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1-26-2022

Windows OS vs. Linux OS

Similarities

- Organize Disk- based files into a hierarchy of directories. These are essentially the files that you see in the windows and linux system when looking up files.
- Usage of GUI- Both systems use graphical user interface to allow a user to communicate with the system
- Both platforms use “file systems” which are simple collections of data or files stored within the system
- Usage of Master Block Record/ Master Boot Record(MBR) This is essentially information is the disk that’s tells how and where an operating system is located so that it can be loaded

Differences

- Directory Structure- Windows and Linux are structurally different. Windows uses data drives with letters while Linux uses root directory.
- Case Sensitivity: Linux is able to have two files with the same name in the same directory while windows cannot have two files with the same name.
- Peripherals: Linux peripherals are considered files like printers and CD-ROMS while windows considered these devices.
- Speed- Linux is faster than windows even with outdated hardware while windows is usually slower than Linux

Which do you prefer Windows or Linux?

- While Linux is faster, open source capable of easier alterations and has access to more complicated application than windows from a business point of view I think I would go with windows. Windows is simple easy to use and mostly everyone is familiar with windows. Linux on the other had can be a bit complicated if your unfamiliar with the operating system and to use it effectively you would need some experience in it or training. So, you wouldn’t be able to use Linux to its full potential without that knowledge and when thinking about your company running on Linux that is a concern. Windows also includes Active Directory-based corporate servers. Linux provides this to, but you would need add-ons to get it.

Storage Solutions

SAN(Storage Area Network)

- Performance- Because storage processing is done on a network separate from the local area network, a SAN outperforms DAS. SAN ensures that the performance is unaffected by LAN traffic congestion. To free up bandwidth and enhance speed, it also removes storage traffic from the LAN.
- Scalability: A SAN can have thousands of SAN storage devices and host servers, all of which can be scaled to meet changing business requirements. When capacity requirements grow, organizations can expand their SAN by adding new hosts and storage devices.
- Reliability:SAN storage can be accessed via many paths and is unaffected by the applications it supports. If a communication failure occurs, the SAN network fabric can employ alternate channels to keep storage available, ensuring that there is no single point of failure between the host and the storage device.

Das(Direct Attached Storage)

- Performance-DAS can give fast access to data and facilitate high-performance I/O activities because storage is directly connected to the DAS host computer. A DAS system is also unaffected by bandwidth constraints or network latency because it isn't connected to the internet.
- Low cost: DAS does not require any hardware or software to operate and maintain the storage system, making it a very cost-effective alternative to NAS and SAN, which both require hardware and software to operate and manage the storage system. The only costs connected with setting up a DAS system are those related with the disk drives and any drive enclosures you may require.
- Easy Set-up: Internal direct-attached storage is preinstalled and ready to use in a new computer or server. External storage that is plug-and-play can be used as soon as it is connected to a USB port.

Christian Perspective

- The ethical considerations depends on the need of the company. If cost considerations are considered, then I would base my options from the lowest priced to the highest prices. I would consider the dangers of the low-costing storage space. I would consider the reliability of the storage space. I would consider if these options were a danger to my employee’s. If I did choose a low-priced storage option with vulnerabilities, I would ensure that the employee’s were aware of these vulnerabilities. I would inform them because I wouldn’t want to find out that a storage system has vulnerabilities by someone hacking my data.

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