

## CommVault® replaces Veritas Backup Exec, delivers worry-free data protection for Cardinal Logistics

### QUICK FACTS

Industry/Solution:

- Logistics and transportation

Platform/File System:

- Microsoft Windows Server 2000 and 2003

Applications:

- Microsoft Active Directory
- Microsoft Exchange
- Microsoft SQL Server

Partner Hardware:

- 60 HP ProLiant DL360 & DL380 servers
- Two Network Appliance FAS940C filers
- One Network Appliance R200 filer

Challenge:

- Close interaction with Network Appliance filers
- Need for reliable, centralized backup
- Need for fast, reliable restores of lost or corrupted information

Solution:

- CommVault Galaxy Backup & Recovery
- CommVault Data Migrator

Benefits:

- Automated, centralized backup reduces by 50% staff time needed to administer backups
- 50% reduction in time required to complete a full backup
- Solution accommodates sixfold increase in volume of backup data
- Informative reports enable efficient use of resources, prevent over-buying media
- Reliable backups and restores
- Improved Microsoft Exchange email performance

### Customer Profile

Headquartered in Concord, North Carolina, Cardinal Logistics Management is one of the country's leading third party logistics, transportation, and supply chain solutions providers. Cardinal combines dedicated shipping resources with industry expertise and advanced logistics technology to help companies maximize their supply and demand chains. Cardinal's logistics experts work directly with clients to develop customized solutions to challenging supply chain problems – delivering more than 17,000 donuts to over 1,400 7-Eleven stores every day; shipping more than 20,000 tons of corrugated boxes to Georgia-Pacific customers every month; receiving, routing, and delivering over 100 million pounds of lumber to the world's leading home improvement retailer and their customers coast-to-coast every year.

### Data Management Environment

Cardinal's centralized data system is the company's "customer service center" supplying IT services to the whole organization, including approximately 80 remote sites, which access applications and shared files at the data center using Citrix servers. The data center has approximately 60 HP ProLiant DL360 and DL380 servers running Windows 2000 and 2003 operating systems. Primary storage is on three Network Appliance FAS file servers – two in the data center and one at an off-site Disaster Recovery facility. For backup, they have an ADIC Scalar I2000 tape library with four LTO2 tape drives and 300 media slots. To protect their information resources, Cardinal uses CommVault Galaxy® Backup & Recovery software and CommVault Data Migrator for managing email data.

### Multi-level backup process

Cardinal uses a combination of disk-to-disk, disk-to-tape, and snapshot backups. They run nightly incremental backups of their HP

ProLiant servers Monday through Thursday. These are disk-to-disk backups to an HP StorageWorks disk array. On Friday they run full backups of the ProLiant servers to the ADIC tape library, and copy the week's incremental backups to tape. Nightly and weekly backup tapes are retained on the library, and the end-of-month full backup tapes go to the Disaster Recovery site and are kept permanently.

For the NetApp filers, they run incremental backups Monday through Thursday to the ADIC tape library, and on Friday a full backup to the tape library. In addition, the Net App filers at the data center use NetApp Snapshot technology to send snapshots to the NetApp filer at the DR site. Explains Marty Hurd, the IT administrator responsible for backup, "A lot of our activity is not forecasted. It's up-to-the-minute data transfers, and we must be able to react quickly. We have NetApp snapshots to meet immediate needs, so we need a backup solution that would work well with NetApp, which CommVault Galaxy software does very well."

### Backup is critical for Cardinal and their customers

Backup is a top priority for Cardinal. Explains Hurd, "We develop unique, customized applications for our customers, and our backup for those applications must be absolutely dependable. If there is a problem with a customer system, we need to know that we have backup. Our customers depend on it. We support 800 users, and as we add some big customers, we need NetApp and CommVault to be able to grow with us, and they have. We started with half a terabyte of data, and that grew to three TB in the first year and a half we had the CommVault Galaxy software."

Cardinal builds its customer solutions on trucking industry software platforms from vendors such as TMW Software. "We tweak the solution the way the customer wants it," says Hurd. "We stay on top of what the customer wants. If one of these customer solutions crashed and we did not have it fully backed up and recoverable, we couldn't just pull another copy of TMW off the shelf. We would have to start from scratch re-building the custom application. That would be a lot of time and money lost, and could cost customer confidence. With CommVault software, if a server goes down, we know we can do a bare metal restore and have the server up and running again before the end of the day. We have tested CommVault Galaxy Backup & Recovery to the fullest extent, doing restores of critical servers. We use our backup and restore capability as a sales point. We tell customers 'If there is a problem, you can be confident we have your application backed up and we can restore it.'"

### **Data Migrator has an immediate impact on email performance**

Like almost every business, Cardinal makes heavy use of email for internal and external communications. They were finding that the demands on email data storage were growing at a fast pace, and that the burden of storage was slowing email performance. To manage email storage, Cardinal turned to CommVault Data Migrator to automatically archive all emails over six months old, moving data from primary storage on their Microsoft Exchange email server to secondary storage on the NetApp file server at the Disaster Recovery site. The impact of installing Data Migrator was immediate. When only about 50% of the users had been moved to this system, performance picked up noticeably. "With Data Migrator installed, we are not taxing the email server as much," reports Hurd. "Some of our users access their email a

lot. Data Migrator reduces the load on the Exchange server, because the server does not have to work as hard to find messages the users want, and archiving saves us storage space in the data center."

### **Choosing CommVault Galaxy to replace Veritas Backup Exec**

Before they installed CommVault Galaxy Backup & Recovery, Cardinal used Veritas Backup Exec backup software. "When we did a backup, we didn't know whether we had data or not," says Hurd. "So we needed to find a new backup solution." Cardinal invited vendors to make presentations. Hurd and his team were impressed when one of the CommVault presenters initiated a backup on his laptop, and then abruptly shut down his computer. When he re-started the laptop, the backup started again. "With Backup Exec," says Hurd, "if something happens during your backup, you lose the backup, and you have to start over from scratch. CommVault Galaxy software 'thinks.' If you re-boot in the middle of a backup, it just picks right up again and finishes the job."

### **Working with NetApp "just simplifies everything"**

Cardinal first started working with NetApp in 2001, and since then NetApp has become the backbone of the company's data storage strategy. "A big piece of why we chose CommVault software was how it works with NetApp," says Hurd. "CommVault Galaxy Backup & Recovery software not only works with NetApp, it understands the NetApp architecture, and that makes the interactions smooth and worry free. The two together, CommVault and NetApp, complement each other very well."

Cardinal originally chose NetApp for its performance on SQL databases. "On SQL, performance was night and day versus our previous storage solution," says Justin Loucks, Senior Network Engineer. "With

some products, as the number of snapshots that you want to maintain increases, performance degrades. You won't see that with NetApp. The Snapshots are done in seconds, with no impact on production. NetApp also made backups easier. Before, if someone dropped an SQL database, a restore was difficult. With NetApp, we can restore it immediately off the filer."

NetApp has allowed Cardinal to start with a simple solution and grow it to meet changing needs. He says, "We started with a basic NAS solution running the CIFS protocol, we added iSCSI, and now we are thinking about Fibre Channel. With NetApp, we can run all three. NetApp offers flexibility that's beyond comparison, and all with the same code base. To do an upgrade with NetApp, you shut it down for a short time, swap out the old head, and snap in the new. There's no fork-lift upgrade to move from one to another. The hardware model does not matter."

"NetApp just simplifies everything. It offers stability and simplicity, and you can't put a price on that. Windows and Unix file shares as well as iSCSI and Fiber channel connectivity running on the same platform. They all run on one box, it doesn't degrade performance, and it is easy to manage and to create resources and jobs. For some solutions, you need to go to a class for a week. One person went for NetApp training five years ago, and that's it. The GUI is bullet proof. It's almost too easy; you just click on it.

"With NetApp, you just turn it on and it is there. We took the system down for only 30 minutes to go from a single-node filer to a clustered configuration. That is a major move, and it took no time at all. It was easier than I could imagine. NetApp delivers flexibility, performance, and easy upgrades."

### CommVault saves time, makes administration easy

With the Veritas solution, backups were consuming Cardinal's IT resources. "I was spending three or four hours a day, just trying to figure out what backups we had and how to get at the data and not kill performance by backing up over the net," says Hurd. "Now I come in and look at the logs and the reports. If there is a failure, which is not very often, the reports show me what happened and why, and I go fix it." Hurd estimates he is saving as much as 50% or more of his time – time he used to spend on backup.

Before the switch to CommVault Galaxy software, weekend full backups were taking up to 72 hours. Starting on Friday evening, the full backup was not finished by the start of work Monday morning, some 60 hours later. "When I had to complete backing up a NetApp filer during the work day," explains Hurd, "it impacted overall performance. With CommVault software, the full backup is done early Sunday morning, in less than 36 hours."

The Cardinal team also likes the fact that CommVault is very well integrated into the Microsoft Windows environment. "CommVault Galaxy Backup & Recovery software backs up Microsoft Windows Active Directory," explains Hurd, "and has the ability to restore a user completely, including the user's whole environment, down to permissions and security codes. The CommVault software restores it all.

And to install it, you don't have to install a whole lot of extra drivers. Whatever you attach, if the Windows drivers work, CommVault's software works. With Backup Exec, there were lots of extra drivers to install. Upgrades take no time at all. It's so easy. You don't have to touch every box. You can do it all from one console. It simplifies my life."

CommVault software also works well with NDMP (Network Data Management Protocol), which Cardinal uses to manage backups. "NDMP used to be inflexible," says Hurd, "but CommVault's software has done a great job solving the issues that used to hold NDMP back. For example, now you can restore an NDMP dump to an alternate location, not just to the location where it was first sent. CommVault Galaxy Backup & Recovery software has made NDMP much more flexible, much more useful."

### CommVault support is "great"

Hurd rates CommVault support "second to none." He says, "We have run into very few problems, but if we do I submit a question by email, phone or on the web site, and we get a quick response. They are eager to help, always ready to go above and beyond what they have to do to help. We are a fast growing company. Interactions happen quickly, and we need timely response. The CommVault support people take the time and effort to know their customers, they understand our specific needs, and they take care of us. These guys are great."

### From nightmare to peace of mind

"Our experience with CommVault has been very positive," confirms Hurd. "When I took over backup, I was coming in every day worrying about what backup problems I would have. It was a nightmare. If somebody asked for a restore, I had to wonder if we had the data at all. Now, I have no doubt at all that the data is there. I've even challenged my boss to ask me to find any data, and I can find it every time. CommVault always comes through. It is the Holy Grail of backup software. CommVault Galaxy software tells me what I have on hand for backups and exactly where they are. If someone asks me to restore x data from x day, I run a report, it shows me what I've got, and I can say to the person making the request, 'Here it is, where do you want it?' I don't even have to know where it is. I can just click on the file, click on restore, and the software goes and gets it and puts it where I want it."

Hurd sums it all up when he says, "The combination of NetApp storage and CommVault software gives me peace of mind. My advice to someone considering the same solution is, 'buy it, hands down.' When you come from something that does not work, and go to something that does work, it is a great relief."

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