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CIS

6 October 2024

**Operating systems and file Systems**

Linux is an open-source operating system that follows a monolithic kernel approach. Windows is a proprietary operating system with a hybrid kernel design. Linux is a very versatile operating system that also allows for vast customization and community support given its open-source nature. Whilst offering lots of community support Linux is also a difficult OS to learn in comparison to Windows. Linux is generally used for server administration, developers, and also educational settings. On the other hand, Windows is a paid and licensed operating system that allows for very little customization as that's set by the creator. Windows is a very easy operating system to use, it also undergoes regular security and functionality updates.

For new computer users the windows operating system would be the best choice. The interface presented when booting up windows is simple and easy to navigate in comparison to Linux. Windows software also has great compatibility with popular software. Microsoft developed a wide range of tools most commonly used in the workplace. These key items include excel and word, these are some of the most used applications in the workplace. Windows is used in the workplace due to its simple learning curve and wide range of functionality provided by other Microsoft applications. Windows thrives in a broad compatibility landscape that tends to be more resource intensive than Linux (Hill). Linux is a more difficult operating system to learn than windows but offers more community driven support. Linux can be customized to the users liking and is also an open-source operating system. Linux is most often used in a server based environment especially in the IT world. However, Linux can also be used to develop and educate other programmers.

To determine whcih operating system is best for you depends on a few factors. Are you using this operating system in your place of work or is this for personal use. If for personal use either Linux or Windows would be suitable depending on the users specific wants. At your place of work using Windows is going to be the smarter decision most of the time ass most companies use Microsoft across the board. At the end of the day each operating system has its pros and cons and its up to the user to decide what's best for them both price wise and for functionality.

A file system is a structure that both Windows and Linux use to organize files on any given device. A file system acts in hierarchal order and makes use of directories to do this. Each file is represented by a unique path and is a part of another folder connected to a directory. Each of these files are represented by many things such as timestamp, size, and permissions. The file system can write, delete, and read files present in the system. In Linux the most commonly used file system is Ext4. Ext4 is the successor to Ext3 and is known for its increased file size limits, better performance, and faster file system checks (Technology). This file system is preferred amongst users due to its high performance, reliable journaling, and large file and partition sizes. Another commonly used file system in Linux is the Btrfs. This file system is designed to address the limitations of other older file systems (Technology). This fie system has quality efficient space usage and built in data integrity with checksums. This file system is flexible making it useful in both single and multi-disk setups.

Works Cited

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