Nominated Company: GreenBytes

Nomination Title: GreenBytes vIO: The Virtual Storage Appliance that makes VDI (Finally) Fast and Affordable

Businesses wanting to deploy virtual desktops face huge storage-related cost and performance bottlenecks. The per-desktop storage cost is so high because of virtual desktops' intense demand for Input Output performance, which places much more load on the storage area network (SAN) than it can handle. This results in extremely slow application response times and lost user connections. Until GreenBytes, some IT departments tried combatting this by upgrading SANs and adding high-speed storage, but that's extremely expensive. Others tried using retrospective deduplication solutions, but those require more time and resources, lowering performance and ROI. Some resorted to non-persistent desktops, which limited user experience and frustrated users.

GreenBytes vIO was purpose-built to enable superior virtual desktop performance at minimal cost. It is the only virtual storage appliance that helps businesses easily overcome IOPS barriers and deploy high-performing persistent virtual desktops at cloud-scale—without adding expensive, additional RAM to every server.

(Alternatives historically available in the market, such as Atlantis Computing and Nexents, have added either speed or retrospective data deduplication, but not in combination with cost and complexity reduction. As a result, they don't deliver the performance enhancements and cost savings of GreenBytes.)

vIO is a plug-and-play virtual storage appliance (VSA) that snaps into any existing virtual desktop infrastructure, and can be deployed and ready to present storage locally or externally via iSCSI or NFS in less than five minutes. vIO works by diverting heavy traffic from the customer's existing SAN to GreenBytes, and uses GreenBytes' patented Zero-Latency Inline Deduplication technology to deduplicate data in flight, removing all redundant data in real-time before it's written to the storage device. One CPU machine cycle is all it takes to determine whether there is a need for any data to be read/write again, and to send only truly unique data to the existing storage system. This is in sharp contrast to retrospective deduplication solutions, which require additional hardware and software to store all data until it can be examined for redundancy, and which degrade performance.

GreenBytes Zero-Latency Inline Deduplication reduces required storage by orders of magnitude and delivers high performance. vIO enables IT organizations to deliver much higher Inputs Outputs Per Second (IOPS)—up to 50,000 IOPS— and lower latency. Customers routinely realize 30%-plus performance increases with virtual desktops that perform even better than traditional local desktops. Customers can provide 100 persistent desktops for every 200 GB of storage with a single GreenBytes vIO virtual storage appliance. Without GreenBytes, this would require almost 4 TB of storage. GreenBytes further enhances performance by reducing the footprint of VDI swap files by 75% during run-time. This is a benefit retrospective deduplication systems cannot provide.

By cutting storage needs by up to 98%, GreenBytes vIO frees the SAN to perform as it was originally intended: efficiently handling the much lower IO loaded necessary to store and protect application and user data. Customers no longer need to purchase additional SANs, disks or flash, and instead

have extra capacity on their existing SAN. As a result, organizations drastically cut costs related to storage hardware, software, power and cooling. The bottom line: vIO enables affordable virtual desktops and reduces overall VDI ROI by 50%, from 18 months to just nine months.

Equally important, vIO enables the user experience that businesses need to turn VDI from an interesting concept into a compelling, feasible enterprise-wide solution. Businesses adopt desktop virtualization because they want an efficient way to deliver full-featured desktops. Persistent desktops based on SSD storage deliver the ideal performance, however it can be prohibitively expensive. GreenBytes enables SSD performance at the cost of traditional disk, removing this economic barrier. Now, IT can deliver full-featured persistent virtual desktops at scale. This is because the excessive (and expensive) storage is no longer needed to support the 30GB-plus footprint traditionally required for each full virtual desktop: GreenBytes requires just 1.5GB/desktop. Every time the user logs on, his/her complete, personal desktop is there. Virtual desktops run at optimal levels, providing better-than-local-desktop performance and productivity.

GreenBytes has been recognized by major industry analysts and awards organizations for its breakthrough IO Offload technology. From earning Best of VMworld 2013 for Desktop Virtualization, and an Always-On "Company to Watch," to a Virtualization Tech Trailblazer, GreenBytes' solution is consistently recognized for overcoming previously insurmountable obstacles to virtual desktop adoption. Customers of all sizes deliver greater virtual desktop efficiencies and performance. A case in point is OneNeck IT Services, which wanted to offer virtual Desktops as a Service (DaaS) to its customers using Citrix XenDesktop on XenServer. However, the traditional storage it tested with this virtualization solution was so expensive on a per virtual machine basis that OneNeck couldn't go to market with a strong enough offering. But, by using GreenBytes instead of traditional storage, they were able to reduce storage requirements from 50GB/user to just 1.5GB/user. As a result, OneNeck cut its virtual desktop storage/seat/month costs by more than 80% and reduced peak-time latency from 20 milliseconds to just 3 milliseconds. Thanks to GreenBytes, OneNeck now has a very attractively priced DaaS offering that far surpasses competitors in performance.

Why nominee should win

- GreenBytes vIO eliminates two critical and previously unsurpassable barriers to widespread VDI adoption: high cost and poor performance due to storage issues.
- vIO is the only virtual storage appliance in the industry and is extremely simple to implement.
- GreenBytes' patented Zero-Latency Inline Deduplication technology cuts storage needs by up to 98%, boosts performance by 30% resulting in consistently better-than-local performance, and reduces overall VDI ROI by 50%, from 18 to nine month