



DOUBLE-TAKE® BACKUP SAVES THE DAY FOR NETSAM'S E-COMMERCE CLIENTS

Even with a substantial investment in RAID, a web site's data may be highly vulnerable in the case of hardware failure. Thanks to the real-time data protection capabilities of NSI's Double-Take for Windows 2000, the data from some busy e-commerce sites remained safe and secure when a major power failure brought down the sites' servers.

Solution Overview

Industry

- E-commerce

Architecture

- Dell Ultra SCSI RAID 5 Servers
- Windows 2000
- Microsoft SQL Server Version 7

Products Used

- NSI Software Double-Take for Windows 2000

When managers of busy e-commerce sites fret about potential threats to their customer data, they are more likely to focus on software problems than on hardware failure. But hardware failure can occur, and the loss of data can be disastrous. Even an impressive arsenal of RAID (Redundant Arrays of Independent Disks) may not provide adequate protection.

Managers at NetStrategies and Management, (NetSam), Inc., understood how vulnerable their e-commerce clients' data could be to hardware failure. And, because of the precautions NetSam took, when NetSam servers were brought down by a severe power failure at NetSam's service provider, NetSam's clients' mission critical data remained safe and secure.

NetSam is an Arlington, Texas-based firm that provides design, development, management and consulting services to Fortune 500 companies and other businesses and organizations that use Internet technologies. The company's services include hosting data storage for e-commerce and other businesses, for which they use 8 Dell Ultra SCSI 3 RAID 5 servers.

Power Problem Triggers Hardware Failure

NetSam's potential data crisis began one Friday morning, with a power failure at the servers' off-site location. The company maintaining the servers for NetSam had connected them to a UPS (Universal Power Supply) that was set for 75% capacity. When the power failure occurred, NetSam e-commerce clients had accumulated 8 to 9 hours of new orders since their last backup. Another NetSam client was in the process of updating the content for his company's web site on NetSam servers, and was scheduled to present that content to his board of directors in about an hour and a half.



According to Michael Bohan, NetSam's Chief Technology Officer, "when the servers at the collocation site took a huge power hit, all the high-end Dell servers went down hard. Discs were off line, RAID controllers were screaming. We put the drives back on line. When we tested the SQL server, we found it was corrupted through the hardware. Certain queries would fail. It appeared that all of the clients' data was pretty useless and that they could lose 8 to 9 hours of orders. Also, it appeared that our client who had to make a presentation to his board would not be able to do so."

Data Recovery to the Point of Failure

"The thing that saved us and our clients," says Bohan, "was that we use NSI's Double-Take® software." NetSam uses Double-Take to do real time replication of data, including an hourly differential backup--an hourly "snapshot" of the data.

As Bohan explains, "Double-Take operates at the software level above the disc cache, so it was not affected by what was going on with the power. The corruption that occurred with the RAID controllers was not replicated to the fail over SQL server, as it would have been in a hardware-based solution. We were able to bring the fail-over SQL server on line. When we spooled up the fail over server there was no corruption. We were able to recover data to the very point of failure. Double-Take has no file-locking problems, and that's why it can do SQL servers, like ours, in real time. Double-Take also examines the transaction logs so we would know if any transactions were cut off because of the power problem. In that case the backup would have been rolled back."

"In a hardware failure situation such as this," he continues, "most companies would have had to go back to tape. We did have a tape backup we could have used. With tape, though, the best scenario would have been to queue it up, and restore from, say, an hour ago. The Double-Take solution is much faster and more thorough than relying on tape alone."

Back in Business

Considering how severe the problems could have been, Bohan was delighted to get clients' data back so quickly. According to Bohan, "Our clients were back in business quickly. We got the drives on line, determined the best approach to recovering from the hardware failure, and plugged the machines into another UPS. Getting clients back in business so quickly is important in helping us meet our Service Level Agreements (SLA). Even though the failure occurred during production hours, we were not far off our SLA."

Bohan cites some other advantages of using Double-Take. "The fail over SQL server we used to recover was also functioning as a web server in full production. Double-Take made it possible to carry out this function."

Protecting Against Hardware Failures

Bohan obviously believes not enough attention is paid to hardware failures and the catastrophes they can cause.

"Most people focus on software problems, but I'm most afraid of hardware problems. Many people act like hardware problems don't happen any more. But, that's just because these problems haven't happened to them. You can spend half a million dollars on redundant disc array, and still be vulnerable. A RAID set wouldn't have done anything for us in this situation."

"Double-Take saved our business--if we had to go roll back to tape, our customers would not have been happy. Double-Take not only saved the data for our e-commerce customers, but our client who had to present web content to his board had everything he needed, and his meeting went off without a hitch."