

Based on Ahmed and Gokhale (2009), what makes an operating system reliable? Why is it important to focus on reliability over performance?

Based on the reading, reliability is based on realistic goals set forth by the manufacturer. If it OS can function relatively error free (funny) without needing to do what we all like to call a "hard reset," then success would be met. Other schools of thought (that are much broader) suggest that if an OS works and does what you ask of it, then equally, it would meet with levels of success. Wherever your feelings lie on this issue, we have all had problems with reliability and continue to search for the "Holy Grail" of the perfect OS that combines reliability coupled without loss of performance. There are a lot of nifty tricks that companies are doing now to improve the reliability of their OS's without sacrificing performance, "Virtualization" is one of those. This process has multiple OS's running concurrently on the same machine. Each system works independently as if it were operating by itself on the virtual hardware. If one of the systems should fail, other systems operating on the virtual hardware would be isolated from the failure as if it didn't happen in the first place. Keeping the users in a seamless transition between operation and fault.

Response 2

While it may be difficult at times to determine what makes an operating system reliable some of the areas to consider which were discussed in the text include. Reliable operating systems should be able to identify and recover from issues without needing to reboot entirely. The system should be able to deliver the expected service without any interruptions during normal operating mode and that the ideally the system should be able to discover any internal service failure issues and recover through its own means leading to little interference on the behalf of the user. It was determined through the text that no system can be completely error free due to the conflicting focus between that of reliability and performance.

While reliability and performance seem to go hand in hand reliability must be considered over that of performance. Reliability provides security checks, fault tolerance mechanisms, and additional indirections resulting in performance flaws.