![Retrospect - A StorCentric Company.]

Low-Field Imaging Laboratory at Harvard Medical School Protects 80TB with Retrospect Backup

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Matthew Rosen
Director of Low-Field Imaging Laboratory in MGH Martinos Center
Harvard Medical School

BUSINESS BACKGROUND

The Low-Field Imaging Laboratory at Harvard Medical School is on the forefront of reducing the cost of medical imaging using machine learning. Magnetic resonance imaging (MRI) is the gold standard of biomedical imaging, enabling doctors to understand structures and processes within the body that were not possible decades ago, but MRI scanners today still require large superconducting magnets to product high-resolution imaging.

At the lab, new applications of supervised learning enable it to reduce the costs of MRI machines by several orders of magnitude, enabling more affordable high-resolution imaging with reduced size at new point-of-care locations. Machine learning requires huge quantities of data to analyze and extract relevant models. The lab must manage 80 TB of data as well as the protection of 20 laptops, desktops, and servers in different parts of the building.

HETEROGENEOUS ENVIRONMENT

The lab uses Retrospect Backup Single Server Unlimited to protect its entire environment. With Retrospect, the lab can protect its large servers, various desktop machines, roaming laptops, and NAS storage from a Mac Mini.

To ensure laptops are backed up whenever they are available, Rosen uses ProactiveAI. "It's great for that. It works super well." ProactiveAI will optimize the backup window for the entire environment using machine learning, prioritizing backup sources based on their prior performance.

INDUSTRY
Education

ENVIRONMENT
• 80 TB of data
• 1 Windows server
• 4 Windows systems
• 5 Linux systems
• 8 Mac systems

KEY CHALLENGES
• Large data volumes
• Heterogenous environment with roaming laptops and large servers
• Decentralized across buildings

SOLUTION
• Retrospect Backup Single Server Unlimited for Mac
• Available at $79 per month, $799 per year, or $1,449 perpetual

KEY BENEFITS
• Seamless protection for heterogeneous environment
• Scalable protection for large data volumes
• No dedicated IT staff required

Administrators can simply set a window of time--all day or 8:00 AM to 5:00PM--to proactively back up sources, and Retrospect will rank the list of sources based on availability and previous backup times. With ProactiveAI and execution units, administrators can fully utilize their computer and network resources without attempting to back up every available computer.

"People always ask what I use for backup. I tell them Retrospect. It's pretty sweet in terms of its physical footprint," says Rosen. "Mac users use Time Machine, but if they have a lab, that's like the wild west." Using a business-grade backup product enables Rosen to ensure all of his machines and data are completely protected at an affordable price point for the lab's budget.

HUGE VOLUMES FOR MACHINE LEARNING

With the push into machine learning, the lab needs to cope with an ever-growing volume of data. They currently protect 80 TB of data with Retrospect. "I'm a physicist, not an IT person. Retrospect just works really well," concludes Rosen.

Retrospect integrates seamlessly with all major destination types, including local disk, NAS devices, tape libraries, and over twenty cloud storage providers like Amazon S3, Google Cloud Storage, and Dropbox.

Customers can transfer backups between their destinations without touching the original computer, off-loading complex backup strategies for their primary volumes, and with selectors, they can isolate specific file types or modified files to further reduce their storage while protecting the most critical files.

NAS devices are a great, affordable solution for large, on-premise storage. The Low-Field Imaging Laboratory utilizes Synology RAID devices for their backup destination. Retrospect is compatible with any NAS device that supports SMB or AFP.

RESTORING IS EASY

Restoring data is easy. Rosen adds, "Someone deletes a file. I recover it. Once, a scientist accidentally deleted all of their data. We restored it with Retrospect." Retrospect makes it easy to protect data and also to restore it when it's needed.

However, when issues do arise, Retrospect Support is a phone call away. "Retrospect has always been very responsive," says Rosen. Any number of problems can come up with hardware, and being able to depend on a knowledgeable, responsive support team is critical to any data protection strategy.

ABOUT RETROSPECT

Protecting 100 Petabytes in over 500,000 homes and businesses in over 100 countries, Retrospect is dedicated to providing reliable backup and recovery tools for professionals and small-to-midsize businesses with Retrospect Backup and Retrospect Virtual, covering physical servers and endpoints, virtual environments, and business applications. With three decades of field-tested expertise, Retrospect meets the needs of organizations that require the highest level of recoverability. Retrospect is a proud member of the StorCentric family of brands.

> "Retrospect Backup has saved us on a number of occasions"
> Matthew Rosen, Director

www.retrospect.com