

STORAGE SWITZERLAND CASE STUDY

MAJOR TELCO ADOPTS BACKUP VIRTUALIZATION



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IT personnel at telecommunications firms have almost impossible expectations placed on them to meet both uptime requirements as well as adhere to countless industry regulations. The challenges of maintaining uptime and meeting data retention regulations have required many telco data centers to raise the bar on their recovery capabilities, but without breaking the budget. These goals are often at odds with each other.

Recently, Storage Switzerland had the opportunity to meet with the manager of the HP NonStop™ Systems environment for one of the largest telecommunications firms based in the US. As new solutions were being explored for this company, a challenge that surfaced was the need to retain current information already on older-format tape media, in this case, DLT4000 tapes. With the new retention regulations in place, the data on that media was instantly made more valuable and had to be kept for at least seven years.

The lead for this project created a detailed set of criteria by which to judge the vendors competing for the firm's business. Their environment was focused on the HP

NonStop systems which track billing and call detail records. At the time it was protected by a tape library with DLT4000 tape drives. Vendors quickly raised their hands to indicate they could help, and each was brought in for a week of rigorous testing. They were judged on their ability to improve backup and recovery performance, simplify backup operations, and protect and leverage historical assets. The HP NonStop environment also added a unique wrinkle to this testing. The existing DLT4000 tape drives were facing an end-of-maintenance deadline and the LTO drives suggested as a replacement by HP were particularly expensive when "certified" for the Non-Stop environment.

After weeks of testing, the telco firm decided on [Tributary Systems'](#) ViTAL®, a solution that Storage Switzerland would classify in the 'Backup Virtualization' market. As discussed in our [recent article](#) on backup virtualization, these systems abstract the backup hardware from the backup software, allowing for high performance tape devices and disk storage to be added to the backup process, while maintaining access to legacy tape devices.

According to the NonStop administrator, ViTAL was the only solution that had the ability to allow seamless access to their now critically regulated data residing on legacy tape, while at the same time supporting the newest generation LTO tape drives, all within the same library. The other solutions required that legacy data either be manually transferred to the new tape formats selected, or that it be run as a separate instance until the retention period could be fulfilled. The cost of operating and maintaining that environment for seven years would have been a budget buster.

The other challenge that the one-off handling of legacy tape causes is that it doesn't address how the systems would handle the inevitable next technology change. Since the ViTAL system was able to handle both technologies from day one, it has a proven track record that, when it comes time to upgrade hardware, it will be supported.

With the legacy tape support issue addressed, the telco firm also looked for the ability to improve backup performance. Because the ViTAL system supported disk as a front end cache, backup jobs were processed as quickly as the systems could send them. This also led to a significant reduction in the amount of tape drives that had to be acquired by the organization. In fact, even though this was a high-end enterprise environment with mission critical data, they were able to get by with only two to three physical tape devices per data center, substantially less than they would have budgeted for tape alone.

Finally, as part of its regulatory requirements, the company had the need to encrypt the data being backed up. The competing systems only encrypted data when it was moved to tape media, typically leveraging the tape drive's encryption ability. ViTAL was unique in that it encrypted data as it landed on the disk cache, which improved the firm's comfort level with their data being secure.

After several months of comparing vendors' solutions and the choice made, the time came to implement ViTAL in the data centers spread throughout the United States. The solution was deployed in one data center at a time, over a period of five months. Despite the sensitive nature of the environment, each installation went smoothly. The ViTAL systems were drop-shipped to each location the Friday before the installation and, in every case, the systems were up and operational within 24 hours. This can be attributed to the ease-of-use that is inherent in these systems and to the thoroughness that the IT administrator used during the proof-of-concept testing.

The systems have been in production for over three years thus far and, for the most part, have been a lights-out operation. Configuration changes caused by growing disk capacity or changes in network infrastructure have all been applied with limited interruption. Most importantly, recoveries have all been successful, and at increased speeds. The legacy DLT drives are gradually being phased out, but the telco firm counts on Tributary to maintain a set of refurbished drives in case one fails in the library.

The next step for the firm is to implement the remote backup option. They believe they can leverage ViTAL and backup virtualization to create a cost effective disaster recovery solution. The plan is to copy backup and archive data to another ViTAL appliance in an alternate location, driving out the costs associated with a third party off-site facility.

For this major US telecommunications firm, the use of backup virtualization has reduced costs and improved backup and recovery windows. Tributary's vision of being able to support legacy hardware was a critical factor in the selection process; but the quality of Tributary's support and service is what has kept the firm a loyal customer.

About Storage Switzerland

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