nexenta™ Case Study

GridSouth

Networking

Challenge
Storage capacity and access. Cost-effective hardware and the ability to replace disks without replacing hardware.

Benefits
Easy to implement growth plan. Bottom line ROI saves about 70% over legacy solution. Increased performance.

Solution
NexentaStor™ 3.0.5

BUSINESS OVERVIEW

GridSouth Networks, LLC, a privately-owned Managed Service Provider, delivers high-capacity, high performance grid networking, including 100 and 1000 Mbps Internet service, VMware vSphere Hosting, and managed Web hosting. GridSouth's product and service offerings are designed and built around the philosophy of over-engineering, which leads to unsurpassed network reliability, resiliency, and, ultimately, extremely satisfied customers. Over-engineering includes fully redundant data centers, active standby equipment, and technical expertise to deliver cost-effective service plans with uncompromising results.

CHALLENGES

GridSouth was facing similar concerns of many fast growing companies. They were facing a significant demand for storage and the equipment on-hand would not fulfill expanding requirements—storage capacity, access, and cost-effective hardware.

The company realized that on-hand storage infrastructure would not meet capacity demands or last long enough. Hardware was expected to last 3-5 years, with disks needing replacement even before that. GridSouth wanted a storage solution that would allow them to replace disks without replacing the existing hardware.

Prior to the 4.0 ESX release, there was a limitation on LUN size. With GridSouth hosting hundreds of virtual machines, an easy to use, low-cost storage solution was essential.

GridSouth needed a unified storage solution, one that had iSCSI, NFS, and CIFS support. The company also wanted one centralized management console from which to drive the entire storage solution. In addition, the solution had to run iSCSI to support block storage.

GridSouth's existing backup solutions could not provide easy data access or offer site-to-site replication.

Cost also was a major issue. And the company was getting fed up with vendors radically overcharging for essential commodity items.

NexentaStor

- 128-bit file system
- Two Supermicro appliances with 100TB raw storage and 40TB of usable storage, deployed as VM storage (using iSCSI and NFS) and NAS (using CIFS)
- Incumbent storage solution with 20TB utilized as VM storage
- Four 10Gb multimode connections (two for iSCSI and two for CIFS and NFS)

"Once we implemented virtualization into our IT infrastructure, it forced us to reconsider our storage options. EMC, NetApp, Openfiler, FreeNAS, and OpenSolaris were too expensive or provided no flexibility in hardware. NexentaStor was, by far, the best solution out there, providing the enterprise features we needed."

Jim Nitterauer
CEO
GridSouth Networks

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SOLUTION

After researching the market, and taking into account expected company growth, GridSouth knew it wanted to go with ZFS technology, as it was the best storage file system available. And as to performance, when compared to GreenBytes that had an SSD, Nexenta performed the same or better, at a much lower cost (even without SSDs on Nexenta).

GridSouth also looked at Openfiler, FreeNAS, and OpenSolaris but found that all of these solutions came with a much higher, long-term, associated cost than the Nexenta solution, which provided the best price to performance ratio—about $500 per terabyte.

GridSouth's solution includes two Aberdeen disk controllers, thirty-two 3 ½" 1TB, 3 Gbps SATA drives for a total of 32TB of raw capacity. In addition, there are two mirrored physical controllers, two mirrored 1TB drives write cache (ZIL), and two mirrored 1TB inactive drives reserved for read cache (performance found to be better without the read cache). GridSouth now is running 78 VMs, 20 which are templates, on the Nexenta solution.

BUSINESS BENEFITS

Implementation of NexentaStor, led to improved performance for GridSouth's Web hosting business. The new Web interface allowed for non-IT personnel, without extensive training, to activate the system, as it is intuitive and easy to use.

Data volumes are better segmented (by customer, by purpose), allowing for better access and greater productivity.

Easier Growth Path: With NexentaStor, the company was able to blueprint its growth path, allocating fewer resources and equipment than would be needed with a legacy system. Starting small and expanding, as needed, fulfilled a major, long-term corporate concern. Needing to create a LUN for hundreds of VMs, GridSouth recognized that NexentaStor has no LUN size limitations.

Bottom Line ROI: The Nexenta solution saved GridSouth both time and money. It provided an easier-to-use solution than all competitors, along with extensive savings (up to 70% less cost than legacy systems).

Nexenta helped GridSouth maximize return on its storage investment with increased performance, improved data back-up and recovery, and hardware-agnostic solutions, thereby allowing the company to leverage existing in-house machinery.

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