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Atlantis promises to flush out VDI I/O bottlenecks

Says ILIO will stop your virtual desktop sinking

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A company called [Atlantis](#) [1] has come up with a new wheeze on how to deal with VDI-crippling I/O bottlenecks: detect and delete dud I/Os at the NTFS level.

Atlantis' ILIO 2.0 product – ILIO stands for In Line Image Optimisation – is a software incarnation of its hardware appliance, and runs as a virtual appliance that works with VMware and Citrix virtual desktops. The pitch is the well-known one that massive amounts of virtual desktop I/O can overwhelm storage arrays, causing them to have more spindles than sheer capacity would merit, just to get the I/O capability up to the right level. It's the same thing that's causing storage arrays to use SSDs and get their I/O count up that way.

Atlantis says that, by working at the NTFS protocol level, it can optimise how Windows XP and 7 interact with external VDI storage arrays. Atlantis says it also "de-duplicates in line all VDI images before they reach storage [and] effectively eliminates the need to store up to 90 per cent of Windows image components, further reducing the amount of storage required for a ... VDI deployment."

The pitch with the software appliance is that it can reduce the cost of a virtual desktop "below that of a physical PC. Atlantis ILIO can cut VDI CAPEX up to 75 per cent by using up to 20 times less storage and enables more storage options including the use of lower cost SAN, NAS or local disks."

Atlantis claims that "running a virtual desktop with anti-virus enabled can cut in half the number of virtual desktops that a server can host". It has a fix for that too: use McAfee MOVE AV. The company says: "The combination of Atlantis ILIO and McAfee MOVE AV can deliver up to a 100 per cent density increase with better performance than a physical PC, while reducing storage costs by as much as 90 per cent."

It all sounds good. A 451 Group note on Atlantis' website is enthusiastic:

ILIO works by understanding the Microsoft Windows family of operating systems. These OSs were designed with the advantages and constraints of conventional personal computers in mind. They assume there is a low-latency dedicated local disk available for their exclusive use. Hosting virtual desktops replaces that cheap local memory with expensive remote storage. The result is that every user, application and desktop must compete for limited I/O capacity. Windows doesn't know how to deal gracefully with the resulting contention and performance degradation.

... the ILIO appliance intercepts Windows requests to what Windows thinks is the local disk, and what ILIO knows is a virtual hard disk or VM disk residing on the SAN. The combination of intelligent caching with image management should be able to serve the bulk of those requests from the ILIO device's own repository without having to hit the storage I/O at all. ILIO should boost the performance of the virtual desktops while reducing their SAN footprint and simplifying patching and updating from a central image.

This means, if it's true, that you can use common or garden SAN or NAS storage and get the same performance as you would from an HP 3PAR SAN or EMC VMAX. Alternatively, use ILIO with the 3PAR or EMC arrays and pump up the VDI volume some more. It's worth a look. ®

Links

1. <http://www.atlantiscomputing.com/products/>