





LINUX



Linux History





- In 1991, Linus Torvalds a student at the university of Helsinki, Finland, thought to have a freely available academic version of Unix started writing its own code. Later this project became the Linux kernel. He wrote this program specially for his own PC as he wanted to use Unix 386 Intel computer but couldn't afford it. He did it on MINIX using GNU C compiler. GNU C compiler is still the main choice to compile Linux code but other compilers are also used like Intel C compiler.
 - He started it just for fun but ended up with such a large project. Firstly he wanted to name it as 'Freax' but later it became 'Linux'.
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What Is Linux

- Linux is an open-source operating system like other operating systems such as Microsoft Windows, Apple Mac OS, iOS, Google android, etc. An operating system is a software that enables the communication between computer hardware and software. It conveys input to get processed by the processor and brings output to the hardware to display it. This is the basic function of an operating system. Although it performs many other important tasks.


Linux Bash



- The Linux Bash is also known as 'Bourne-again Shell.' It is a command language interpreter for the Linux based system. It is a replacement of Bourne shell (sh). It was developed under the GNU Project and written by Brian Fox. Nowadays, Bash is the default user shell of most of the Linux distributions.
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Linux Distributions (Distros)



- Other operating systems like Microsoft combine each bit of codes internally and release it as a single package. You have to choose from one of the version they offer.
 - But Linux is different from them. Different parts of Linux are developed by different organizations.
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Linux Distributions List



- Ubuntu
 - Linux Mint
 - Debian
 - Red Hat Enterprise / CentOS
 - Fedora
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Linux Directory Commands



- pwd - It displays the current working location or directory of the user.
 - ls - The ls command is used to show the list of a folder. It will list out all the files in the directed folder.
 - cd - It is used to change to the directory you want to work from the present directory
 - mkdir - With mkdir command you can create your own directory.
 - rmdir - The rmdir command is used to remove a directory from your system.
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Linux File Commands



- file - Determines file type.
 - touch - Used to create a file.
 - rm - To remove a file.
 - cp - To copy a file.
 - mv - To rename or to move a file.
 - rename - To rename file.
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File Permissions



- Read (r) : The read permission allows you to open and read the content of a file. But you can't do any editing or modification in the file.
 - Write (w) : The write permission allows you to edit, remove or rename a file. For instance, if a file is present in a directory, and write permission is set on the file but not on the directory, then you can edit the content of the file but can't remove, or rename it.
 - Execute (x): In Unix type system, you can't run or execute a program unless execute permission is set. But in Windows, there is no such permission available.
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Setting Permissions With chmod

- Syntax: `-- chmod +<permissionName> <fileName>`
- Example: `chmod +w file`
- `777 = rwxrwxrwx`
- `765 = rwxrw-r-x`
- `654 = rw-r-xr--`