



Backup Express

Success Story: U.S. Airways keeps three of its operations humming using a cost-effective disk-based backup storage and fast, block-based backup from Backup Express for a fraction of the cost of its former tape-based disaster recovery solution.

Organizational Profile

- Critical to achieving business success, U.S. Airways, a leading worldwide airline, must ensure consistent access to applications and data in order for its operations, reservations, and hardware to function optimally.

Business Needs

- Implement a robust disaster recovery strategy for three remote sites.
- Convert from a centrally managed tape backup architecture to a cost-effective disk-based solution.

Environment

- LaCie 500GB IEEE 1394b (FireWire) hard drives.

Benefits

- After evaluating several backup solutions from major players such as ArcServe and Legato, Backup Express provided the best combination of reliability, usability, and customer service.
- Syncsort's technical support provided everything needed for 24 hours to successfully convert a single master environment to three.
- Switching from tape to hard disks has enabled U.S. Airways to reduce costs, increase backup speed, improve reliability, conserve resources, and access data more efficiently.

"I preferred Backup Express' interface over that of Legato. Syncsort technical support department provided me whatever I needed for 24 hours to make our environment work from a single master environment to three."

Patricia Ciccone, EDS Systems Analyst and Backup Engineer

The Challenge:

U.S. Airways enlisted EDS, one of the largest worldwide IT service providers, to develop a disaster recovery plan for its operations in Pittsburgh, Winston-Salem, and Washington, D.C. In the late 1990s, EDS consolidated and centralized U.S. Airways' disaster recovery strategy for the three locations around Syncsort's Backup Express software and QualStar tape libraries, which it ran from EDS' Pittsburgh data center.

EDS set up Backup Express Master servers and a tape library in three site locations so that the backup processes wouldn't interfere with each other and blow out the overnight backup window. "We didn't want to shut down a backup process in Pittsburgh to fix a problem in Washington," said Patricia Ciccone, Systems Analyst and Backup Engineer for EDS. Therefore, all Master servers were controlled from Pittsburgh.

For many years, this centrally-managed, distributed tape backup architecture worked very well. However, in late 2000 and early 2001, the maintenance agreements on the QualStar hardware were running out. "It was clear that without maintenance agreements on the libraries, we wouldn't have the resources to maintain them. We were running out of healthy tape drives. The current version of Backup Express gave us the opportunity to move to a really cost effective disk-based solution."

The Solution:

Using a combination of inexpensive disk-based backup storage and fast, block-based backup from Syncsort's Backup Express, U.S. Airways was able to ensure effective disaster recovery at a fraction of the cost of its former tape-based disaster recovery solution.

"We do one full backup with two differential backups per month," says Ciccone, which back up all the data that has changed since the monthly full backup. "For the remainder of the month, nightly incremental backups occur." With each 500GB (now 1TB) hard drive able to hold backup data for up to 10 servers, EDS had an inexpensive, fast, and effective backup strategy. "We would have paid anywhere from \$25,000 to \$150,000 per site if we had gone with tape libraries, again, but with FireWire hard disks and Backup Express, we built each site for about \$10,000."

The biggest challenge has been meeting the backup window. "I had to engineer a schedule for the jobs to run efficiently based on capacity and throughput, and it

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works beautifully.” If any of the backup sites require an upgrade or software patch at night, it’s easy to reschedule the backup process to work around them. Restores can be run quickly during the day and overnight in the event of hardware or data loss. But what Ciccone appreciates most is the ability to avoid data loss by using Backup Express’ comprehensive backup logs to find and troubleshoot potential problems before they occur. “Syncsort spent the time to teach me how to read those logs and exactly what to look for. It really helps me keep track of the behavior of the entire environment.” In all, Ciccone feels that disk-based backup with Backup Express has made a potentially expensive and complex process “easy and very comfortable to work with.”

The Benefits:

Disk-based backup offers several advantages over tape. Hard disks have much higher throughput than tape and the backup process is considerably less resource intensive, without the need for the constant changing and labeling of media. While tape is linear, hard disk storage is not, so that access to backed up data is much faster and the opportunity is there to increase efficiencies by eliminating a lot of redundant data with each backup. Disk prices have plummeted year after year so that the cost of hardware is very low. And overall, hard disk storage has a lower failure rate than tape.

Backup Express’ disk-based backup uses a block-based backup strategy that works much faster and more efficiently than typical file-based backups, especially for locations with particularly large numbers of files, and allows for an almost infinite number of incremental or differential backups to be stored on disk. This allows very fast recovery to multiple previous points in time, which is invaluable for recovering from a virus or worm infection, in addition to natural disasters.

About Backup Express:

Backup Express is an enterprise data protection solution with innovative technology, flexibility, and manageability for UNIX, Windows, Linux, NetWare, Novell Open Enterprise Server (OES), and Mac OS environments.

Backup Express is the only solution that integrates heterogeneous snapshot, image, and rapid recovery options, supports any combination of UNIX, Windows, NetWare, OES, Linux, and NDMP/NAS in a SAN, performs backup of all data directly across fibre or iSCSI networks, dynamically shares all drives, supports all NDMP incrementals, and controls an entire enterprise environment with a single high-performance catalog.

Backup Express’ innovation, flexibility, and manageability solve business requirements and budgetary pressure to meet shrinking backup windows and instant recovery-time objectives, meet regulatory compliance requirements, implement complete Disaster Recovery Plan strategies, optimize staff efficiency, and do it all while enabling the 24/7-available business.

For more information, call 201-930-8200 or visit www.syncsort.com.