

Solving Virtualization's Pitfalls

Keeping Performance and Reliability on Your Virtual Machines

Virtualization has enormous potential to save companies money, time and space. However, like any innovation, there are bound to be a few snags and snares that prevent you from maintaining optimum performance and reliability. While virtualization promises efficiencies, it hardly guarantees performance. The anticipated evolution to full virtualization can only be made effective by understanding and seamlessly integrating this technology into the network. Success also hinges on the resolution of any reliability-threatening problems, like fragmentation, that will spring up.

Fragmentation 101

Fragmentation is a performance-crippling phenomenon. And, if left unchecked, it leads to hangs, misused resources, bottlenecks, freezes, crashes and system failures.

Disk fragmentation occurs when individual files are not stored in contiguous segments. To fit space restrictions, files are broken up and scattered around the hard disk. So the file system, whether in a virtual machine or not, has to generate more I/Os to address the excessive file fragments.

Pinpointing the Problem

Without a doubt, the more I/Os generated (and multiple virtual machines only exacerbate this), the more throughput you'll need to account for in storage subsystems. Even with expansive, fully optimized SAN or RAID implementations underlying those virtual machines, poor disk performance is still traced back to fragmentation.

Virtualization pundits have been cautioning for some time about the major performance hit a host operating system takes from fragmentation. Fragmentation's side effects include I/O bottlenecks and the inefficient use of resources. These are two major pitfalls along the path towards virtualization. They limit the performance and reliability of virtual machines. And server virtualization actually compounds fragmentation. A fragmented virtual disk on top of a fragmented logical disk significantly increases the amount and severity of fragmentation's symptoms.

A misguided and somewhat instinctual response to fragmentation is to add more and more hardware to fight off its effects. But this only mitigates the problem, and never solves it.

Solving Fragmentation

New Diskeeper® 2008 automatically solves fragmentation in real time. Management and downtime are things of the past. The breakthrough InvisiTasking™ technology makes defragging volumes a transparent background process. Only untapped resources are used, so applications are never interrupted. Having Diskeeper running on your virtual machines eliminates I/O bottlenecks and causes resources to be used more efficiently.

Combining virtualization's economical resource use with Diskeeper's transparent system enhancements leads to maximum productivity. Diskeeper will purge your system of performance-wrecking fragmentation. So your systems, virtualized or



not yet, will run smoothly. Download and try Diskeeper 2008 now!

[Click here to try Diskeeper free for 30 days.](#) With Diskeeper, your systems, virtual and traditional, receive unparalleled performance and superior resource efficiency.

The move to virtualization saves money and strategically allocates resources. Putting Diskeeper 2008 on your volumes gets your virtual systems operating at peak performance. Diskeeper 2008 is a crucial tool for any virtual machine. Try Diskeeper 2008 for free now!

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