MEDNAX Selects Cohesity to Manage 2PB of Data and Process Over 20 Million PACS Images Per Day

MEDNAX
RADIOLOGY SOLUTIONS

INDUSTRY
Healthcare

USE CASE
File and Object, Backup and Recovery

COHESITY SOLUTIONS
DataProtect, Cohesity CloudArchive

SOLUTION PARTNERS
Cisco UCS, Microsoft Azure

CHANNEL PARTNER
CDW

Key Benefits

- 50 percent cost savings compared to previous solutions

- Predictable and consistent performance to meet strict SLAs and provide better patient outcomes

- Reduced architectural complexity due to built-in features for data management and analysis

MEDNAX, Inc. (NYSE:MD) is a national health solutions partner comprised of the nation's leading providers of physician services. Founded in 1979, today MEDNAX provides services through a network of more than 4,250 physicians in all 50 states and Puerto Rico. MEDNAX provides shared-services support to its portfolio of managed health care practices, including Virtual Radiologic Corporation (vRad).

vRad is the nation's leading cloud-based radiology solutions and telemedicine company. vRad's IT team works with MEDNAX's shared services team to deliver radiology interpretations using the world's largest and most advanced cloud-based radiology PACS for more than 2,000 facilities and radiology groups across the United States.

Challenges

vRad provides radiology services for over 30 percent of hospitals across the United States and has the world's largest single PACS implementation, handling over 20,000 studies every 24 hours. Over the last 15 years, vRad has developed and fine-tuned the MEDNAX Imaging Platform to improve the speed and accuracy of radiology and reduce the cost of patient care.

While traditional healthcare organizations are required to store images up to 25 years, vRad does not need to store or access 99 percent of its images a second time, and therefore deletes images after 45 days. In a single day, vRad must ingest and delete approximately 20 million files.

Solution

To replace MEDNAX's aging, legacy storage systems, the IT team had to find a solution that would work across multiple locations and business units from a common interface, for seamless data management.

MEDNAX considered traditional network-attached storage (NAS)-based platforms and public cloud providers, as well as some up-and-coming providers that focused on object-based storage. The company uses a diverse variety of applications, including third-party and Windows-based applications that access file services, as well as extensive infrastructure from Cisco, including Cisco UCS.

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> "Cohesity is an integral part of the success of the MEDNAX Imaging Platform. Interruption in radiology services can negatively impact patients, and Cohesity enables vRad, a MEDNAX company, to operate with predictable performance for optimal patient care. A couple of key strengths of Cohesity are included as built-in features, such as data security, multi-protocol support and data analytics. Not only do we have a solution in place to carry us into the future, we have reduced cost by 50 percent, eliminated bottlenecks affecting performance, and are now managing our storage architecture from a single pane of glass.
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> **Patrick Williamson**, Associate Vice President, Enterprise Architecture at MEDNAX

Cohesity provided the best of both worlds. "We solicited 20 vendors, but only four came back with proposals to meet our requirements. When I met with Cohesity, after five minutes of explaining our biggest challenges, it was clear they were built to tackle our Achilles' heel and resolve the bottlenecks we were facing," explains Williamson.

"Cohesity is built to eliminate issues with latency that were burdening our ability to scale. We finally found a solution that could meet our storage platform requirements to keep up with the scale of the MEDNAX Imaging Platform at an affordable price."

Results

Cohesity has greatly simplified data management across MEDNAX's organization, for total cost of ownership savings of 50 percent compared to the previous solutions. Cohesity's flexible architecture allows the company to leverage the solution for multiple use cases.

Primarily, Cohesity serves as a repository for over 2PB of medical images, storing all PACS images for vRad. MEDNAX uses a variety of PACS systems, and consolidated from numerous enterprise storage solutions to a single Cohesity platform. Once image files are received from hospitals, that data is stored immediately onto Cohesity, a critical and integral piece of the MEDNAX Imaging Platform. Cohesity enables the application to service approximately 600 emergency medicine patients per hour to provide diagnostic reports in as few as eight minutes. Cohesity has greatly improved data scalability by providing consistent read, write and delete performance, helping vRad deliver timely patient care.

Besides using Cohesity to manage PACS images, MEDNAX uses the solution for file and object services, and management of data from applications that require NAS as a file path. Finally, to ensure business continuity, Cohesity replicates all images and files to a secondary data center location for business continuity and disaster recovery purposes.

Cohesity provides improved data management efficiency. Compression and deduplication rates improved by nearly 50 percent from the previous environment. And as a result of Cohesity's built-in security features, MEDNAX does not have to sacrifice application performance for data encryption, making it much easier for the IT and Security teams to manage the data without third-party key management products.

Multiprotocol support from Cohesity will enable MEDNAX to write to both files and object storage but access data through a different protocol, if needed. This is especially helpful when it comes to projects involving machine learning. The ability to run applications available through the Cohesity MarketPlace atop the data under management provides a path to address future use cases as they arise for MEDNAX and vRad. In the future, MEDNAX plans to use Cohesity CloudArchive to tier cold data to Microsoft Azure based upon rules-based policy criteria.

MEDNAX and vRad realized many benefits with Cohesity, including:

- 50 percent cost savings compared to previous solutions

- Predictable and consistent performance to meet strict SLAs and provide better patient outcomes

- Reduced architectural complexity due to built-in features for data management and analysis, including data encryption, security and multiprotocol support

- Simplification of administration across 150 locations, lowering operational effort required to maintain and operate the solution

COHESITY

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