

SUCCESS STORY

Growing Local Exchange Carrier Reduces Backup Window by 60 Percent with D2D2T Solution

CHALLENGES

- ▶ *Data growth more than doubled in two years*
- ▶ *Inability to meet backup window impacted network performance*
- ▶ *Data recovery was cumbersome and time-consuming*
- ▶ *Multiple media formats and high tape volumes drove up media management costs*

THE SOLUTION

REO 9000 and NEO 8000

BENEFITS

- ▶ *Backup time slashed by 60 percent, enabling Sage to meet backup window*
- ▶ *Data recovery now virtually instantaneous*
- ▶ *Quantity and cost of media reduced significantly*
- ▶ *Scalable solution protects investment and meets future storage growth*

RESELLER

*Dallas Digital Services,
www.ddserv.com*

Sage Telecom is one of the fastest growing local exchange carriers, currently serving more than 550,000 residential and small business customers in 11 states. Based in Allen, Texas, a Dallas suburb, Sage delivers local and long distance phone service through an agreement with SBC and is introducing high speed Internet service to ensure that customers receive competitive choices and innovative services.

Sage prides itself on delivering outstanding service at a remarkably low cost in rural and suburban areas of Arkansas, California, Illinois, Indiana, Kansas, Michigan, Missouri, Ohio, Oklahoma, Texas and Wisconsin. The carrier plans to continue its expansion and growth in both the residential and business telephone segments.

Its 10-person IT team operates as a call center and manages data for the company's large billing and accounting system. "We perform full backups of our system weekly, and incremental backups daily," says Jack Green, senior network administrator for Sage Telecom.

But in the past two and a half years, the company experienced explosive data growth, and its storage requirements grew beyond their means.

THE CHALLENGE

Sage initially began its weekly full backups on Fridays at 8 p.m. so that they would complete during the weekend. However, as Sage's data requirements grew - more than doubling in the last two years to 12 terabytes - the full

backups did not complete until Monday afternoon. This severely impacted network performance, and employees noticed. "The system was incredibly slow, and file changes weren't getting backed up," Green recalls.

Sage's data resides in four Network Appliance filers and 85 Hewlett-Packard Superdome and ProLiant servers, running Microsoft SQL server. It had been using two Overland Storage NEO 2000™ tape libraries with LTO-1 drives to archive data from its filers and a Hewlett-Packard AIT library to backup data from the servers. As a result, Sage had two different types of media to contend with and a huge number of tape cartridges to account for on a weekly basis—36 LTO-1 tapes and 20 AIT tapes. It was becoming increasingly difficult and costly to manage the tapes in off-site storage - not to mention the need for greater capacity.

Additionally, when restores were necessary, recalling the tapes from offsite was time consuming and costly. "Inevitably, there was always someone who needed data that we archived to tape and shipped offsite," Green says. "They'd have to wait several hours for us to get the container, locate the right tape and restore the file. And each time this happened, we incurred a charge."

“ The NEO 8000 snapped right in to our storage environment ...and while the REO was completely new to us, it only took a couple of hours for us to feel comfortable using it. They made our life easier instantly. ”

Jack Green
Senior Network Administrator

Green had always been impressed with the two NEO 2000™ libraries, but after exceeding their backup window for several months, Green contacted Texas-based Dallas Digital Services, a local integrator, in January 2005. He knew there had to be a faster way to conduct backups, manage growing data requirements, and reduce the number of tape cartridges used for archival.

THE SOLUTION

Green evaluated several disk-based backup solutions and different backup software options. Realizing that throughput was the issue, Sage once again selected Overland - this time opting for a disk-to-disk-to-tape (D2D2T) strategy using the high-performance NEO 8000™ library and versatile REO 9000™ disk-based backup and recovery appliance.

Impressed with the NEO 8000's performance, scalability, price and size, Sage traded in its two NEO 2000s for one NEO 8000. The NEO 8000 easily scales up to 1,000 cartridges, and can house as many as 24 tape drives in a 19-inch rack footprint. "The upgrade made NEO 8000 more affordable than any competing product would have been," Green says.

To further reduce Sage's increasing backup window, Dallas Digital Services also suggested the Overland REO 9000 disk-based backup and recovery appliance. The REO 9000 enables fast, reliable data backup and recovery while reducing operating costs. Easily configured as a virtual tape library, dynamic virtual tape drives, and/or disk volumes (LUNs), the

REO can be easily deployed and modified to adapt to changing data protection requirements. Capable of storing up to 9.6 terabytes of raw data, the REO 9000 includes embedded Protection OS software, which provides data protection intelligence including virtualization, management, and connectivity.

After purchasing both in April 2005, Sage now backs up its filers to the NEO 8000 tape library with Fibre Channel LTO-3 tape drives, while its 85 servers back up directly to the REO 9000. Sage uses Legato NetWorker software to backup data to the REO, where it is retained for two weeks and then archived to the NEO 8000 tape library. Dallas Digital Services installed both products, and Sage was up and running in less than two days.

"NEO 8000 snapped right into our storage environment without any trouble," Green says. "Its interface is similar to that of the NEO 2000, so we immediately knew how to use the NEO 8000. And while the REO was completely new to us, it only took a couple of hours for us to feel comfortable using it. They made our life easier instantly."

THE BENEFITS

Sage's main consideration for seeking a new storage solution was to decrease its backup window. And it did - significantly. Overland's combined NEO 8000 tape library and REO 9000 disk-based backup and recovery appliance helped Sage reduce the time to complete full backups by 60 percent - from 60 hours to less than 24 hours. Backing up the servers to REO alone saves Sage about 30 hours—a


decrease of more than 80 percent. Furthermore, network performance come Monday morning is no longer an issue.

Sage also significantly decreased the number of tape cartridges needed for off-site storage. Full backups that used to require 56 LTO-1 and AIT tapes now require only 17 LTO-3 tape cartridges. As a result, Green says the IT department saves an hour or more each week in tape backup rotation. The cost of purchasing tapes and recalling them from offsite storage also has decreased by 25 percent.

Additionally, with the REO 9000 Sage can recover data instantaneously. Instead of the cumbersome process of recalling a tape from offsite, the IT department can restore the data directly from the REO.

Sage is now considering the REO 9000's flexibility and scalability for future projects such as moving its NDMP backups to disk. Green also expects to take advantage of the disaster recovery benefits of the REO 9000. "As we start moving toward a disaster recovery solution at the end of this year, we intend to make the REO a main component of our offsite disaster recovery plans."

Currently, Sage is only using about 10 percent of the NEO 8000's capacity. As its business and storage requirements continue to grow, the IT department can easily take advantage of NEO's capacity-on-demand, further protecting its investment.

Green says, "We're confident the REO and the NEO will keep pace with our growth for the next three years at least so that we can easily apply additional storage requirements and not have to purchase anything more." 



About Overland Storage

For 25 years, Overland Storage has delivered world-class data protection solutions designed to ensure business continuity. Focused on backup and recovery, Overland's data protection solutions include the REO SERIES™ family of disk-based backup and recovery appliances and the award-

winning NEO SERIES™ of tape libraries. Overland sells its products worldwide through leading OEMs, commercial distributors, storage integrators and value-added resellers. For more information, visit Overland's web site at www.overlandstorage.com.

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