Linux vs. Windows Operating Systems

Linux is an open-source operating system, meaning that all the code is publicly available and free to be used, viewed, and edited by anyone (Opensource). It has many different distributions of Linux which includes different software options. This makes Linux really customizable because, not just applications like word processors and web browsers, can be swapped out. Linux users can also choose core components like which system displays graphics and other user interface components. While Linux is free to be used by anyone, the trademark on the name still lies with the creator, Linus Torvalds, from the time it was built in 1991 when he was a student at the University of Helsinki (Opensource). On the other hand, Windows is a commercial operating system. This differs from Linux where users have access to the source code of the operating system, where windows users don’t have that access (Brittanica). Windows operating system is what allows you to use a computer, and it comes preloaded on most new personal computers. Since its first release in the mid 1980s, there have been many versions of Windows since then. Windows featured the first graphical user interface for IBM compatible PC’s, where Windows OS soon took over the market. As newer versions of Windows came out, it introduced greater functionality and a more dynamic interface (Britannica).

A file system is a method for storing and organizing data on a computer. In Linux, the file system is a very important part of the OS because it is responsible for managing data stored on the disk and other storage devices (Javatpoint). In Linux, the file system has a hierarchal file structure as it contains a root directory and subdirectories. All other directories can be accessed through the root directory. Ext4 and Btrfs are two file systems that stand out as the best general use ones. Ext4 is the default file system used for Linux installations most often. It is proven to be reliable, capable, and high performing. Ext4 is also a journaled file system, which means that it tracks the location of the files on the disk and logs changes made to the disk. Btrfs is an open-sourced file system, and it is one of the top alternatives to ext4. The most notable aspect of Btrfs is its own copy on write approach. This includes copying data to an alternative location on the disk before modifying it. Because of this approach, Btrfs has minimized the risk of data corruption (Knight).

Citations:

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