

## Reliable CommVault Software Provides MoMA with Industrial Strength Solution

### QUICK FACTS

#### Industry/Solution:

- Entertainment – Art Museum

#### Platform/File System:

- Microsoft Windows
- Apple MacOS

#### Applications:

- Gallery Systems Collection Management System (CMS)
- Microsoft Exchange
- Microsoft SQL Server

#### Partner Hardware:

- Wintel servers
- Apple Macintosh servers
- Apple XRAID storage server
- ADIC Scalar 100 tape libraries
- ADIC Scalar 24 tape libraries

#### Challenges:

- Provide data protection and high availability for critical applications, including Collection Management System
- Fast, reliable backups for eight sites in two states
- Fast, reliable restores
- Ease of backup management, reduced management costs

#### Solution:

- CommVault Galaxy Backup & Recovery
- AUX Copy
- Synthetic Full Backup

#### Benefits:

- Automated, centralized backup reduces backup management time
- Informative reports for easy backup management
- Reliable backups in available window of time
- Fast, easy to do restores

#### Customer Profile

Founded in 1929, The Museum of Modern Art in New York City is the foremost museum of modern art in the world. MoMA offers a permanent collection of the highest order, presents world class exhibitions, and its library, archives, and conservation laboratory are noted international centers for research. In 2004 MoMA completed a \$425 million, three-year renovation, a dramatic re-invention of one of the world's great cultural institutions. A critical part of that re-invention was a major redesign of MoMA's information technology infrastructure, in which CommVault software has played an important role.

#### Data Management Environment

MoMA's public face is the main museum building on West 53rd Street between Fifth and Sixth Avenues, in the heart of Manhattan. But the museum is a multi-site enterprise with locations around New York City and beyond. The museum's IT infrastructure, including nearly a hundred servers running dozens of different applications, is spread among six different sites, including a primary data center at the Museum's main building, a storage and research facility in Queens, a retail distribution center, two retail stores, and a film preservation center in Pennsylvania.

Most of MoMA's servers are Intel-based machines running Windows. They also have a small number of Macintosh servers running Mac OS as well as an IBM iSeries deployment. Storage is primarily server-attached. For backup, each IT location has one or more ADIC tape libraries, and each server has its own CommVault Galaxy backup agent.

#### Data Protection is Mission Critical

MoMA depends on CommVault software to back up the systems that are critical to running the museum. Chief Information Officer Steven Peltzman explains, "The most important value CommVault software delivers is the value of reliability. Data protection is a major part of our IT mission, and being reliable and credible in how we protect data means everything to us. Implementing CommVault brought us from a 'small-shop' backup operation to an industrial strength solution, worthy of protecting a world-class museum's digital assets."

Among those digital assets are the museum's membership system, multiple retail channels – including three stores in Manhattan, on-line retail, catalogue sales, and trade sales to other stores – and the Collections and Exhibitions Management System (CEMS), one of the museum's most important management tools.

Developed by Gallery Systems, the CEMS holds a database of detailed information on works in the collection, including about 20,000 images. Protecting the data in the CEMS is mission critical for the MoMA IT team. "The art is what is unique about the museum, and CEMS is used to manage the art. At any one time only a small percentage of the museum's collection is on exhibit, and the curators use CEMS for access to all the rest of the collection."

#### Galaxy Supports Multi-Site Backups

"CommVault is our backup strategy," says MoMA Network Manager Randall Mosby. "We use CommVault to back up all our Wintel and Mac servers, at all our locations." Primary backup method is via Galaxy to tape. MoMA has three mid-range ADIC Scalar 100 tape libraries, each with one to six tape drives and up to 72 media slots, and three ADIC Scalar 24 libraries, each with one or two LTO tape drives and 24 media slots, and a virtual tape library (VTL).

The standard backup routine at each of the IT sites includes daily incremental and weekly and monthly full backups. Both CommVault Synthetic Full backups and conventional full backups are used, with different schemes for different servers, determined by the size of the full backup. CommVault's Aux Copy capability is used to make a second backup for disaster recovery. Every Tuesday, the IT team collects the disaster recovery tapes from every site, and ships them to an out of state disaster recovery vendor. The vendor returns the tapes from the previous week, and the tapes are rotated back into the system. As a result, MoMA maintains a revolving tape backup at the DR site that is always up to date within a week.

#### Reliable Restores

Most restores are made from the tape library on-site. "We keep current tapes on the

libraries," explains Mosby. "We rarely need to go to the off-site tapes, because we usually have the needed backup tape on-site." But if they need to, they know they can get tapes quickly from their tape storage vendor. "We recently dealt with an important file that had become corrupted, but we did not realize that it was corrupted until the end of the month. We got the backup tape and successfully restored. It worked the way it is supposed to."

### Versatile Virtual Tape Library

The VTL does multiple backup tasks, including "backup of the backup." In addition to the regular backup to tape, the IT team backs up the most critical servers to the VTL. Having the backup on disk enables faster restores than are possible from tape. They also do priority-based backups to the VTL. "We were recently upgrading a Web server," relates Mosby, "and we did a backup to the VTL, 'just in case.' In the course of the upgrade, we had a corruption problem. We were able to go to the VTL, quickly do a restore, and continue the upgrade. We were able to do that because the CommVault software interfaces seamlessly with the VTL solution. The flexibility of the CommVault software in a multivendor storage environment is a paramount virtue."

### Replacing Veritas Backup Exec

As MoMA approached the renovation and looked at upgrading its IT infrastructure, the IT team determined that the museum needed to upgrade its disaster recovery and business continuity capability. Each server had its own tape drive for backup, and they used a limited software solution to manage it. With the drives spread across multiple locations, operating and maintaining the backup system was labor intensive. "We spent a lot of time collecting and swapping tapes," says Mosby. The shortcomings of the system were demonstrated dramatically by an incident in which data on the museum's email system became corrupted. When the IT team tried to restore the system, they

discovered that the backup was bad. The incident made it clear just how large a part reliable data plays in the museum's business. The IT team went to museum management and presented the case for a comprehensive capital project to develop a new disaster recovery and business continuity system.

Museum management agreed, and the IT team evaluated a number of different backup strategies and vendors. At the conclusion of the evaluation they selected ADIC tape libraries for backup hardware, and CommVault for backup software. They felt ADIC was the industry leader in tape libraries, and they chose CommVault for its reputation for fast, reliable backups and restores. "We had a clean slate to get whatever system we wanted," says Peltzman, "and we sought out and chose CommVault. We concluded that CommVault's tools and interfaces are best of breed."

### CommVault Delivers Economy, Versatility, and Informative Reports

The CommVault/ADIC backup solution was in place and proving its worth when the renovated museum re-opened in 2004. By enabling MoMA to centralize and streamline the backup process, and making it more automated, CommVault software made backup easier to manage and audit, and reduced the administrative time required for backup. Fewer failed backups also mean less time must be spent dealing with backup problems.

In MoMA's highly varied, multi-site environment, Galaxy's flexibility and versatility pay off. Explains Mosby, "We have well-designed Galaxy backup agents for different applications. For example, there is an SQL Server agent, and a DB2 e-commerce agent. CommVault backups and restores are fast, and if there is a problem with a backup, you know it immediately, because the system notifies you right away. And if there is a problem we need help with, we can print out a log, go to the interface, and send it directly

to CommVault. We know that someone at CommVault will look at it and get back to us with an answer to the problem."

### CommVault's Unified Data Management Helps Stretch Resources

"With a lean IT staff," says Peltzman, "any time we can save time and money by standardizing and consolidating, we help stretch resources - and those resources can be allocated more directly towards the Museum's mission." CommVault's unified data management approach helps by allowing MoMA to add or integrate additional software components at a fraction of the time, effort, and money required by separate point products. "For example, we definitely want to add DataArchiver for email archiving. This is a must-have, because our email storage needs are growing rapidly, and the Museum is more and more dependent on email." Adding DataArchiver will be fast and simple, and will make it possible to capture and archive email data for compliance with retention requirements and for fast, easy search and retrieval.

### CommVault Has Been a "Good Partner"

The upgrading of MoMA's disaster recovery and business continuity plan is a high priority effort that the IT team expects will be an ongoing process. "We started with one library and a few clients," explains Peltzman, "and we have continued to upgrade, adding libraries, and adding Galaxy agents. This is a steady process, in which CommVault has been a valuable partner."

CommVault service has also been a plus for MoMA. "A person in CommVault service is assigned to our account," explains Peltzman. "That gives us someone to go to if there is a problem. Recently CommVault has been consulting with us on a 'health checkup' for our whole backup and disaster recovery/business continuity plan. CommVault has been more than simply a good technology solution provider; they have also been a true business partner."

[www.commvault.com](http://www.commvault.com) | 888.746.3849 | E-mail: [info@commvault.com](mailto:info@commvault.com)

CommVault Worldwide Headquarters • 2 Crescent Place • Oceanport, NJ 07757 • 732-870-4000 • Fax: 732-870-4525  
Regional Offices: United States • Europe • Middle East & Africa • Asia-Pacific • Mexico & Latin America • Canada • India • Oceania

