

CASE STUDY

Improve Enterprise Storage

Aberdeen's AberSAN Z30 Helps Out The River City Internet Group

THE ABERSAN Z-SERIES from Aberdeen is designed to provide SAN enterprise storage environments with a scalable storage system that's as intuitive to use as network-attached storage. The file storage appliances can scale beyond 1PB and can be managed through a single Z-RAID array. River City Internet Group recently selected the AberSAN Z30 to help it keep up with the I/O demands of multiple virtual host machines that are constantly reading and writing production data.

High-Performance Storage

River City Internet Group was working with a hosting company that was looking for a high-performance storage system that's designed to be used with a server farm. Another goal was that the virtual server farm needed to be extremely flexible and cost-efficient. "We have found the AberSAN Z30 to be exactly what we needed," says Jeff Laird, systems architect for River City Internet Group. "It cost us 60% of what a similar system from another manufacturer would have cost, and it is providing us with performance we have not seen before from a storage system." The Z30 combines Fibre Channel and iSCSI block-level connections with multi-user network sharing to overcome storage and partition-size limitations.

The Missouri-based company needed fast drives in order to handle the potential I/O load predicted in developing a multinode virtual machine farm. The AberSAN Z30 can be built with hardware and Stripe, Mirror, RAID-Z1 (single parity), RAID-Z2 (double parity), and combinations of these. The Z30 can also be built using single, double, or triple parity with hot spares. Multilevel data protection prevents silent data corruptions and supports block- and file-based replication. The AberSAN Z30 is also capable of scaling to work with the growth of disk-based storage. For example, the Z30 uses the ZFS file system, which allows for unlimited snapshots, making it easy for you to back up stored data more often and, if necessary, restore files

quickly. Incremental data backups use less network bandwidth than large daily updates.

For speed, the AberSAN Z30 can use dual Intel Xeon 5600 or 5500 series processors and up to 192GB of memory. The Z30 can reach up to 48TB of raw capacity without using any storage expansions. The AberSAN also meets the needs of River City Internet Group's virtual machine farm through inherent I/O virtualization. There are hybrid storage pools with SSDs, as well as options for thin provisioning and cloud-ready storage capabilities. Also, unlike traditional solutions, IT staff will enjoy unlimited file system size.

The AberSAN Z30 also comes with the NexentaStor plug-ins. "The Nexenta software is very flexible and has allowed us to allocate and modify settings easily based on changing customer requirements," Laird says. "It was also easy to learn and provides excellent informational feedback." The NexentaStor software provides the high-performance features of the ZFS file system, including tools for in-line deduplication, data mirroring, WAN-optimized IP replication, and high-availability clustering.

The NexentaStor plug-ins are one of the main reasons that River City Internet Group selected Aberdeen. "[Aberdeen] offered a unique method for organizing and partitioning drives via the Nexenta software, which immediately made sense to us," Laird says. NexentaStor's VM Data Center plug-in is available to simplify the



performance to the number of targets available. With the 3U, 19-inch rackmount, "We chose to go with 10GbE fiber networking for its tremendous throughput capabilities and chose the fastest drives we could order so that the system could be used with an ever-expanding front-end environment," Laird says.

There is also a variety of NexentaStor plug-ins you can select to improve the capabilities of the storage system:

Delorean. This is a backup utility for Windows that functions as a backup, restore, and search tool. It includes a

Target FC. This plug-in is designed to use the AberSAN Z30 as a block-level target when working only with Fibre Channel. Target FC can also create logical groups of initiators and targets. For example, a common block management could allow a ZVOL or virtual block device to inherit the storage management policies unique to the ZVOL or protection scheme.

VM Data Center. The VM Data Center plug-in makes it easier to set storage policies for virtual environments and perform storage tasks, such as starting a VM. It

The AberSAN, featuring the Intel® Xeon® processor 5600 series, delivers exceptional quality with unified storage capabilities such as deduplication, virtualization, high availability thin provisioning, replication, and scale-out storage.

management of storage for a variety of environments, including VMware vSphere, Citrix Xen, and Microsoft Hyper-V. Companies can even create replication policies for each VM and perform most common management tasks through the plug-in.

Delorean is another helpful NexentaStor plug-in that allows companies to create ZFS-powered Windows backups. IT staff can use the 100 client licenses in Delorean to select local files and folders they want to protect, which means they'll be further replicated and protected through AberSAN.

Cost was also a major factor in the decision making process for the River City Internet Group. "The ROI for this project was unknown going in, and Aberdeen provided the best value for the equipment we needed," Laird says.

Z30 Performance Options

The Z30 allows you to scale the hardware by increasing memory available or CPU

client that runs on all user machines and the company servers, while the plug-in delivers the same features to the AberSAN Z30. Delorean supports combined backup and snapshot capabilities, as well as Windows VSS and other backup schedules.

HA (High Availability) Cluster. The AberSAN Z30 can use the HA Cluster plug-in to create two AberSAN instances that will be configured as an active pair. Each instance of the AberSAN provides you with high availability, and the shared storage is available from both appliances. If you want to protect your data, the HA Cluster plug-in can work with RAID and replication policies.

metaSAN. This management software provides high-speed file sharing with cross-platform workgroup collaboration. Multiple users can share data files, which is ideal for film and video editors, health-care specialists, and other environments where there's a need to access a common pool of data files.

can also help you discover all ESX or Xen servers on the VMs in the servers. The AberSAN Z30 and VM Data Center can close through the template function, which can quicken provisioning of identical VMs.

WORM. With this utility, IT staff can make any data folder into a Write Once, Read Many mode. The WORM utility works with all network content, including files, directories, and subfolders. 

Aberdeen AberSAN Z30

A 16-bay, 3U ZFS SAN storage appliance.

Expansion Options

- Seven full-sized PCI-E x8 slots, which allows for extra HBAs and NICs
- ZFS cache acceleration for L2ARC and ZIL
- Can add up to four JBODs (64 drives)
- Virtually unlimited expansion through HBAs over storage switches

Other Products Sold

Custom rackmount servers, storage servers, NAS (network attached storage), SAN (storage area network), and JBODs (Just a Bunch of Disks)

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