

**CASESTUDY**  
REGIONAL WEST  
MEDICAL CENTER



We utilize the latest and best in high tech equipment and procedures, but what sets us apart is our commitment to providing safe, compassionate care when our patients and their families need it the most.

## REGIONAL WEST MEDICAL CENTER DEPLOYS ASSUREON® MEDICAL IMAGE ARCHIVE TO IMPROVE PERFORMANCE AND DISASTER RECOVERY PROCESS

Regional West Medical Center implemented the Horizon Medical Imaging™ picture archiving and communication system (PACS) from McKesson to improve workflow and protection of patient records. The McKesson solution provided immediate improvements for the facility, yet the underlying infrastructure which supported the PACS was outdated, limiting the overall potential of the solution. Additionally, the facility wanted to implement an effective contingency plan that ensured full data replication and disaster recovery.

### CUSTOMER OVERVIEW

Regional West Medical Center is a progressive organization which actively leverages the latest technology to improve the quality and scope of the services they offer. Located in Scottsbluff, Nebraska, the organization is dedicated to supporting safe, comprehensive and innovative health care services for the people and communities in its region. The 180-bed facility has evolved into a regional referral center and is one of three Level II Trauma Centers in the state, providing 24-hour emergency and trauma care for patients throughout the Nebraska panhandle and Eastern Wyoming.

### CHALLENGE: IMPROVING IMAGE ACCESS PERFORMANCE

In order to effectively treat patients, the medical staff at Regional West required immediate access to all medical records regardless of age. The facility was using network attached storage (NAS) for the secondary tier, supported by a near-line tape library for archiving. While the access speeds for NAS were sufficient, the slow and unpredictable retrieval times for images stored on tape were creating insurmountable burdens on the IT staff supporting it.

The library's mechanical construct was negatively impacting the speed of recall, and involved a great deal of complexity when recalling older records. Due to the offline state of older studies, the help desk was tasked with routing retrieval requests for this data. The process involved routing requests to a product specialist, who researched the index to identify the correct tape, and when found, mounted it into the library. By the time the record was finally restored, anywhere from 24 to 48 hours had passed. Compounding this, if the hardware experienced any problems during this process, the nearest support facility was eight hours away which created additional concern.

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## CASE STUDY REGIONAL WEST MEDICAL CENTER



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### DONNA VOGEL

DATA SERVICES MANAGER,  
REGIONAL WEST MEDICAL CENTER

## CUSTOMER CHALLENGES

- Slow and unpredictable wait times for recall of older studies
- Inefficient disaster recovery processes
- Rising dependence on primary storage tiers
- Risks to workflow and long-term feasibility
- Increasing burden on IT staff



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## CHALLENGE: IMPLEMENTING AN EFFECTIVE DISASTER RECOVERY PLAN

The medical center also needed to update their contingency plan with a proven disaster recovery (DR) and business continuance solution. The existing DR strategy relied on a manual process to rotate tape media offsite. This process was unreliable, vulnerable and also required significant management resources. Regional West wanted a solution that provided full replication, failover and also eliminated the operational overhead created by the manual procedures in place.

## CHALLENGE: EFFICIENT STORAGE UTILIZATION & IMPROVED WORKFLOW

Due to the limited performance of the existing long term archive, the facility was growing increasingly dependent on primary and secondary tiers of storage and unknowingly jeopardized the ability to create new studies. To understand this, a review of a common medical image archive workflow is warranted.

**Workflow:** New studies are written to primary storage which must be flushed when a high watermark is reached. The flushing process intelligently migrates older data (based on last access date) from primary to secondary (NAS). Due to these vulnerabilities, PACS often requires confirmation that each study is also archived before it can be fully reported as a candidate to be flushed. Therefore, if a study is not confirmed as archived, it cannot be flushed and must be maintained on primary storage.

Based on the workflow described above, the library was not only creating delays for the recall of older data but also jeopardizing the archiving of new studies due to time-outs and unrelenting job queues. These job queues were making it difficult to efficiently manage the capacity of primary storage and jeopardizing the entire PACS work flow.

## SOLUTION: NEXSAN ASSUREON, A DEDICATED MEDICAL IMAGE ARCHIVE

After considering the alternatives, Regional West selected the Nexsan Assureon® medical image archive. Feedback from McKesson PACS end users such as radiologists and technologists has been very positive, especially regarding the speed of image recall from Assureon. The medical center's IT and PACS administrators were also surprised by the easy implementation and support for existing workflow.

The simplicity to integrate Assureon's powerful data protection elements without custom development or complex integration was another big plus," said Donna Vogel, IS Data Services Manager, Regional West Medical Center. "In most cases, administrators can't tell when a record is being pulled from Assureon as opposed to the primary storage system, and the system improved our staff efficiency by keeping all data 'near-line' for quick retrieval. In addition, we particularly like Assureon's ability to provide a very efficient DR solution."

Assureon is a dedicated medical image archive solution available through McKesson.

## NEXSAN ASSUREON BENEFITS

- Simple to manage as a self-managing, self-healing appliance
- Digital fingerprints enforce full preservation of original files and metadata
- Recurring audits ensure tamper-proof and corruption-proof data protection
- Consistent and predictable online access to all data with built-in replication and failover
- Rapid recovery of individual file and image data
- Data privacy enforced through access authentication and an unalterable audit trail
- Enterprise-class reliability with dual copies, RAID 6 and fully redundant hardware
- Highly efficient power and density
- Easy to expand and scalable into the petabytes
- Transparent application integration makes future storage migrations quick and effortless



## RESULTS: IMPROVED DATA PROTECTION & AVAILABILITY FOR ALL MEDICAL IMAGES

With Nexsan Assureon in production use, the medical center is now getting more consistent recall performance and improved reliability. The most important benefits and advantages of the system include:

- **Data Protection** – Assureon’s recurring audits preserve the original study, while access authentication and auditing ensures only authorized users can view data.
- **Ease-of-Use** – Assureon is a fully self-managing and self-healing solution that significantly reduces the burden on IT. Remote site replication, failover and DR are included with no extra fees and create a much more efficient contingency plan.
- **Efficiency** – Offloading primary and secondary storage frees up space for active data and reduces the burden of managing these systems. The power and cooling costs are also reduced using the Nexsan AutoMAID® disk spin down technology.
- **Enterprise-class Performance and Scalability** – As an online image archive, recalling patient data is reduced from hours to minutes. Furthermore, Assureon is easily expanded and adapts to the evolving demands of healthcare facilities.

## ABOUT REGIONAL WEST MEDICAL CENTER

For more information on Regional West Medical Center, visit [www.rwmc.net](http://www.rwmc.net).

## 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](http://www.nexsan.com).

Note: Regional West Health Services does not endorse the Nexsan Assureon or any other product.



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