

## “Most Wired” Healthcare System Looks to CommVault Galaxy for Healthy Data Protection

### QUICK FACTS

**Industry/Solution:**

- Healthcare

**Platform/File System:**

- Windows 2000, 2003
- AIX

**Applications:**

- Microsoft Exchange & SQL Server
- Data Warehouse
- Multiple clinical and financial applications

**Partner Hardware:**

- EMC CX600 Storage Area Network
- ADIC Scalar 1000 tape library
- ADIC Scalar 24 tape library
- FalconStore virtual tape from Dynamic Network Factory

**Challenges:**

- Complete backups in available window of time
- Reliable backups
- Fast restores

**Solution:**

- CommVault Galaxy Backup & Recovery
- AUX Copy
- CommVault CommNet ServiceManager

**Benefits:**

- Ability to add backup capacity and functionality as storage grows
- Ease of management of a complex network
- Informative reports
- Full weekend backups completed in available time
- Faster, less difficult restores

**Customer Profile**

Meridian Health is one of the largest healthcare organizations in New Jersey, with 7,500 employees, 1,400 affiliated physicians, and 70 locations in Monmouth and Ocean Counties, including three hospitals with a total of over 1,100 beds. Named one of the “100 Most Wired” healthcare organizations in the United States for six consecutive years, Meridian Health is committed to the aggressive use of information technology to achieve its goal of providing the finest healthcare in New Jersey. The organization has a widely distributed computing environment with a primary data center, three off-site moderately sized computer rooms, and half a dozen smaller data sites. CommVault Galaxy backup and recovery software, backs up 6 to 10 terabytes of data each week on 200 servers spread across ten sites.

**Backing Up Critical Data**

Like other modern healthcare systems, Meridian has numerous departmental application systems requiring their own sets of servers. These servers, backed up by Galaxy software, support hundreds of applications, including medical applications essential for patient care, as well as business applications that keep the organization healthy. For example, Galaxy backs up a radiology system that holds all the records and results from the reading of X-rays. Another medical record application, stores transcriptions of doctors’ orders.

From a functional point of view, Galaxy backs up all of the core facilities of the IT infrastructure, including domain controllers, SQL servers, and Microsoft Exchange email servers. Approximately 50 different SQL databases are backed up by Galaxy, along with the Meridian Health Decision Support data warehouse, a repository for a huge amount of financial and clinical information.

**Storage Infrastructure**

Of the 200-plus servers at Meridian Health, about 20 servers — those with the biggest applications and the greatest data storage requirements — are attached to an EMC CX600 Storage Area Network (SAN). SAN backups are done disk-to-disk to a virtual tape library, the FalconStor Virtual Tape system from Dynamic Network Factory (DNF). This system has its own dedicated server and disk array. The data is then immediately copied offsite using Commvault’s AUX Copy to an ADIC Scalar 1000 physical tape library with four LTO2 drives and 300 tape slots.

Approximately 175 servers (some at remote sites, but most at the data center) are not on the SAN. Like the SAN-attached servers, these servers are backed up over the WAN or over the data center LAN, first to the virtual tape system and then, using Galaxy AUX Copy, to the ADIC physical tape library.

For disaster recovery purposes, the Virtual Tape Library is located in a separate location from the data center, while the ADIC tape library is at the data center, putting primary and secondary storage in separate locations. Six weeks worth of backups are retained on the ADIC library. Initial disk backups are kept in the virtual library for two to three weeks. Almost all restores are done from the virtual library. However, if the data being restored is more than two or three weeks old, it is pulled off the ADIC library.

**Time for a Change**

Before they installed Galaxy, Meridian Health used a competitive backup solution, or, as Director of IT Bob Radvanski describes it, “a solution that did not work!” They could not get backups completed. “Management of backups became a nightmare,” says Radvanski. “We were constantly working with the vendor, trying to fix the problems. We were banging our heads against the wall.”

At that point, one IT staff person was spending 100% of her time, all day every day, fixing backup issues from the night before. She was in that mode for several months. Recalls Radvanski, "The vendor kept saying, 'we'll fix it,' but it was going nowhere. So we started shopping around. We stumbled on Galaxy. The employee who was working fixing the problems had a friend who worked at CommVault, and the friend said 'why don't you try it?' We had an open mind, because what we were doing was not working. So CommVault came in, did the proof of concept in March 2002, and we installed Galaxy in April 2002."

"Initial deployment was a snap," reports Network Specialist Brian Duff. "We just installed the Galaxy software, configured the library, pointed out the clients, and it was done. The whole process was pretty simple. Most of our servers did not have to be rebooted, and that was a plus. Now deploying Galaxy is just part of the process of building new servers. We install the client, point where we want the data to go, schedule the job, and it's done."

### **CommNet "Takes the guesswork out of backup"**

Meridian Health added CommVault's CommNet management software in February 2005. CommNet provides extensive reporting, with more detailed, faster reports, such as forecasts of what will be backed up next week, so they know if they have enough tapes available. "CommNet takes the guesswork out of backup," says Duff. "This definitely saves time. Reports are right at your fingertips. Before, if you needed to know something, like how much backup capacity we need next week, you'd have to figure it out manually. With CommNet, all that information is right there, instantly. CommNet puts it right in front of you."

### **Galaxy Scales Up to Meet New Demands**

As storage demands have grown at Meridian Health, Galaxy software has been scaled up to respond. Meridian started with Galaxy in 2002, backing up server-attached storage. They installed the SAN at the end of 2003, and the virtual library in 2004. At each stage, the transition has been smooth, says Radvanski. "At first we did a direct replacement and plugged in Galaxy. Then we replaced the backup software in the SAN. Originally, we did not have that much to backup. But as we added storage we just added whatever we needed from CommVault, when we needed to."

When Meridian Health first installed Galaxy, they had 92 servers. In three years that number has more than doubled, going to over 200. At the same time, the amount of data being backed up tripled. "All that growth came with no pain!" says Duff. "We started with Galaxy V3.7.1, and now we are on V5.9. The upgrades have all been smooth. Everything CommVault told us Galaxy could do, the product does. It is one of the best products we have in terms of reliability and support." And the administrative effort needed for backup management has gone from a full-time person solving backup problems all day, to an hour or two a day doing routine checks.

The Meridian IT team is in the continual process of moving more and more data to the SAN. During the summer of 2005, a new mini-PACS (Picture Archive Computer System) that stores medical images was added to the SAN and incorporated into the Galaxy backups. Over 1 TB of data was seamlessly added to the backup process. Based on past experience, the IT team at Meridian is confident that the Galaxy software will handle the increased workload "with no pain" as SAN storage and new applications continue to come on-line.

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