

Fast Growing Fuel Cell Company Looks to DataMigrator and Galaxy to Manage and Protect Exchange Data

QUICK FACTS

Industry/Solution:

- Chemicals

Platform/File System:

- Windows 2000/XP

Applications:

- Microsoft Exchange 2000, Microsoft Office

Partner Hardware:

- IBM:
 - Netfinity servers with SCSI RAID
 - LTO libraries for backup

Challenge:

- Maintain performance and security on MS Exchange during rapid growth worldwide.

Solution:

- CommVault DataMigrator
- CommVault Galaxy Backup & Recovery.

Benefits:

- Increased performance
- Ease of maintenance
- Fast file recoveries
- Data security

Customer Profile

Hydrogenics Corporation designs and builds fuel cell systems for clean efficient power generation. In preparation for the large future commercial markets that are anticipated, the Company currently works primarily with early technology adopters whose specific power delivery requirements are not met by conventional power technologies. The Company also works with select original equipment manufacturers (OEMs) who, recognizing the potential of this new technology, want to introduce fuel cells into their advanced technology programs. General Motors, for example, is both a client and an investor in Hydrogenics. In addition to fuel cell power product development, Hydrogenics' Greenlight Division develops and manufactures test systems used by fuel cell developers to test, control, and optimize their proprietary fuel cell stacks. Hydrogenics also provides system integration services to clients who require design engineering and prototyping to build proprietary technology into operational fuel cell systems. Or, in the words of a Hydrogenics' slogan, "We make fuel cells work."

Rapid Growth Drives IT Strategy

The mission of the Hydrogenics IT department is to provide technology services for the whole company, including communications, data storage, and applications. The company has a total of about 275 people, of whom about 140 are located at company headquarters in Toronto, 80 at the Vancouver Greenlight facility, 40 in Rochester, New York, and the remainder in offices in Japan and Germany.

Overview of Computer Environment

Hydrogenics runs its business in a Wintel computing environment (Windows and Intel). They have primarily IBM hardware, with Windows 2000 servers at the back end, Windows 2000 and Windows XP desktops, and MS Exchange messaging.

In the Toronto data center there are eight servers, including file servers, an MS Exchange server, and a Sharepoint Portal Server for document management. Additionally, Hydrogenics has three MS Exchange servers placed globally, in Japan, Germany and Vancouver. Remote locations are linked using VPN connections over the Internet. The internal

network in Toronto is a Gigabit Ethernet backbone, with 100 Mbps Ethernet to the desktops.

"We are pretty much a typical Microsoft BackOffice shop," explains IT Manager Aaron Hardwick. "We have no legacy applications. Fast growth is our issue." The company was founded in 1995. However, as recently as three years ago it had only 16 employees; growth to over 275 employees has come in the last three years. "Microsoft Exchange is mission critical for our business," says Hardwick. "It's the collaborative platform on which the business runs day-to-day. We use it to schedule meetings and resources, manage people and calendars, and support contact management. MS Exchange also supports our voice mail system. We have a unified messaging solution that uses MS Exchange as the platform for receiving voice mails into the system. MS Exchange is a core component of our information systems. CommVault DataMigrator and Galaxy software helps keep MS Exchange safe and running smoothly."

CommVault Galaxy Backup Software

Data storage is on IBM Netfinity servers with SCSI RAID boxes. Backup hardware is two IBM 20-Tape LTO libraries. The backup software at Hydrogenics is CommVault Galaxy, installed in 2001. Their experience with Galaxy has been excellent says Hardwick. "CommVault is always there if we need them. Our local CommVault field engineer is great with hands-on help. And the customer support from CommVault is great." So when Hardwick started to look for a storage management system for their MS Exchange servers, one of the first products he looked at was CommVault's DataMigrator.

DataMigrator Controls Growth of MS Exchange Information Store

"We needed DataMigrator for performance and storage," says Hardwick. "MS Exchange Information Store has grown exponentially over the past couple of years, as the company has grown. There are mailboxes with a gigabyte of data in them, with many large attachments in Information Store." The "large attachments" are often critical technical information. "On a daily basis, we have people who have to go back and retrieve an

attachment to a message that's 6 months or a year old," says Hardwick. "It takes under a minute to recover the message."

Hydrogenics installed DataMigrator in the third quarter of 2002. "DataMigrator manages email so the database can be smaller and mailboxes can be smaller," explains Hardwick. "That has major performance and efficiency benefits for the email system, but it also means that overall system performance and reliability go up and the ability to recover information goes up."

Automatically Migrates Data

DataMigrator is a policy-based system that is set up to automatically migrate data off to lower-cost, off-line storage. Any file that is over 100 KB and has not been used in over 45 days is migrated automatically to another disk, off the database. "We have available capacity in inexpensive disks, off the database," explains Hardwick. "When we do a restore, we want to go to disk, not to tape, to make it faster. We are a very fast-paced company, very leading edge. We want to be quick reacting about every thing, quick to respond, including being able to recover Exchange messages quickly. Our recovery time is less than one minute."

The fundamental benefit of DataMigrator is that it cuts the size of the MS Exchange Information Store. This, in turn:

- Reduces the size of backups
- Increases performance; smaller database file is quicker, easier to navigate
- Makes indexing, defragging, and other maintenance tasks easier and quicker; all maintenance is easier
- Enhances recoverability; it is quicker and easier to find things in a smaller database

Saving Time in Maintenance

"There's a definite time-saving benefit in system maintenance," says Hardwick. For example, defragmenting takes files scattered in different physical locations on the disk, and pulls them together. This improves

performance and frees up space on the disk. "Microsoft recommends you run the Exchange database defragmenter once a month," says Hardwick. "The problem is that you need to take the database off-line to do it, so it's downtime. It takes an hour to defrag 5 GB. DataMigrator cut the size of one of our MS Exchange databases from 10 GB to 5 GB. That cut defrag time from 2 hours to 1 hour. When you're talking about maintenance downtime, saving an hour is important. We have the MS Exchange database broken up into four separate databases, so that's 4 hours a month of downtime saved. Overall, the size of the MS Exchange databases was about 50 GB, and DataMigrator cut the total to about 25 GB."

Benefits for Mobile Users

With smaller mailboxes, it's easier and faster for mobile users with laptops to synchronize their laptops. "We have one engineer who sometimes works at home on his laptop," says Hardwick. "His mailbox was about 2 GB. He had problems with his database getting corrupted, which meant he had to download his mailbox from the server and re-synchronize. With a 2 GB mailbox, that could take all day. When that happened it was a productivity disaster for him and a continuing burden on the IT staff. With DataMigrator, his mailbox is cut down to about 100 MB, a 20-to-1 reduction. Now it takes half an hour to download, rather than all day."

MS Outlook has an Auto Archive feature to keep mailboxes at a manageable size. However, for lots of users this feature can have negative results. Auto Archive automatically moves data from the mail server to the client (the local computer, the laptop). Once there, it has no redundancy. If the laptop crashes, the information can be lost, causing productivity loss and need for immediate recovery. DataMigrator automatically shuts off Auto Archive at installation, and then takes over the process of migrating data in an orderly process, with data security always maintained.

CommVault Offers an Integrated Solution, Reduced Training Time

"One thing I really like about DataMigrator," says Hardwick, "is that it doesn't seem like a

separate piece of software. It just looks like another part of Galaxy. We chose Galaxy, and we learned the skill set. Then we chose DataMigrator, and it has the same skill set. You have the same learning curve for Galaxy and DataMigrator. That was a key selling point for Galaxy, and a key selling point for DataMigrator, because when we bought Galaxy we knew we would probably get DataMigrator later. VERITAS has comparable products, but we wanted a truly unified, integrated solution, not two products with totally different architectures."

It usually takes "at least a week" to learn a new piece of software, says Hardwick. "With DataMigrator, it only took one or two days. I just plugged it in and away I went. It follows the same structure as Galaxy. There were a few wrinkles, but those were easy to learn."

Policy-Based Systems

Like Galaxy, DataMigrator is policy-based. "That's very novel in the data backup and archiving world," says Hardwick. "With most backup and archiving products, you have to deal with them in computer terminology, talking about files and tape drives, etc. You have to know where the data is physically stored in order to find it. But in the business world, that stuff doesn't matter. What matters is, I want to know that if I go looking for a message that's 100 days old, I know I'm going to be able to find it. That's how you work with CommVault software, in terms of business-related policies, not computer terminology."

Another key selling point has been Hardwick's confidence in the CommVault team. "I have told many people in the organization that it's unusual to find a company like CommVault. Often you find a company with a really great, leading edge product, but the company doesn't cut it! With CommVault, they are constantly there. We looked at other companies but came to the conclusion that their products would be costly to scale up to enterprise size, and maintenance costs would get out of control. Galaxy and DataMigrator scale up very well. They make sense for us now, and they will still make sense for us in five years."

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