

Virtualization: It's more than making the hardware shrink

Virtualization--multitasking for computers. While it may be a great motivation for hardware consolidation, could it have benefits for your company beyond running several operating systems concurrently on one computer?

Virtualization "breaks" a computer into many pieces called virtual machines (VM). A VM can run its own operating system handling a specific task such as email functionality. Each VM is restricted to its own operating system thus eliminating any potential conflicts or security issues. A single physical computer can run multiple operating systems simultaneously.

Businesses using virtualization can realize financial savings through hardware consolidation (both server and storage consolidation) as well as network and application consolidation. Additional cost savings include the reduction of operating costs and simplified management of the infrastructure; think less physical space and lower energy expenditures.

However, the real benefits are increased IT efficiency and virtual management as well as benefits that underpin the entire enterprise such as:

- Enhanced service responsiveness
- Improved system, network, and application performance
- Resources delivered where and when needed (key in a 24/7 world)
- Ability to manage and secure data without affecting its availability
- Easier to migrate data lowering the cost and complexity of disaster-recovery

And, by pairing virtualization and cloud computing, your organization's IT operations can move to a whole new level. The numbers speak for themselves. Consolidating to a virtual infrastructure can result in maximizing server utilization rates of 5 to 15 percent to more than 70 percent. Talk about improving your ROI!

Virtualization can make your IT operations more flexible and able to respond to business needs quicker and more efficiently. Therefore, IT will be able to focus more on meeting business requirements and less on security and performance issues. Your company's infrastructure can then work on helping the business side create innovative solutions to business challenges rather than just trying to keep up with day-to-day demands.

Cold feet

While virtualization has tremendous potential, a recent study by Veeam, a backup and recovery software provider, reveals that chief information officers are still cautious of virtualization technology. Businesses are still unsure about the ability to back up and recover their virtual machines, causing many organizations to avoid virtualizing their entire infrastructure. However, many organizations are making the transition for about 40 percent of their IT infrastructure--all but mission or enterprise-critical applications.

Along with operational virtualization, comes the cry for desktop virtualization with its promise of improved security, manageability, and flexibility. However, significant upfront costs and lag times for recouping these major expenses may slow down the adoption process.