What is Linux

CentOS Linux Essentials
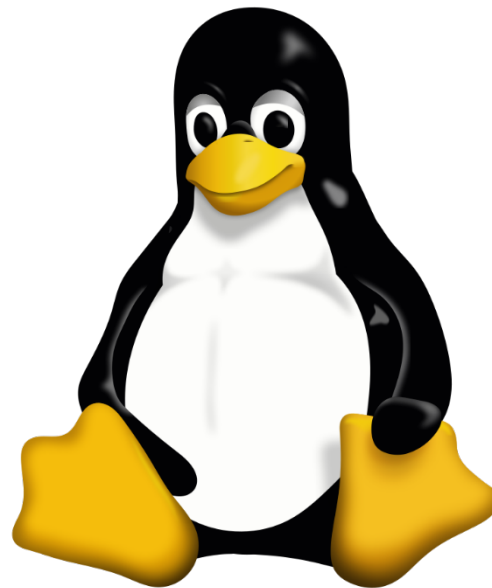
Linux. DevOps training

In this video:

- Linux history overview
- Linux as an operating system
- Kernel
- GNU

Linux as an operating system

Linux is

- **Unix-like** computer **operating system**

- Assembled under the model of free and open-source software development and distribution.

- The defining component of Linux is the Linux kernel.

https://en.wikipedia.org/wiki/Linux

‹epam›

Linux history overview

1969 and 1970 - the Unix operating system was implemented
1977 - BSD was released
1983 - the GNU project was started
1986 - Maurice J. Bach published *The Design of the UNIX Operating System*
1987 – MINIX was released
1991 - Linus Torvalds began a project that later became the Linux kernel
1992 – releasing kernel under GNU GPL
1994 - Linux version 1.0.0 (176 250 lines of code)
1996 - official mascot, penguin **Tux**. Linux version 2.0.0 (777 956 lines of code)
2011 - Linux version 3.0 (14.6 million lines of code)
2015 - Linux version 4.0 (19 million lines of code)
2019 - Linux version 5.0 (26 million lines of code)

GNU

The development of GNU, started in January 1984, is known as the GNU Project. Many of the programs in GNU are released under the auspices of the GNU Project; those we call GNU packages.

The name "GNU" is a recursive acronym for "GNU's Not Unix."
The program in a Unix-like system that allocates machine resources and talks to the hardware is called the "kernel".

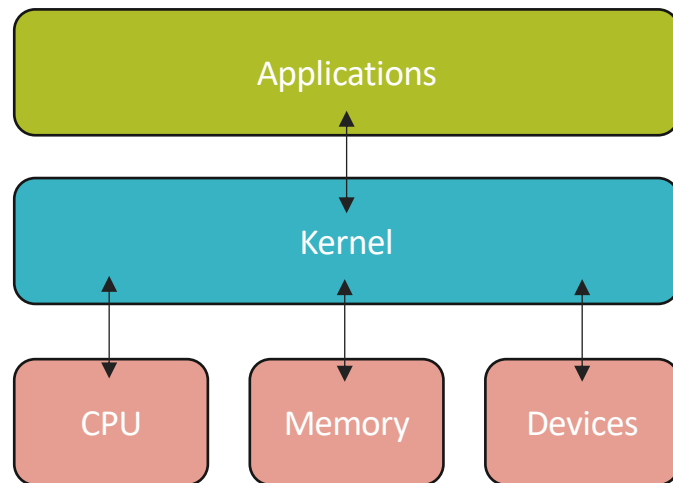GNU is typically used with a kernel called Linux.

https://en.wikipedia.org/wiki/GNU

‹epam›

Kernel

What is Kernel?

- Central part of operating system.

- A program having control over everything that occurs in system.

- Interface between the user applications and the hardware.

| Applications |
| Kernel |
| CPU | Memory | Devices |

Most important differences

- Clarity (open source)

- Availability (free distribution)

- Booting (Either primary or logical partition.)

- Security (more secure)

- Decentralization

- Diversity (broad range of distros)

- Scalability

- Simplicity

- Monolithic kernel

- Customizable

- Separation of the directories using (Forward slash)

- File names(case sensitive) and structure of file system

Useful Links:

- https://en.wikipedia.org/wiki/Linux
- https://en.wikipedia.org/wiki/Linux_kernel
- https://en.wikipedia.org/wiki/History_of_free_and_open-source_software
- https://en.wikipedia.org/wiki/GNU
- http://www.gnu.org/