

## DISK-BASED BACKUP SOLUTION

# InfiniSAN cuts the tape

Nexsan's InfiniSAN D2D backs up and restores network data without the delays and headaches of tape **MARIO APICELLA**

ONE OF THE dark secrets of the IT industry is that tapes have never been an ideal medium for backing up data. Tapes do not easily yield the information they store (the process of resurrecting data can take days) and of course, tapes are just as vulnerable to physical damage as the devices they purport to back up. Moreover, today's e-business systems generate so much data that, for many companies, relying on tape-based backup means fighting an unwinnable war to acquire increasingly faster tape devices.

Most backup solutions are based on tape, because tape solutions have long offered higher capacity at lower costs than disk-based ones. Today, however, the cost differential between tape and disk is shrinking. And although advanced tape solutions, such as LTO Ultrium and Quantum SDLT, boast significantly lower costs per megabyte of storage, the higher cost of disk solutions could be justified by increased flexibility and faster performance.

One disk-based backup solution that should give tape a run for its money is Nexsan Technologies' InfiniSAN D2D. A combined software and hardware solution, InfiniSAN promises targeted backups driven by unattended schedules, fast and reliable data restores, extremely contained costs, and not a single tape. In our tests, we were impressed enough with the InfiniSAN to give it a score of Deploy.

The InfiniSAN solution consists of backup software and a storage appliance, known as the ATAboy, which features replaceable controllers for either SCSI or Fibre Channel connectivity. Instead of tapes, the ATAboy mounts ATA (Advanced Technology Attachment) 100 disk drives as backup media.

Historically, ATA disks have been relegated to devices on which performance is not as important as price, such as desktops and entry-level servers. But Nexsan is capitalizing on recent breakthroughs in ATA technology, which have led to disk drives that boast unprecedented capacity and performance while maintaining reasonable price levels.

InfiniSAN's support for both SCSI and Fibre Channel is also interesting. The two technologies have always been direct competitors, but by

merging the two, Nexsan cleverly delivers the best of both worlds. Thanks to internal protocol translators, users can derive the cost benefits of ATA disk drives while maintaining interoperability and fast connectivity with existing systems using SCSI or Fibre Channel.

We tested an eight-bay unit with a redundant power supply and Ultra SCSI 160 RAID controller, mounting eight IBM ATA 100 disk drives in a RAID 5 configuration, giving us a backup capacity of close to 500GB. (Nexsan is currently developing a 14-bay version of the product that will increase the capacity of each unit proportionally; you can also stack multiple units for increased capacity and performance.)

To put InfiniSAN through its paces, we connected the unit to a Windows 2000 server using a standard SCSI cable. Next, we defined a logi-

cal volume to store our backups and then installed the D2D Backup software. Once loaded, the software presents an easy-to-use interface for defining backup jobs, choosing source directories to protect, and selecting destinations for the backup copies.

Our first backup job was a local directory containing five files for a total of 500MB. Due to the speed limit of our local disk drive, the backup took roughly 20 seconds. We then tried other backups and restorations, which clocked in at similar speeds. Our measurements with Intel's IOMeter, however, indicated that the ATAboy reached data transfer rates up to 80MBps - respectable performance that compares to that of three Ultrium tapes working in parallel with compression.

Furthermore, any discussion of InfiniSAN's performance should include the fact that the ATAboy supports multiple jobs in parallel, unlike a tape device, thereby enabling multiple, concurrent backup operations. In short, actual performance will depend on the speed of your backup server.

Another significant advantage InfiniSAN has over



INFINISAN'S ATABOY mounts hot-swappable ATA drives and is managed remotely via Web browser

## THE BOTTOM LINE

Nexsan InfiniSAN D2D Backup  
**BUSINESS CASE** Compared to tape solutions, Nexsan's disk-based backup solution reduces backup-related administrative costs and business interruptions.

**TECHNOLOGY CASE** InfiniSAN provides the cost benefits of ATA disk technology and integrates easily with existing SCSI and Fibre Channel environments.

### PROS

- Easy to use and implement
- Good administrative features
- Excellent backup features
- Good scalability and interoperability

### CON

- Limited to Windows

**COST** \$13,364

**PLATFORMS** Windows NT and Windows 2000 servers

**COMPANY** Nexsan Technologies;  
www.nexsan.com

tape-based backup solutions is that it only copies files that have changed since the last backup. In this way, InfiniSAN eliminates unnecessary data transfers and dramatically cuts down on backup times. Moreover, InfiniSAN can create different versions of a file for each backup, enabling easy recovery from corruption caused by human error.

The included software also deserves high marks for its intuitive interface. Two stacked windows display the possible backup source and target directories, either of which can be chosen with a mouse

Ease of use	9	click. Each backup operation can be
Implementation	8	launched immediately or be scheduled for
Innovation	9	unattended execution. You can also set criteria
Interoperability	7	for operations including compression, expiration
Scalability	9	dates, and versioning for backup copies.
Security	8	Administrators can use the GUI to
Suitability	8	change InfiniSAN's RAID levels, set network
Support	7	parameters, or define e-mail addresses that
Training	7	should receive malfunction notices. You can
Value	9	also monitor the system's status and access
<b>DEPLOY</b>		logs.
1	2	3
4	5	6
7	8	9
10		

Overall, we valued our first experience with the InfiniSAN D2D. The model we tested sells for \$13,364, which puts it in the same bracket as a good tape autoloader such as the IBM 3581 Ultrium. But that price also includes backup software and media, which are normally not bundled with tape solutions. Our only regret is that the InfiniSAN is a Windows-only solution, although Nexsan promises a future Unix version.

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