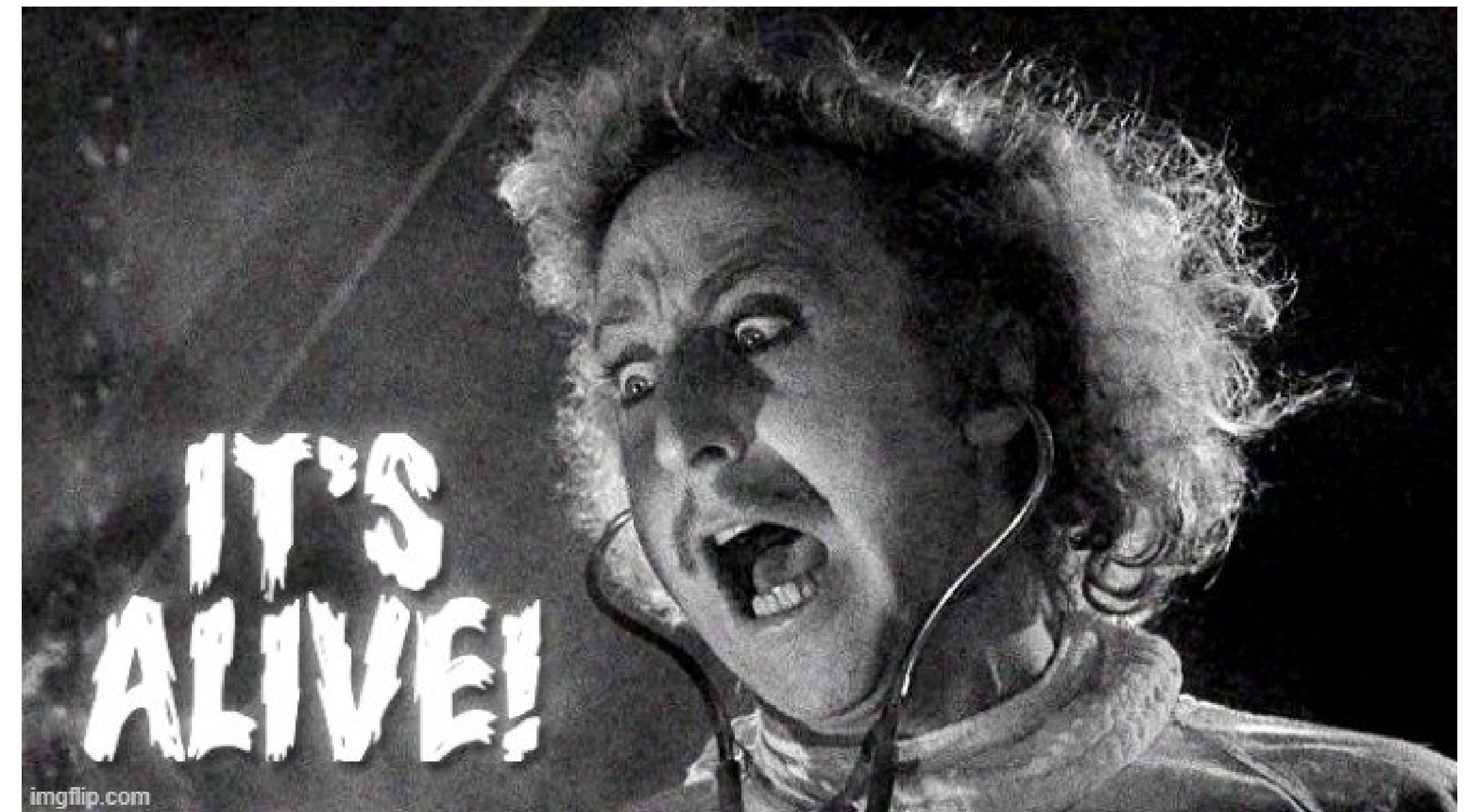


AMAZON KINDLE DEC 22, 2025 🔥💬
Amazon to offer DRM-free EPUB and PDF downloads for Kindle titles starting in January 2026

Live USB

Booting from USB

- You can start your system directly from a USB drive, no installation needed!
- Like a VM, this won't touch your existing system



Live USB

Booting from USB

- You can start your system directly from a USB drive, no installation needed!
- Like a VM, this won't touch your existing system
- To boot from USB:
 - Plug in your live USB,
 - Restart, then immediately press the boot menu key. Common keys:
 - **F12** (most Dell, HP, Lenovo)
 - **F9** (some HPs)
 - **ESC** (many laptops, especially older ones)
 - **F2** / **DEL** (often BIOS/UEFI setup — may have boot options inside)

Pro tip: If you miss it, just restart and try again. No shame in hitting **F12** five times.

Can't find the key?

Search: '[Your Laptop Brand] + boot from USB'



Bare metal

So you like Linux.. let's make it yours

- You can take the USB that you setup in the previous step and install from it, HOWEVER:
 - Make sure your data is backed up online or to an external drive, just to be safe. It's a good idea to always have backups, in general
 - Follow the instructions from the official documentation
 - Enjoy the journey. You might hit a snag or two. That's okay! Troubleshooting is where real learning happens. Patience + curiosity = success.

CTF Time!