**Linux History**

A popular open-source operating system is Linux. It was initially created by Linus Torvalds in 1991. At the time, Torvalds was a computer science student at the University of Helsinki, Finland and began working on the Linux project as a personal endeavour. The name Linux is a combination of his first name, Linus, and Unix, the operating system that inspired his projects. At the time, most operating systems were proprietary and expensive. Torvalds wanted to create an operating system that was freely available to anyone who wanted to use the operating system, He originally released Linux as free software under the GNU General Public License. This meant that anyone could use, modify, and redistribute his source code.

Early versions of Linux were primarily used by technology enthusiasts and software developers, but over time it has grown in popularity and is used in various types of devices such as servers, smartphones, and embedded systems. Linux is considered one of the most stable, secure and reliable operating systems and is widely used in servers, supercomputers and enterprise environments. Today, Linux is one of the most widely used operating systems in the world, with an estimated 2.76% of all desktop computers and more than 90% of the world’s top supercomputers running on Linux, and approx. 71.85% of all mobile devices run on Android, which is, you guessed it, Linux-based. The Linux community has expanded to include thousands of developers and users who work on the creation and upkeep of the operating system. Nowadays Linux has many distributions (versions) namely:

1. Ubuntu
2. Fedora
3. Arch
4. Plasma
5. KDE
6. Mint
7. Manjaro

**How does Linux Work?**

Think of the operating system as the engine of your car. The engine can move on its own, but when connected to the gearbox, axles and wheels it becomes a functioning car. If the engine is not working properly, the rest of the car will not work. Linux was designed to be similar to UNIX but evolved to run on hardware ranging from phones to supercomputers. All Linux-based operating systems include a Linux kernel that manages hardware resources and a set of software packages that make up the rest of the operating system. Organizations can also run Linux operating systems on Linux servers.

* **Kernel:**This is actually a component of the “Linux” system as a whole. The kernel, which controls the CPU, memory, and peripherals, serves as the brain of the system. The operating system’s kernel is at the most fundamental level.
* **Desktop Environment:**The user actually engages in interaction at this point. There are numerous desktop environments available (GNOME, Cinnamon, Mate, Pantheon, Enlightenment, KDE, Xfce, etc.). Every desktop environment has pre-installed programmes (file managers, configuration tools, web browsers, games, etc.).

**Why Use Linux?**

There are several reasons why one might choose to use Linux:

* **Open-source:**Linux is open-source software, meaning that the source code is freely available for anyone to use, modify, and distribute. This allows for a large and active community of developers to contribute to the development and maintenance of the operating system.
* **Customizability:** Linux is highly customizable, and users can easily install and configure different software packages to suit their needs.
* **Stability and security:**Linux is known for its stability and security, as it is less prone to crashes and viruses than other operating systems.
* **Cost-effective:** Linux is free to download and use, making it a cost-effective option for individuals and businesses.

**Events Leading to the Creation of Linux**

The emergence of Linux, one of the world’s most widely used open-source operating systems, can be traced to several important events and the work of a few people. Below is a summary of the major events that led to the emergence of Linux.

1. **Unix development:**Linux was heavily influenced by the Unix operating system developed by Bell Labs in the late 1960s and early 1970s. Unix was developed as a multi-user, multi-tasking operating system and has been widely used in science and research.
2. **Minix is ​​born:** In the early 1980s, computer science professor Andrew S. Tanenbaum created a small Unix-like operating system called Minix. Minix was developed as an educational tool and the source code was made available to students.
3. **Linux is born:** In 1991, a 21-year-old student named Linus Torvalds began working on a new operating system he named Linux. Linus was inspired by his Minix and used its source his code as a starting point for his own projects. He also drew heavily on Unix design principles.
4. **Release of Linux 0.01:** In September 1991, Linus released the first version of his Linux called Linux 0.01. It was a command-line operating system and was freely distributed on the Internet.
5. **Linux community development:**In the years that followed, Linux quickly gained popularity among programmers and enthusiasts. A community of developers began to form around Linux, contributing to the development of the operating system by writing code, filing bug reports, and providing feedback.
6. **Enterprise Adoption:** In the late 1990s and early 2000s, the open-source nature of Linux made it more flexible, cost-effective, and more secure than proprietary operating systems such as Windows, making it a popular choice for enterprises and businesses. started being hired by companies. This increased acceptance led to the development of commercial support and services for Linux.
7. **Linux Distribution Growth:** As Linux became more popular, various groups of developers began creating their own versions of the operating system, called distributions. Some of the most popular distributions are Red Hat, Debian, and Ubuntu. These distros contain the Linux kernel and a number of his packages of easy-to-use tools and software that make using his Linux easy for both developers and end users.
8. **Linux in the Enterprise:**With the growth of cloud computing and the Internet of Things, Linux continues to gain traction in the enterprise. Linux is now widely used as an operating system for servers, mainframes, and supercomputers. It’s also used in embedded systems, mobile devices, and the Internet of Things.
9. **Linux in the Consumer Market:** Linux has also entered the consumer market with the advent of Linux-based mobile devices, smart TVs, and other consumer electronics.

**Official Mascot of Linux**

The official **Linux mascot**is a **penguin**named **Tux**. Created by artist **Larry Ewing**in **1996**, the penguin was first used as his Linux mascot for the **Linux kernel**. Tux **quickly**became **popular**in the Linux community and is now one of Linux’s most recognizable icons. Tux was chosen as the mascot because the **penguin**is a **rare animal**found in the wild in Antarctica, just as Linux is a **unique**and **powerful**operating system. The name **Tux**comes from the short form “**Torvalds Unix**“, in honor of the creator of Linux, Linus Torvalds. Tux is used in a variety of contexts, including Linux operating system **logos**, **T-shirts**, **stickers**, other Linux-related merchandise, and even video games.

**Development of Linux**

The Linux ecosystem is a constantly evolving and expanding platform, so there is a lot of development going on. Notable recent developments include:

* Linux 5.11 **kernel release**.It includes new **features**such as AMD Zen 3 processor support, memory management system improvements, and **new hardware**support.
* Continued development of various **Linux distributions**. Ubuntu 21.04 released in April 2021. It features an updated Gnome desktop environment, improved ZFS file system support, and new security features.
* Development of **new open-source**software and tools for Linux. For example, the release of version 6.0 of **Ansible automation**tools brings new features such as support for Windows Subsystem for Linux 2 (WSL2) and improved support for Kubernetes.
* The rise of **containerization**and **orchestration**technologies such as Docker and Kubernetes. They are becoming more and more common in deploying and managing Linux-based applications.
* Linux is **growing**in **popularity**in the cloud computing space, with many major cloud providers offering Linux-based virtual machines and managed services.

**Installing Linux**

Installing an operating system can seem like a daunting task to many. Believe it or not, Linux is the easiest operating system to install. In fact, most versions of Linux offer what’s called a live distribution. This means running your operating system from a CD/DVD or USB flash drive without making any changes to your hard drive. All features are available without committing to an installation. Once you’ve tried it out and decided to use it, double-click the Install icon to run the simple installation wizard.

**Conclusion**

Linus Torvalds’ 1991 invention of Linux has made significant advancements. From a basic operating system for personal computers, it has developed into a popular and respected platform that runs anything from supercomputers to mobile phones. Because Linux is an open-source operating system, a sizable and engaged developer community has been able to contribute to its creation and upkeep, making it a highly adaptable and reliable operating system. Both consumers and corporations favour it because of its affordability and adaptability. In the world of technology, Linux is still a big player, and its influence can be felt in many other sectors.