What is Linux and why is it so popular?

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Abstract: Whether you know it or not you are already using Linux (the best-known and most-used open source operating system) every day. From supercomputers to smartphones, the Linux operating system is everywhere. As an operating system, Linux is a family of open source Unix-like software based on the Linux kernel - that sits underneath all of the other software on a computer, receiving requests from those programs and relaying these requests to the computer's hardware. With regard to careers, it is becoming increasingly valuable to have Linux skills rather than just knowing how to use Windows. In general, Linux is harder to manage than Windows, but offers more flexibility and configuration options.
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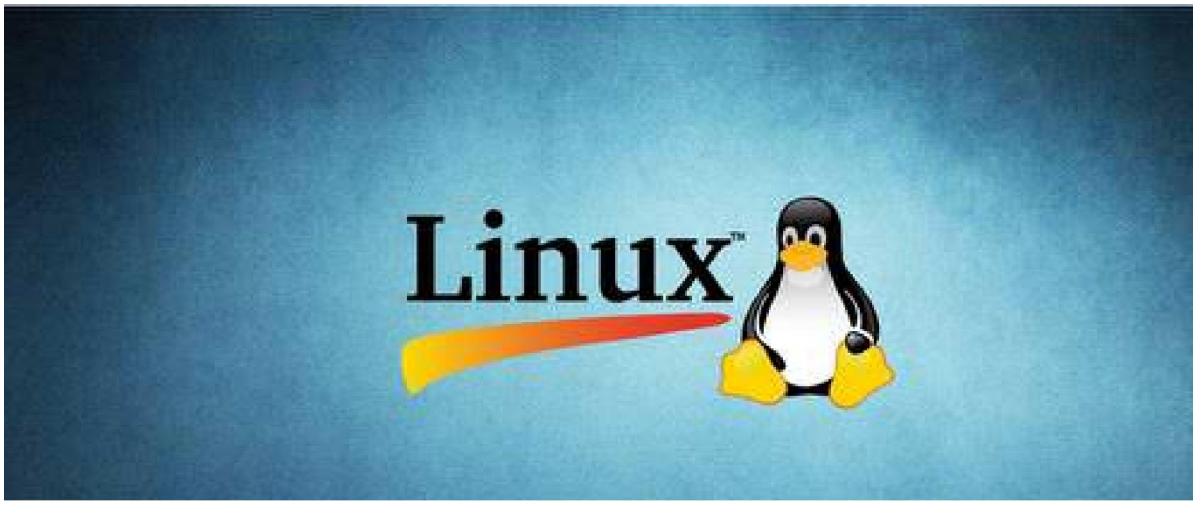


"Linux has definitely made a lot of sense even in a purely materialistic sense."

- Linus Torvalds

Introduction

Every desktop computer uses an operating system. The most popular operating systems in use today are: Windows, Mac OS, and **LINUX**. Linux is the best-known notoriously reliable and highly secure open source portable operating system -- very much like UNIX -- that has become very popular over the last several years -- created as a task done for pleasure by **Linus Torvalds** -- computer science student at the University of Helsinki in Finland -- in the early 1990s and later developed by more than a thousand people around the world.

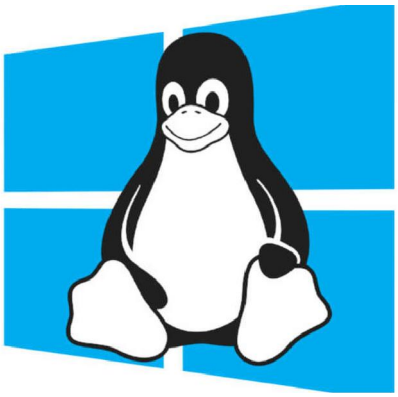
Linux is fast, free and easy to use, that sits underneath all the other software on a computer -- runs your computer -- handling all interactions between you and the hardware i.e., whether you're typing a letter, calculating a money budget, or managing your food recipes on your computer, the Linux operating system (similar to other Operating Systems, such as **Windows XP**, Windows 7, Windows 8, and Mac OS X) provides

the essential air that your computer breathes.

Linux is the most important technology advancement of the twenty-first century and Licensed under the General Public License (GPL) that Linux uses ensures that the software will always be open to anyone and whose source code is open and available for any user to check, which makes it easier to find and repair vulnerabilities and it power the laptops, development machines and servers at Google, Facebook, Twitter, NASA, and New York Stock Exchange, just to name a few. Linux has many more features to amaze its users such as: Live CD/USB, **Graphical user interface** (X Window System) etc.

Why LINUX?

Although Microsoft Windows (which is the most likely the victim of viruses and malware) has made great improvements in reliability in recent years, it considered less reliable than Linux. Linux is notoriously reliable and secure and it is free from constant battling **viruses** and **malware** (which may affect your desktops, laptops, and servers by corrupting files, causing slow downs, crashes, costly repairs and taking over basic functions of your **operating system**) – and it keep yourself free from licensing fees i.e., zero cost of entry... as in free. You can install Linux on as many reliable computer ecosystems on the planet as you like without paying a cent for software or server licensing. While **Microsoft Windows** usually costs between $99.00 and $199.00 USD for each licensed copy and fear of losing data.



Below are some examples of where Linux is being used today:

- Android phones and tablets
- Servers
- TV, Cameras, **DVD** players, etc.
- Amazon
- Google
- **U.S. Postal service**
- New York Stock Exchange

Linux Operating System has primarily three components:

1. **Kernel**

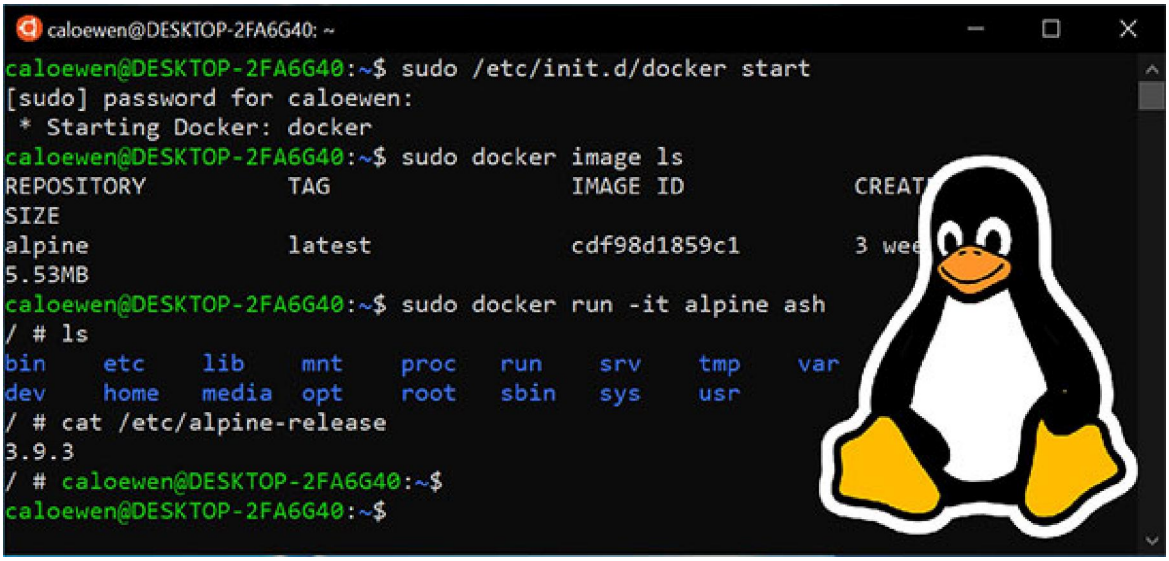
Kernel is the core part of Linux Operating System and interacts directly with hardware. It is responsible for all major activities of the Linux operating system.

2. **System Library**

System libraries are special programs using which application programs accesses Kernel's features.

3. **System Utility**

System Utility programs are responsible to do specialized tasks.



Important features of Linux Operating System:

- Portable
- Open Source
- Multi-User
- Multiprogramming
- Hierarchical File System
- Security

Now Linux (successfully being used by several millions of users worldwide) has grown passed the stage where it was almost exclusively an academic system, useful only to a handful of people with a technical background. It provides more than the operating system: there is an entire infrastructure supporting the chain of effort of creating an operating system, of making and **testing programs** for it, of bringing everything to the users, of supplying maintenance, updates and support and customizations, runs on different platforms including the Intel and **Alpha platform**. Today, Linux is ready to accept the challenge of a fast-changing world to do various types of operations, call application programs etc. Since the hiring focus is shifting more and more toward **DevOps** type skills, a Linux skill set will be the types of things that will make you very deployable.

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