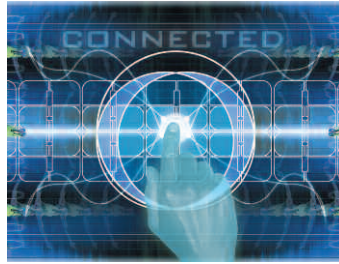




Datalink Implements Disk-based Backup with WAN Acceleration

Provides Maximum Data Protection & Performance



As an independent storage architect, Datalink works with organizations to design, deploy and support their storage architectures. The nature of the business is such that a large percentage of Datalink’s workforce is remote. Professional service teams are typically on site at organizations—helping identify issues around their storage or backup and recovery operation, educating IT management on how various technologies will impact their environment, and implementing customized solutions.

The technology within the storage industry rapidly changes and is often complex, so sharing information (i.e., what works well, what doesn’t) between Datalink professional service teams is key. This factor, combined with a national workforce that is continually mobile, means that in order to effectively communicate with customers and peers, employees rely heavily on their Blackberries for remote access to their email and calendars.

“Everything revolves around the availability of email. The availability of that data is job number one for our team,” says Dan Stephans, IT manager for Datalink. If email is down, then employees cannot communicate with each other. They cannot receive or respond to email from customers. Among other things, this can ultimately affect orders being received, solutions being deployed, and corporate revenue.

RESTORES NOW OCCUR IMMEDIATELY

Several years ago when Datalink backed up directly to tape, a recovery would have taken several hours. To avoid this scenario from happening, Datalink has a disk-based backup architecture in place where restores can occur in as little as an hour, versus a day. The system is built around several NetApp filers and NetApp SnapManager® for Microsoft® Exchange software, which leverages snapshot technology to execute full backups and recoveries of email data in a fraction of the time of legacy tape-based approaches.

INDUSTRY

Data storage

LOCATION

Minneapolis, Minnesota

SOLUTION

Disk-based backup and recovery, server virtualization, and WAN acceleration

BENEFITS

Able to quickly back up and restore data and meet remote and local user performance requirements

“We can restore to any point in time in the last three days, and it is so much faster than pulling the data off of tape.”

— Kyle Barina
System Administrator

Using SnapManager, Datalink takes snapshots of the Exchange data every hour. This data is then mirrored to a NetApp near-line storage device. “We can restore to any point in time in the last three days, and it is so much faster than pulling the data off of tape,” says Kyle Barina, system administrator. “We just revert back to a previous snapshot and play the Exchange logs forward. Instead of taking 12 hours and seriously slowing down the system, I can do it in an hour,” Barina says. In fact, he adds, the restore could occur even faster if he chose to adjust certain settings on the filer.

Datalink also mirrors the data off site to another filer at a disaster recovery (DR) location. This device polls the near-line storage device every hour for changes and the off site copy is updated accordingly. The data is then archived to tape on a weekly basis.

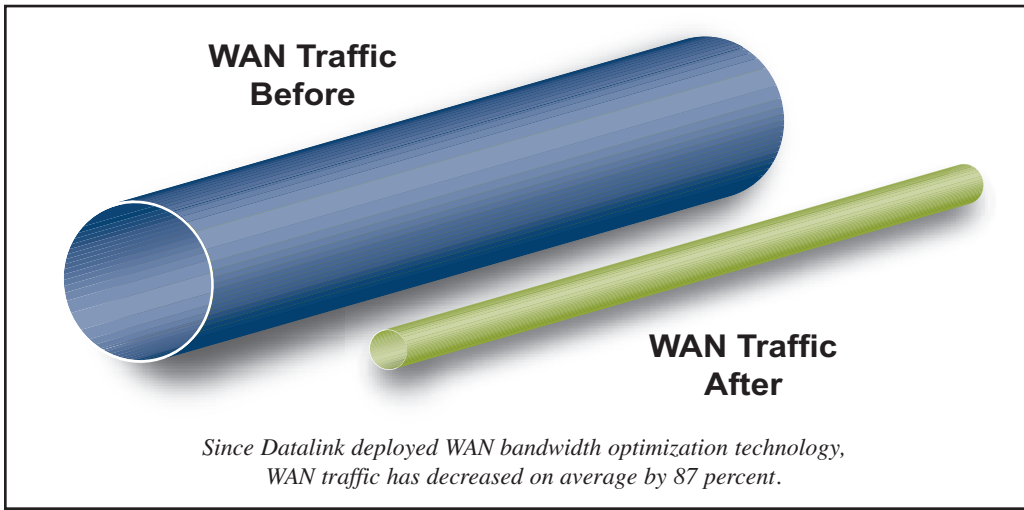
With multiple layers of redundancy, Datalink has a high level of confidence that it can meet its recovery point and recovery time objectives for mission critical Exchange data. Beyond this, Datalink is architecting a similar backup and recovery architecture for other data types as it implements VMware software and migrates a large portion of its infrastructure to a virtualized server environment.

In and of itself, the virtualized server environment will ease manageability significantly, Stephans says. And the NetApp disk on the back-end enables additional capabilities, such as automated and simplified data protection options. “We’ll be able to do the same things with this data that we can with the Exchange data. If something goes wrong with the server, we can roll back to a previous snapshot of that server and bring it back up,” Barina says.

REDUCING NETWORK TRAFFIC LOWERS BANDWIDTH REQUIREMENTS

While the replication technology that Datalink has in place has enabled the organization to reach its desired level of data protection, it has naturally increased the amount of network traffic. To help make this more manageable, Datalink recently deployed Wide Area Network (WAN) bandwidth optimization technology with Riverbed Steelhead® appliances in its corporate office as well as its DR location and several remote offices.

The Riverbed appliances remove repetitive traffic from the WAN, increasing performance across the WAN for all TCP applications. Data streamlining stores the WAN traffic on disk in a proprietary, application-independent form that can be reused by any application, file or user that sends or receives the same data. As users request files, transmit emails, etc., any traffic generated that has been across the network before will not be transmitted.



With Riverbed appliances in place, remote employees are able to experience LAN-like performance as they access and save files.

“It reduces the network traffic between locations and has really been a bandwidth multiplier,” Barina says. In fact, WAN traffic has decreased on average by 87 percent since the Riverbed deployment. “It effectively gives us 10 times the pipe,” he says.

Stephans adds, “We always were concerned with the amount of time it took to replicate data to our off site location. We wanted to reduce that window of risk. With the Riverbed technology in place, that window has gone from three days to less than a day.”

Beyond that, Datalink now requires less bandwidth, which is a significant cost savings. “The Riverbed solution was essentially a one time cost—where additional bandwidth is continual, Stephans explains. “If we didn’t have the Riverbed appliances we would definitely have to bump up the size of our pipe, especially with the amount of Exchange traffic we have nowadays,” he added.

It also provides a huge performance benefit to remote users. “The data for our remote offices resides at our corporate facility because we don’t have the resources to manage it in the remote offices,” says Barina. With Riverbed appliances in place, remote employees experience LAN-like performance as they access and save files. The Riverbed technology helps ensure all users have adequate access to key applications that enable them to conduct business operations and help drive revenue.

“All in all, we believe our current solution has allowed us to get the maximum amount of protection and performance for our investment,” Stephans says. “The nature of our business means that we need to be able to quickly back up and recover data with minimal impact on employee productivity. We also need to give our remote users adequate performance so their productivity is not impacted. And like most organizations, we were interested in doing it as efficiently and cost-effectively as possible. We feel we have definitely achieved this.”



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