

TV2 Norway Improves Restore Times Tenfold with LEGATO NetWorker DiskBackup Solution

Case Study



LEGATO NetWorker Helps TV2 Reduce Backup Windows, Optimize Tape Investments

The Company

TV2 Norway is the largest commercial TV station in Norway. The company has two main offices in Bergen and Oslo with approximately 250 employees each. Many smaller satellite locations, such as Trondheim, Norway, exist around the country and communicate with these main offices for centralized IT resources, information management and support. TV2 operates 22 hours a day, 365 days a year.

The Challenges

- Manage the continuously increasing quantity of client data
- Relieve the high pressure on a shrinking backup window
- Leverage and optimize significant recent investments in STK Library and DLT media
- Improve restore response times

The Environment

The TV2 data center in Bergen is connected with Oslo at a very high 155Mbps connection but maintains 34Mbps connections with the other satellite offices. All backup is done by the Bergen office, representing about 90 backup clients, which include Windows NT, 2000, 2003, Linux, Solaris servers and IRIX visualization systems. This load is divided into 4 groups which have separate full backups accomplished on staggered weekends. A total of 5TB of client data is backed up in one monthly backup cycle (1 full, 3 level 5 and 30 incrementals). Cloned data is sent to the tape library saveset by saveset in a single client stream to eliminate fragmentation on tape and optimize recovery times.

Too much data, small backup window

Being on the air 22 hours a day is standard operating policy for Norway's largest commercial television station, TV2. With primary facilities in Bergen and Oslo, the centralized backup and recovery of business-critical data from operations around the country had been relegated to a major investment in a StorageTek tape library and associated robotics.

TV2's Kåre Teigland noticed that the total quantity of backup data was increasing at a relentless pace and that the backup windows could not accommodate this going forward. "Since we already invested in a StorageTek 9710 DLT Robot, we wanted to find a solution which, in addition to increasing performance for backup/recovery, could also take advantage of this (fast library)." In addition, TV2 was not providing file level recoveries as fast as they would like for their users. "DLT is known to have a relatively long mount time. This leads to unwanted delays in protection and recovery operations." says Kåre. TV2 needed to find a newer solution in which they would be able to protect their investment and improve their service-level performance requirements.

ProAct Brings LEGATO NetWorker DiskBackup to the Rescue

Disk-based data protection solutions have steadily become more desirable and affordable due to the lower cost of ATA storage systems. As a complement to using tape for long-term storage, backup-to-disk is a powerful solution for rapid recovery of mission-critical data, yielding significant benefits over traditional backup-to-tape. Recognizing this, TV2's local technology consulting partner, ProAct, was able to assist in proposing a solution that would first involve backing up of primary client data to two secondary Nexsan ATAbay storage arrays directly connected to their Sun E450 backup server. Secondly, by using administrative policies set by the ProAct Fast Restore Cache software in conjunction with NetWorker DiskBackup capabilities, this new, easily adopted, backup and recovery paradigm yielded all the results TV2 sought (and other new benefits as well!) By separating the "roles" of disk and tape in the solution, data stored on the arrays would provide a dramatic 10x increase in recovery performance and ultimately be cloned to tape at the conclusion of the retention period for long-term, off-site data protection purposes.



TV2's Kare Teigland, System Engineer, in front of NetWorker B2D environment with Nexsan & STK products.

The Solution

- LEGATO NetWorker® DiskBackup Option
- ProAct Fast Restore Cache
- 4 Nexsan ATAboy2s connected to the Sun E450 backup server
- Implement cloning to STK 9710 tape library with 6 DLT 7000 drives
- Maintain last cycle of all backup data on disk

The Business Benefits

- NetWorker DiskBackup improved availability of data and productivity of the organization by improving restore performance by 10x, delivering responsive, "instant" file-level restores in seconds rather than minutes!
- NetWorker helped significantly decrease backup window requirements by separating the tasks into manageable groups throughout the month using disk backup.
- NetWorker DiskBackup is extending the asset utilization "lifespan" of the StorageTek DLT library investment. Older backup cycles cloned to DLT tape eliminate "shoeshining" and fragmentation, resulting in optimized recovery times when tape access is required.
- NetWorker standardization with low cost ATA drive technologies coupled with tape, allows TV2 to scale their data growth well into the future, while improving service levels!



TV2 Operations console view.



Cloning could be automated by policy to be performed at off-peak times, saving administrator time and not interfering with the primary backups and incrementals that needed to occur.

TV2 Solution: Break the Problem into Manageable Pieces

With about 90 clients to back up, covering operating systems such as Windows NT, 2000, 2003, Linux, Solaris and IRIX visualization systems, the full backup data protection challenge was surpassing 5TB a month, with annual total data growth estimated at 10%. TV2 decided to separate their clients into 4 groups which run full backups during their allocated weekend, and outside of that, level 5 backups on all other weekends. In addition to that they run incremental backups each evening during the week. When weekday incremental backups to disk are completed, 7-day old savesets are staged to tape. All full/level 5 backups and some of the incrementals go directly to disk and afterwards, "older" backup cycles are cloned out to DLT tape. The tapes that contain the full and level 5 savesets are sent out of the house for offsite data protection. Savesets older than a month are then deleted from disk to accommodate new backups. The secondary disk system has enough space so that, at any given point, TV2 can have the last full backup jobs on disk –dramatically improving restore performance by up to 10 times as well as achieving a significant improvement in data availability and reliability for all clients.

Sizing the Benefits

TV2 is extremely happy with the solution. ProAct delivered a complete partner-based, total solution, including both hardware and software. They also provided TV2 with technical consulting as needed. ProAct's Fast Restore Cache is a product developed by ProAct for use with LEGATO NetWorker. It allows the user to define rules for how backup

data moves from one device to another. The Nexsan ATAboy2 disk arrays provide 10TB of space today and will easily expand going forward. This will allow TV2 to accommodate its 10% annual data growth and still keep the last cycle of backups always available on disk for highest recovery service levels for all clients. Since 99% of all restore requests are from the last cycle of backups, IT is now able to consistently achieve higher services levels for all constituents. Kåre says, "The backup and restore jobs run like a dream. In particular, the restore has noticeably improved. If a user calls because he has lost an important file, we can pretty much recover it before the phone conversation is over!" Files that used to take 6 or 7 minutes to retrieve now take a matter of seconds.

When staging and cloning gets done to tape, it is sequenced saveset by saveset, eliminating tape-based fragmentation and allowing for faster recoveries from tape if the need arises. TV2 now enjoys the automation cost reductions and timesavings provided by the ProAct policy-based software in conjunction with NetWorker DiskBackup.

The new NetWorker DiskBackup solution helped protect existing tape investments and delivered data reliability, availability, media and administrative cost savings, all at a tenfold increase in restore service level performance! The disk-based solution has no impact on the long-term data management, protection and recovery strategies. DLT tapes continue to be used, but the newest cycle is now always on disk for fastest restores. Earlier on, TV2 was using Backup Exec for NT backup and LEGATO NetWorker for UNIX (Irix and Solaris). Now, TV2 has unified its procedures and has standardized on NetWorker for protection of all clients, saving additional costs for training staff on multiple products and streamlining processes utilizing a single vendor. LEGATO NetWorker DiskBackup solutions are timely and have a huge impact on today's data protection and recovery challenges. TV2 sees this every day!

Compliments of 



3835R East Thousand Oaks BLVD. #315
Westlake Village, CA 91365
Tel 877.230.2837 / Fax 805.435.2500 / www.ess-direct.com