

▶ Case Study: vRad

vRAD FUTUREPROOFS ITS CORE RADIOLOGY PRACTICE THROUGH DATA MANAGEMENT STRATEGIES WITH COMMVault AND NIMBLE



Industry
Healthcare

Corporate Headquarters
Eden Prairie, MN

www.vrad.com



CHALLENGES

- Ensuring a reliable infrastructure and data availability 24/7 for global real-time patient care
- Growing business, and changing business demands, means data volumes growing exponentially
- Evolving beyond traditional data management strategies for core service and new business development

SOLUTION

Commvault® software with Nimble CS 460 Storage

BENEFITS

- Evolve beyond traditional maintenance models while ensuring service uptime
- Ease of scale and cost-effective storage of growing data volumes to match current and new services
- Data integrity and availability enables strategic product development with zero core service impact

vRad (Virtual Radiologic) is a pioneer in teleradiology – and telemedicine. The practice serves more than 2,100+ healthcare facilities across all 50 states, including 35% of all U.S. community hospitals.

vRad's core service is supporting 24/7 radiology needs for its hospital providers through a network of 350+ vRad teleradiologists, all enabled through a purpose-built telemedicine platform. These clinical experts, 75% of who are subspecialty trained, are spread throughout the country and on-call to support in-house emergency service units, while also augmenting specialty diagnostic service needs for a total of more than 14,000 cases per day. No matter where the hospital or patient is, vRad is able to receive, process and provide diagnoses and counsel to emergency staff within minutes, having an immediate impact on patient care and outcomes.

This combination of expertise and turnaround time is essential, especially with understaffed and overbooked radiology departments unable to consistently provide immediate support to their emergency room staff. For a sense of scale, vRad processes more than five million studies per year making up more than 1.3 billion medical images annually - more radiology studies are processed in an hour on the vRad platform than most hospitals do in a month, and more in one month than a typical hospital would do in two years. With vRad, regardless of when the study is received, all essential elements are cross referenced and have a live radiologist reviewing images in four minutes or less, with results usually back to doctors within 20 minutes for emergent cases – and under 10 minutes for stroke related emergencies.

▶ WHEN TIME IS OF THE ESSENCE

With trauma, radiology, accuracy and timeliness are paramount, and the need to have a reliable infrastructure and footprint are essential.

Early in 2014, vRad's data volumes started to grow beyond capacity due to both current and new hospital partner demands. At normal service volumes, even a 5 percent increase in volume could mean thousands of additional studies, all of which are equally important. In addition, vRad stores and manages the metadata and results for client patients in their main database repository driving outcomes based analytics solutions and an industry leading quality program. Given its position at the center of the business, vRad's core database platform is the lifeblood of vRad's service. To ensure their database platform could continue performing and manage expected growth, vRad invested in tuning and re- architecting their database and addressed its overall infrastructure.

Around this time, vRad transitioned from a traditional platform to Nimble's flash optimized enterprise storage platform to leverage a more modern technology. Further, vRad didn't want to conduct database maintenance

“In a growing industry, and with the volume of radiology reports and images flowing through our platform, even a small improvement literally means millions of additional patient data records. Having these core data assets protected and readily available through Commvault brings value to our physicians and our practice – and ultimately to the quality of the diagnostic interpretations we provide to the patients we serve every day.”

SHANNON M. WERB,
CHIEF INFORMATION OFFICER,
VRAD

in a more traditional way, instead utilizing a streamed approach further complicating scalability and performance. Nimble initially provided a deeper understanding of vRad's system, and through this exploration snapshot technology became a key strategy to offload the traditional maintenance load. Enter Commvault, who had already been part of vRad's data protection strategy through its eight year relationship as the backup solution for the core enterprise.

"We knew from our experience that Commvault has a lot of power and flexibility to tackle a variety of different data management needs. It's easy to set up and link to heterogeneous storage elements or needs (e.g. disk or tape) in a seamless way, and has been a main component of our deduplication and disaster recovery strategy," said Jason Mutcher, Principal Systems Engineer at vRad.

Given its unique Intellisnap integration with Nimble, Commvault was the logical choice for vRad to ensure reliability and reduce the workload of the database platform while maintaining performance. With Commvault and Nimble, vRad is able to both better optimize and automate its core database platform in the short term, while setting a clear roadmap to automate and optimize their overall storage strategy for business growth.

► GROWING MARKET LEADERSHIP THROUGH DATA

vRad's growth is tied to an overall market trend in the need for hosted radiology services, as hospitals globally are reporting an increase in radiology volume needs while also requiring insight and partnership to create a more thoughtful radiology service line.

Hospitals' increased use of vRad has also been driven by an expanded understanding of how vRad is supporting their mission. This understanding is coming directly from vRad, as the company in the past few years started leveraging the historical value of their results and metadata in two unique ways: (1) providing global radiology practice reports to its hospital partners, and (2) making customized national and peer benchmark reports available for its hospital and radiology group partners. Given its market leadership position and data volumes, vRad is able to provide a unique window into radiology trends unlike any other vendor. These insights enable vRad to have true partnership conversations with the hospitals and radiology groups they service, leading to process and service improvements, overall increased satisfaction, and ultimately providing better patient care.

vRad builds and deploys all their applications internally, which must be optimized to run without downtime. Given the critical nature of these applications to vRad's users, the build, test and release process can never be too efficient. vRad's Development Operations (DevOps) team is leveraging the virtualized nature of the data Commvault is managing to help automate and optimize the process. With vRad's development

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environment executing daily refreshes and running dozens of concurrent virtualized environments, the team could be running hundreds of virtual machines in a given day. Being able to easily optimize, automate and manage the virtualized data sets DevOps leverages to drive product development means the core business runs efficiently,

▶ SETTING THE STAGE FOR GROWTH

Shannon Werb, CIO of vRad, noted that Commvault enables the company to maximize the value of their Nimble investment. With an enterprise offering that provides scale and control of its storage via snapshot, Commvault sets vRad up for success today and in the future. Shannon also noted that the Commvault team took the time to educate his internal team, who were comfortable with more traditional models, on how the company's infrastructure vision and strategy could be augmented with Commvault and Nimble, and sets this relationship apart from one's he's had in the past. Jason Mutcher is looking forward to leveraging that insight to execute further data and virtualization automation strategies, drive completely separate parallel production and test development environments, and ultimately deploy an end-to-end data management process with one main solution set.

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JASON MUTCHER,
PRINCIPAL SYSTEMS ENGINEER,
VRAD

▶ RESOURCES

1 commvault.com/resource-library/5445a228990ebbbd7100122e/5-ways-to-meet-todays-data-management-challenges-with-a-single-platform.pdf

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▶ To learn more about Commvault's holistic solution to today's data management challenges, visit commvault.com/solutions.

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