

Lab Four

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1 PROBLEM ONE

What is the relationship between a guest operating system and a host operating system in a system like VMware? What factors need to be considered in choosing the host operating system?

In a virtual machine environment, like a VMware system, the host operating system is protected from the contents of the virtual machine. The guest operating system is the operating system that is being used within the virtual machine, not the host. This guest operating system operates sort of in a sandbox environment. Whatever happens to it, will not effect the host or other guest operating systems. Since the virtual machine is built on the host operating system, the guest operating system is closer to a child of the host than an equal. The host operating system is closer to the kernel of the physical machine than the guest operating system is.

When choosing the host operating system, the user has to ensure it allows for the functionality they require. For this to happen, a good host operating system would have a sufficient system call interface that allows for manipulation of files and devices at the very least. Additionally, the host operating system should have the ability to load, store, and run several programs, all while managing the memory effectively and having a good schedule that prevents convoys and has low turnaround and wait time. Essentially, when choosing the host operating system, it must have some scalability and an effective scheduler that allows programs to seem fast.