

CASE STUDY HACKENSACK RADIOLOGY GROUP



Hackensack Radiology Group

Hackensack Radiology Group is the leading regional provider of diagnostic and interventional radiology services in Northern New Jersey.

AGFA HEALTHCARE AND NEXSAN TECHNOLOGY DATA STORAGE IMPROVING PATIENT CARE

For nearly half a century, Hackensack Radiology Group (HRG) has been providing unsurpassed, comprehensive radiology imaging and services to Hackensack University Medical Center and the surrounding community.

HRG's talented and experienced radiologists use leading edge technologies to ensure the highest levels of patient care. HRG is comprised of leading radiology imaging specialists including neuroradiology, body and vascular imaging, orthopedic imaging and mammography. Their Newman Street Imaging Center and New Century Imaging Center offer the full range of services including CT, MRI, ultrasound, nuclear medicine, mammography, bone densitometry, general x-ray and fluoroscopy.

CUSTOMER OVERVIEW

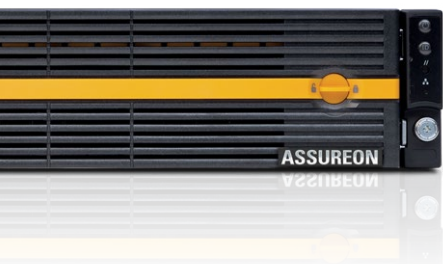
Improved patient care through innovative technology leadership HRG continually adopts new technologies that improve patient care. HRG has long been a satisfied customer of Agfa's IMPAX® PACS (Picture Archiving and Communication System) and became the first US site for Agfa's integrated joint PACS/RIS (Radiology Information System) solution in 2005.

Imaging technology is rapidly advancing and with it comes increased demands for more storage capacity. New mammography studies can consume 2 GB of space, and 128-slice CT studies are approaching 10 GB. These larger image sizes have placed an enormous burden on the traditional storage infrastructures. As the quality of images continues to improve and their size continues to increase, more and more burden is placed on the existing data storage infrastructure.

Storage systems need to scale to accommodate the larger image sizes and need to deliver the performance radiologists require. It's no longer acceptable to wait a day, two hours or even 10 minutes to retrieve an image from an archive. Images need to be immediately available for improved patient care.

In addition to the growing amount of data and need for high speed retrieval, HIPAA regulations and good business practices are also a key concern. Similar to HRG, IT professionals throughout the healthcare industry need to address additional challenges:

- **Immutability:** proof that the data has not been tampered with or altered accidentally
- **Privacy:** protection of patient information
- **Security:** data remains unchanged and useable 15 or more years into the future



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The ability to have one site replicate to another location was very important. Having multiple imaging centers, a cost effective disaster recovery solution is vital. If anything happens to one location we could be back in business providing patient care immediately and all our images are safe.”

DR. OSIASON

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From a business perspective, a healthcare organization is also concerned with:

- **Scalability:** the solution must be easy to scale and afford
- **Footprint Size:** efficient space utilization is mandatory when storing images for 15+ years

Data Storage Improves Patient Care

- **Energy Consumption:** electrical power and air conditioning requirements need to be minimal to reduce energy costs
- **Business Continuance:** Images need to be available even when the main site goes offline

SOLUTION

Nexsan Storage for Primary Image Cache and Nexsan Assureon for Long term Archive

HRG explored expanding their tape system, or replacing it with either an optical or disc archive solution. But none of options investigated offered a comprehensive solution to address the challenges HRG foresaw over the next decade. Agfa’s account team introduced Nexsan as a potential partner who could address both their primary image cache and long term storage requirements. Based on HRG’s requirements, a multiple product solution was proposed and adopted.

Primary Image Cache

HRG’s Oradell, NJ facility required an upgrade to its primary image cache storage. A Nexsan Edge NAS head with a 7TB SATABoy was installed. Nexsan’s Edge allows Agfa’s Impax workflow manager to simply write and read to the storage. The SATABoy allows for one year of images to be available with sub-second retrieval time.

Long Term Archive

HRG installed two Nexsan Assureon storage systems to be used for their long term archiving. Assureon is a highly scalable, high performance disk based archive certified with Agfa’s IMPAX PACS system and Agfa’s IMPAX Data Center Product (IDC). One Assureon with 24TB of capacity was installed at HRG’s Newman St facility and a secondary Assureon at their Oradell location.

Assureon replicates a copy of every image to the secondary site. In the event any image at the main site is compromised or missing, Assureon will repair it automatically using the backup image from the remote site. This configuration also provides disaster recovery and business continuance if the Newman St. site is not available. The Oradell location could become active so HRG can continue to service their patients.

According to Dr Osiason “The ability to have one site replicate to another location was very important. Having multiple imaging centers, a cost effective disaster recovery solution is vital. If anything happens to one location we could be back in business providing patient care immediately and all our images are safe.”

ASSUREON — SECURE ARCHIVE

Assureon is known for its next generation security measures, but when you look 'under the hood,' Assureon reveals a full suite of features.

MANAGEABLE

- Simple to install and use
- Automated audits of file availability, integrity and access
- Automated file fingerprinting
- Automated file ingestion, retrieval, audits, de-duplication and replication without user intervention
- Quick and easy search with near instantaneous retrieval

SCALABLE

- No object limit; scale without performance penalty
- Scale performance and capacity independently
- Scale from a few terabytes to multiple petabytes
- Scale from a few terabytes to multiple petabytes

GREEN

- Energy saving AutoMAID® reduces energy costs up to 60%
- "Speed with Green" - near instant-aneous response from idle state
- Green Maximizer automatically migrates files to 'green, greener, greenest' states of energy savings based on file usage



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Nexsan SATABoy and Assureon exceeded the challenges recognized by HRG.

- **Speed:** Whether accessing images one hour or five years old, access time is immediate
- **Privacy:** Assureon is completely integrated with existing access privileges, so only authorized users can view the data
- **Security:** Transparent self diagnosis and self healing processes assure that the data will always be available
- **Compliance:** Assureon meets HIPAA requirements for immutability and user audits
- **Footprint Size:** Nexsan can scale to 42TB within a 4U space – the highest density storage product on the market
- **Green Technology:** Assureon utilizes 50% of the power that leading disc storage vendors consume*
- **Cost Correct:** Nexsan Storage provides the highest level of quality at a manageable price and is designed to scale

ABOUT NEXSAN

Nexsan® is a global enterprise storage leader since 1999 delivering the most reliable, cost-effective and highly efficient storage solutions. Nexsan's solution portfolio empowers enterprises to securely store, protect and manage valuable business data with a broad product line of unified storage, block storage, and secure archiving. www.nexsan.com.