

Creating a true cyber-resilient IT architecture

How University of Miami Health System created a frictionless, highly secure IT infrastructure

Customer profile



Healthcare | United States, North America



Business needs

University of Miami Health System wanted to reduce the friction associated with using technology to provide and receive patient care, while also increasing cybersecurity. The organization wanted to consolidate its disjointed systems into a single environment that reduced the number of clicks/interactions required to request appointments, read test results and deliver virtual care.

Business results

- Enhanced data protection
- Ability to analyze backup data and ensure data integrity
- Significantly higher organizational confidence in IT systems
- Simplified administration using a single tool to manage all backup workloads
- Improved cyber resilience to recover data swiftly and reliably
- Better clinical care by storing copies of data in multiple locations

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“Today, we find ourselves in a world where we have numerous disjointed systems. Our vision is to reduce the ‘clicks’ through automation, bring together siloed or disjoined systems, enhance data security and provide management via a single user interface to create a common experience across areas.”

David Reis

PhD, Chief Information Officer, University of Miami Health System | Miller School of Medicine

Solutions at a glance

- [Dell PowerProtect Cyber Recovery](#)
- [Dell Data Protection Suite with NetWorker](#)
- [VMware®](#)

The University of Miami Health System uses technology and advanced digital solutions to provide leading-edge patient care — enabling patients to receive the care they need in the time, place and setting of their choosing. For example, the organization actively uses digital technologies to deliver e-visits, perform telemetry-based tracking of biometric patient data, and examine patients' ears, eyes and throats remotely.

For many reasons, the University of Miami has emerged as a leading academic medical center in the region and across the country. The primary reason for this status is the university's National Cancer Institute (NCI) designation. In fact, the University of Miami Health System is one of only two NCI-designated centers in the entire state of Florida. This important designation is the engine that drives much of the university's research, as well as its use of digital technology for patient care, patient education, training future generations of physicians, and delivering thought leadership to the community.

A new vision for the IT infrastructure

While digital technology has enabled the University of Miami Health System to deliver better patient care and improve the overall experiences for both patients and caregivers, it has also opened the door to greater cybersecurity risks.

Businesses across industry sectors have seen a dramatic increase in cyberattacks on their systems, networks and data. Healthcare and higher education organizations such as the University of Miami are particularly vulnerable to ransomware attacks and cyberattacks. The statistics are alarming:

- In 2020, the FBI reported a 400% increase in cybercrime.¹
- Cybercrime costs are predicted to reach \$10.5 trillion by 2025.²



“We look forward to Dell Data Protection helping us ensure availability of our research education, employee and patient data through robust real-time backups and data replications. We feel confident that in the event of a cyberattack, Dell PowerProtect Cyber Recovery will play the central role in recovering our patient research and institutional data.”

David Reis

PhD, Chief Information Officer, University of Miami Health System | Miller School of Medicine

¹ PRNewswire, “Top Cyber Security Experts Report: 4,000 Cyber Attacks a Day Since COVID-19 Pandemic,” MonsterCloud, Aug. 11, 2020. <https://www.prnewswire.com/news-releases/top-cyber-security-experts-report-4-000-cyber-attacks-a-day-since-covid-19-pandemic-301110157.html>

² “Cybercrime To Cost The World \$10.5 Trillion Annually By 2025,” Cybersecurity Ventures, Nov. 13, 2020. <https://cybersecurityventures.com/cybercrime-damages-6-trillion-by-2021/>



Considering these disturbing statistics, the university decided to strengthen its cybersecurity — not only to protect patient information but also to guard against downtime and ransomware, knowing that human lives are literally at stake.

Rather than undertake its security transformation in isolation, the organization decided to modernize and simplify the IT systems they use to provide patient care — and for patients to access care — at the same time.

"Today, we find ourselves in a world where we have numerous disjointed systems. Our vision is to reduce the 'clicks' through automation, bring together siloed or disjointed systems, enhance data security and provide management via a single user interface to create a common experience across areas," said David W. Reis, PhD, Chief Information Officer, University of Miami Health System | Miller School of Medicine.

Bringing their vision to life — together with Dell Technologies

To ensure success of its transformation process, the University of Miami Health System turned to Dell Technologies for help. As an NCI-designated organization committed to advancing patient health and well-being, the University of Miami Health System valued Dell's mission of "Driving human progress with technology."

After completing a thorough assessment of the university's IT environment and cybersecurity landscape, Dell Technologies delivered recommendations for a phased approach that would enable the university to consolidate and simplify, while also becoming truly cyber resilient. The solution includes PowerProtect Cyber Recovery, CyberSense and Data Protection Suite with NetWorker.

"We look forward to Dell Data Protection helping us ensure availability of our research education, employee and patient data through robust real-time backups and data replications," said David Reis. "We feel confident that in the event of a cyberattack, Dell PowerProtect Cyber Recovery will play the central role in recovering our patient research and institutional data."

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Edward Santos

Chief Technology Officer, University of Miami Health System | Miller School of Medicine

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Edward Santos

Chief Technology Officer, University of Miami Health System | Miller School of Medicine

Meeting goals while delivering benefits that count

“This complete solution supports our university’s mission and goals for a safe, simplified and more cyber-resilient environment,” said Edward Santos, Chief Technology Officer, University of Miami Health System | Miller School of Medicine. “Our new solution protects and recovers patient research and institutional data swiftly and securely. It also analyzes backups to ensure the integrity of the data they restore. Now we can complete routine backups throughout each day, creating multiple copies of data in multiple locations and using those copies as necessary to maintain high-quality clinical care.”

Santos continued by saying, “By consolidating three legacy management platforms to NetWorker, our university has decreased the backup time of our VMware environment by 40%, and we have cut the time of our AIX database backups by 70%.”

[Learn More](#) about University of Miami Health System

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