

Crutchfield Finely Tunes Data Protection with CommVault Galaxy Backup and Recovery While Turning up the Volume on Microsoft SharePoint and Exchange Support

QUICK FACTS

Industry/Solution:

- Consumer electronics, Internet retailer

Platform/File System:

- Microsoft Windows 2003

Applications:

- Microsoft SharePoint
- Microsoft Exchange 2003
- Microsoft SQL databases
- More than 250 custom applications

Partner Hardware:

- Dell file servers
- Dell PowerVault 136
- EMC CX300, CX500 and AX100i SANs

Challenges:

- Full backups took up to 48 hours, eliminating time for incrementals
- Data restores were unreliable and laborious, taking several hours at best
- Decision to deploy Microsoft SharePoint created demand for item-level recovery

Competitive Challenger:

- EMC NetBackup
- Legato NetWorker

Solution:

- CommVault Galaxy Backup & Recovery; CommVault Galaxy for Microsoft SharePoint Systems; CommVault Galaxy for Microsoft Exchange Systems

Benefits:

- Backup window reduced from 48 hours to five hours; reliable restores performed in 30 minutes
- Item-level recovery of SharePoint and Exchange data increases efficiencies and lowers administrative overhead
- On-the-fly tape encryption provides data protection and meets PCI compliance requirements
- Dramatically reduced administrative overhead
- Tight integration with Microsoft ensures future-proof data protection

Customer Profile

Founded by Bill Crutchfield in 1974 after he had difficulty finding the proper stereo for a classic car he was restoring, Crutchfield Corp. now is one of the most respected authorities on car and home entertainment products. As the nation's first integrated marketer, Crutchfield consistently earns industry accolades for the quality, design and usefulness of its award-winning catalog, call center operation and popular e-commerce website.

Based in Charlottesville, Va., Crutchfield has grown consistently thanks to extensive product and installation information paired with exceptional customer service. These values continue to define the company as it has branched beyond car audio to offer the latest in home theater and digital video products. Unlike most Internet retailers, Crutchfield maintains a near complete inventory in-house. A warehouse in Charlottesville, Va., holds more than 1.5 million cubic feet of inventory, ensuring that over 93 percent of all products are in stock. More than 600 employees, including sales, customer service and technical advisors, provide Crutchfield's loyal customer base with convenient, full-service shopping and lifetime technical support.

Data Management Environment

Technology has played an empowering role at Crutchfield since the early 1990s when the company launched one of the earliest e-commerce websites as the first vendor-authorized audio/video Internet retailer. A 14-person technology team oversees the core infrastructure, which includes 120 Microsoft servers dispersed across five corporate sites, primarily running Windows 2003, SQL Server 2005, Exchange 2003 and SharePoint Portal Server 2007. The company's close association with Microsoft includes participation in early product evaluations, most recently a beta test of Microsoft's .NET Framework 3.0.

In keeping with the entrepreneurial spirit that defines the organization, Crutchfield has developed more than 250 custom applications, including its e-commerce engine and over

2,000 custom web pages. The IT team also supports a rapidly growing storage environment, which encompasses EMC CX300, CX500 and AX100i Storage Area Networks (SANs) along with a variety of server attached storage. Over the past few years, storage growth has risen rapidly and continues to climb at approximately 10-15 percent a year. Currently, the company safeguards 8 terabytes of mission-critical data, including customers' order histories, product information, manufacturers' product manuals, warranty cards, technical support and high-resolution product images.

Part of the CommVault Simpana™ software suite, CommVault's Galaxy® Data Protection software is instrumental in streamlining backups and restores of Crutchfield's vital data while also providing tight integration with Microsoft's applications to deliver heightened levels of data protection. In particular, CommVault's seamless SharePoint support has expedited upgrades to newer releases and optimized overall data management while substantially reducing administrative overhead.

Facing the Music: Faulty Backups

A growth spurt in 2003 culminated with the deployment of 15 additional servers in just over a year. The resulting data surge overtaxed a Dell PowerVault 132 tape library with two DLT-4 tape drives running Symantec Veritas Backup Exec. It took the four-person data protection team three-to-four days to conduct full backups, which meant constantly picking and choosing which data absolutely had to be backed up in this timeframe.

The time lag also prevented Crutchfield from reliably doing incremental backups throughout the week, a dicey scenario with the heavy dependence on data for all aspects of daily operations. Additionally, the faulty process required at least an hour of administrative overhead daily to swap out tapes and baby-sit backups. "If we ever had a true disaster and lost our Exchange server, it would've taken days to recover," recalls Steve Weiskircher, vice president of information technology for

Crutchfield. "Obviously, this was completely unacceptable. Restores were challenging too and sometimes the only response was 'sorry.' We needed a better solution."

In early summer 2003, the team evaluated ways to bolster its storage as well as fix the faltering backup and recovery foundation. Crutchfield evaluated various SANs disk-to-disk-to-tape (D2D2T) solutions as well as more robust backup and recovery software, such as Veritas NetBackup and EMC-Legato NetWorker. At the same time, Crutchfield decided to replace its intranet with Microsoft Office SharePoint portal to facilitate company-wide collaboration and document management. "We saw SharePoint as an excellent tool for organizing and aggregating our information in one central, web-based application," explains Weiskircher. "While SharePoint would take the pressure off file servers for handling data exchanges, it created a new set of selection criteria for our data protection software."

CommVault Shines with SharePoint Item-Level Recovery

When it came to SharePoint backup and recovery, Crutchfield found severe limitations with the approaches taken by Symantec and EMC-Legato. "The only recovery possibility would require us to rebuild the entire system offline from tape, which would have been a nightmare," says Paul Fitzsimmons, systems manager for Crutchfield. As a result, Crutchfield turned to CommVault, which had leveraged its long-standing close relationship with Microsoft to become the first vendor to support item-level recovery of SharePoint files.

Initially, Crutchfield planned to roll-out CommVault for SharePoint and continue with plans to deploy NetBackup throughout the rest of the company. However, the team was impressed with CommVault's unique data protection platform and tight integration with Microsoft, not to mention the granularity and 'release independence'. "We learned that Microsoft's internal SharePoint team also used CommVault Galaxy," notes Fitzsimmons. "The GUI was intuitive and we liked the multi-streaming functionality and cluster-aware agents."

Crutchfield initially decided to test CommVault Galaxy on a few servers. "Within days, we encountered a major SharePoint file deletion," remembers Fitzsimmons. "The first recovery took less than an hour and worked like magic. We were amazed, thrilled and quickly committed to a company-wide deployment." Crutchfield completed its CommVault implementation, complementing the software with a new Dell PowerVault 136, four-tape LTO-2 library and EMC CX500 SAN for complete D2D2T data protection.

Top-of-the-Charts Results

"Following our flawless SharePoint recovery, we found that CommVault took a lot of the scrambling and stress out of data backups and restores," says Fitzsimmons. Crutchfield took advantage of CommVault's multi-streaming functionality to reduce backup times from 48 hours to about five hours. As a result, the team was able to incorporate less-critical data, while still achieving significant reductions in daily backups. For the first time in years, the company had confidence in its ability to perform incremental backups, which were a straightforward, process each night. Major improvements on restores also were achieved as the time to recover data shrunk from several hours to about 30 minutes. Item-level recovery of Exchange files provided granular restores of full mailboxes, folders, individual items and Outlook-extended information such as contacts, calendar items and tasks.

As an extra layer of data protection, Crutchfield next leveraged CommVault's on-the-fly tape encryption capability. "This fantastic feature gives us more confidence in the event that tapes are ever lost or stolen," Fitzsimmons adds. "Moreover, CommVault's tape encryption ensures complete compliance with Payment Card Industry (PCI) data security regulations."

When it comes to day-to-day management, CommVault's "set it and forget it" operation saves time while dramatically increasing efficiency. "We especially like the system

state backup feature," notes Fitzsimmons. "CommVault also does a great job of tracking tapes, so we don't have to." To that end, administrative overhead managing backups and restores has been virtually eliminated, allowing for more strategic technology initiatives, such as planning and managing SharePoint 2007 and Exchange 2007 migrations.

Harmonious Duet with Microsoft

CommVault's tight integration with Microsoft sets the stage for ongoing development at Crutchfield. Most recently, an upgrade to SharePoint 2007 and an Exchange 2007 migration is planned for later this year. "Tight integration with Microsoft makes life a lot easier," says Weiskircher. "For example, moving from a 32-bit platform directly to a 64-bit environment was straightforward." Over time, CommVault's focus on producing "release independent" software will ease future upgrades by letting Crutchfield restore items from older versions directly into new versions seamlessly.

An added benefit is integration with Microsoft's VSS technology, which streamlines the management of VSS snapshots. CommVault also simplifies VSS usage by enabling a "Generic Requestor," whereby Galaxy makes the translation to the VSS hardware provider. CommVault's proven Microsoft prowess also extends to SQL Server, so Crutchfield is taking a close look at adding Galaxy for Microsoft SQL Server for unified data management.

To that end, the company is reviewing the technology advances included in CommVault's latest version, the Simpana software suite, especially its enterprise-wide search and discovery solution for strengthening compliance and auditing capabilities. "CommVault is our corporate standard for backup and recovery," concludes Weiskircher. "It gives us great peace of mind knowing CommVault is in lock-step with Microsoft while continuing to keep pace with the latest technology advancements to give Crutchfield unprecedented levels of future-proof data protection."

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