



High school deploys TwinStrata CloudArray cloud storage gateway

By Andrew Burton, Senior Site Editor

January 15, 2011

Essex Agricultural and Technical High School in Danvers, Mass., was using removable disk for offsite storage of backup data, but Kyle Jones, technology manager at the school, was not entirely happy with that process. "It was a step in the right direction from where the school was when I started here," he said. "Back then, their idea of offsite storage was to put backup tapes in a vault at a bank about a mile away. I don't think that meets disaster recovery best practices by anyone's standards." Though the removable disk system worked fine, he was looking for something more streamlined that was more suitable from a disaster recovery standpoint.

Jones looked into renting a rack in a data center or collocation facility but the total cost was beyond school's budget. So, he evaluated the school's needs for data protection and in light of budgetary constraints, cloud storage, paired with a cloud storage gateway, made the most sense. After some initial research, he tested cloud gateway products from Nasuni and TwinStrata. These products are designed to present cloud storage as local storage to applications.

Jones first tested Nasuni's Virtual NAS Appliance, and though he said that their customer support was adequate, he struggled to integrate it into his environment. "[The Active Directory integration] would be working one minute and down the next," he said. He also was concerned that Nasuni takes periodic snapshots of the entire file system. "It was more of an automated process," he said. "But, we don't want to do snapshots, and I was worried that we could wind up spending more on cloud storage than we need to."

Next he tested the TwinStrata CloudArray and said that it was considerably easier to get up and running. "I think CloudArray has better integration with Active Directory," he said. "I also really liked that CloudArray has the ability to appear as iSCSI storage. Both of those things make a lot of sense in our environment."

The school runs Citrix XenServer virtualization software with an iSCSI Hewlett-Packard (HP)/LeftHand VSA virtual SAN running on a HP BL460c blade server with a direct-attached SB40c storage blade. Jones installed the CloudArray virtual appliance software on the BL460c and provisioned 200 GB of space on an Iomega StorCenter Pro ix4-200r NAS device to use as a local backup target. Jones performs backups with Symantec Corp. Backup Exec and CloudArray copies backups to the cloud. CloudArray interfaces with

Amazon S3, Amazon S3 RRS, AT&T Synaptic, Hosted Solutions, EMC Atmos and Mezeo. Jones said they selected Amazon primarily based on price.

Their backups primarily consist of two types of data: student-created documents and financial information. The school is required to keep all financial information on file for seven years, and they keep student-created data for six months. Jones created two volumes in CloudArray, one for financial data and the other for student data. The student data is sent to Amazon S3 RRS and the more critical financial data is sent to Amazon S3.

Jones noted that one of the things he liked best about CloudArray is that since the cloud storage appears to applications as iSCSI storage you can set retention policies in your backup software the way you would with physical storage. He also said that he preferred Nasuni's Web-based GUI to TwinStrata's, which is based on Adobe Air. However, he does like the simplicity of TwinStrata's interface and that you can see how much data has been copied from your onsite backup device to the cloud in real time.

One of the knocks typically levied on cloud backup is the slow restore time for large amounts of data over the Internet. However, Jones is not concerned about restoring a large amount of data. He said that he hasn't had to restore much more than a couple of files at a time when students accidentally deleted or lost documents. And, in the event of a major disaster that wiped out his onsite equipment, he has a simple but effective plan in place for recovery. "My colleague and I have the CloudArray virtual appliance software and our backup configuration file on thumb drives at home," he said. "If our onsite equipment is destroyed, we can rent space in a collocation facility, set up new gear, install the CloudArray software, and access whatever we need in the cloud."

This approach, of course, does not ensure the instantaneous access that some businesses require, but Jones doesn't need that level of availability. "We are a high school," he said. "We want to be able to recover data, but let's face it, if the entire eastern seaboard is blown to bits, we don't need to be up and running immediately," he said.

So far his system has been working well with only one significant issue. On New Year's Day, the school lost iSCSI connectivity to the device running CloudArray. Jones sent an email to TwinStrata customer support, and assumed that he wouldn't hear back until the following day. To his surprise, he got a call from the customer service technician shortly after. "I was shocked. I mean, this guy was calling me from his family's house at 11 p.m. on a holiday. I was exhausted, so I just had him call be back the next day, but that is excellent customer support," he said, laughing.