Robust and efficient VNA medical archiving solution from IBM and TeraMedica

Reduced IT complexity, shared access to digital content and improved clinical workflows

On a smarter planet, healthcare providers deliver more personalized patient care, higher quality medical insights and efficiencies that yield results, using systems that are increasingly instrumented, interconnected and intelligent.

These advances, however, rest on a complex foundation — supporting terabytes of new data created annually and incurring high costs, security risks and multi-platform roadblocks to collaboration. Large and complex volumes of data require sophisticated storage capabilities. The best use of medical information demands fast, easy, and collaborative cross-departmental access at the patient level.

IBM and TeraMedica® have come together to address these data storage requirements, collaborative usage needs, patient-centered care and business challenges for healthcare organizations of all sizes. TeraMedica’s Evercore® Clinical Enterprise Suite in combination with premier IBM storage systems — IBM Scale Out Network Attached Storage (SONAS) or the IBM Storwize® V7000 Unified midrange system — provide a robust medical archive solution built on a vendor neutral architecture that delivers secure, consistent image management and distribution at the point of care.

SONAS delivers seamless scalability for the high performance and massive capacity that many enterprise-level healthcare providers require. Its distributed architecture reduces management complexity with an easy-to-use graphical user interface, speeds processes and eliminates any single point of failure that would impede data availability.

Storwize V7000 Unified is a powerful storage system that offers similar capabilities for small-to-midsize healthcare organizations. This system leverages many of the same capabilities offered in SONAS to provide a single point of control for both file and block data storage, while delivering outstanding performance, availability, advanced functions and highly scalable capacity.
The TeraMedica Evercore Clinical Enterprise Suite provides scalability and vendor-independent interoperability to bridge the highly specialized and departmentalized structures of modern healthcare organizations. Modular solutions connect and manage the healthcare system’s digital image infrastructure from the imaging device to the picture archive and communications systems (PACS) and from electronic health records to the clinical desktop.

Together, the comprehensive IBM and TeraMedica solution supports the complete collection, use and archiving of digital records and clinical workflows with ubiquitous sharing that can enhance complex relationships in today’s advanced medical environments.

**Eliminate siloed environments and challenges to data sharing**

The critical documentation created for patient diagnosis and treatment can create an expensive, difficult-to-manage challenge for medical IT organizations. Previous technologies present three key challenges:

- Silos of disparate images created by proprietary solutions limit the ability to share information across diagnostic and treatment areas. With many patients treated by multiple physicians in multiple departments, the need for integrated solutions becomes more important than ever.
- Conventional solutions lock users into the application that created data. The healthcare organization that wants to change application vendors or update its archival storage to a newer technology typically has to pay a significant fee to the application vendor for migration.
- When it comes to medical imaging, the organization seeking to address its data storage and information sharing challenges usually has to involve several different vendors. With medical and IT technologies evolving fast, any increases in time, pricing and complexity brought on by multivendor solutions can be a detriment.

**A combined solution for cross-departmental visibility**

The medical archiving solution provided by IBM and TeraMedica is designed to address all these challenges and meet the needs of growing IT environments. By delivering the performance, scalability, and cross-platform and cross-departmental visibility that are critical to enhancing the quality of care, the solution fosters medical collaboration and can significantly reduce operational costs.

The ability of the IBM-TeraMedica solution to enhance access is evident in multiple rigorous performance tests conducted by IBM on the SONAS component.

The SONAS or Storwize V7000 Unified storage system together with the Evercore solution can improve efficiency and reduce costs by intelligently storing content for easy retrieval, while protecting against technology obsolescence. Additionally, this combined solution can help meet compliance with regulatory requirements for the security of medical information.

**Scalability and functionality to meet your needs**

IBM gives healthcare organizations the storage performance and high availability necessary for supporting life-saving processes and decision making.

The SONAS global repository for application and user files can store and make available huge volumes of critical information — as much as 21 petabytes, with up to two billion files in a single file system — and up to 256 file systems per SONAS solution. SONAS relieves a persistent problem that
accompanies traditional approaches — the inability to scale to high capacities and simultaneously maintain performance — by consolidating multiple file servers into a single, enterprise-wide file system. In doing so, it provides a simple, flexible and robust high availability solution.

Storwize V7000 Unified consolidates block and file workloads into a single storage system for simplicity of management and reduced cost. It offers greater efficiency and flexibility through built-in solid state drive (SSD) optimization and thin provisioning technologies. Storwize V7000 Unified functions also enable nondisruptive migration of data from existing storage, simplifying implementation and minimizing disruption to users.

Superior flexibility utilizing TeraMedica technology

The Evercore platform is purpose-built to maximize the value of digital diagnostic and treatment content with solutions that reach beyond DICOM to provide cross-standard and cross-application image visibility. It enables healthcare organizations to migrate data easily to different vendors, as well as support digital tools that enhance patient care, physician performance and staff efficiency.

TeraMedica’s patented technology is designed to support the workflow, distribution and application of clinical inputs and outputs for 24 medical specialties. It makes available data that in conventional environments is fragmented across departmental PACS, and enhances their management using the following software modules:

- **Evercore Smartstore™**: A vendor-neutral archive that consolidates silos of clinical content under one infrastructure to provide intelligent data management for multiple specialties. The patented Smartstore module integrates clinical IT environments to manage data from multiple PACS, sites, facilities, departments and business units.
- **Evercore Univision**: A browser-based electronic medical record (EMR) viewer that provides one-click access to DICOM and non-DICOM images and digital clinical content. By eliminating the need to train clinicians to use multiple viewers or log in multiple times, this module can give more users faster access to critical digital content.
- **Evercore Remote**: A high speed communication module that combines with the Smartstore solution to distribute secure clinical content across local and wide area networks. It extends applications to geographically dispersed units, sites without high speed connections, and sites that prefer to keep a local cache of clinical content while remaining connected to the data center.
- **Evercore Data Migrator**: An easy-to-use data solution for extracting data from closed archives, enabling the replacement of existing PACS systems with newer versions without incurring migration costs from current vendors. Used with the Smartstore module, it moves data across an open architecture to consolidate pools of information, optimize the medical IT infrastructure and support the acquisition metadata in the clinical data repository, giving providers the flexibility to choose storage and PACS systems.

The IBM-TeraMedica solution accompanies traditional approaches — the inability to scale to high capacities and simultaneously maintain performance — by consolidating multiple file servers into a single, enterprise-wide file system. In doing so, it provides a simple, flexible and robust high availability solution.

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**With the IBM-TeraMedica solution**

Cardiology  Radiology  Oncology

IP network

IBM SONAS or IBM Storwize V7000 Unified

The IBM-TeraMedica solution provides consolidated, cross-platform storage on a SONAS or Storwize V7000 Unified storage system, with IP-based visibility that enables cross-departmental data access and use.
The IBM-TeraMedica advantage

IBM SONAS and Storwize V7000 Unified together with the TeraMedica Evercore offering deliver a premium-level solution that can meet the medical imaging archive requirements for healthcare organizations of any size. This tested and proven solution unlocks trapped value of digital clinical assets to enable healthcare organizations to manage all DICOM and non-DICOM clinical content. The agile, flexible and scalable solution delivers performance, capacity and information lifecycle management capabilities built into SONAS and Storwize V7000 Unified systems along with the vendor independence and content management freedom provided by the TeraMedica Evercore suite of products.

For more information

To learn more about IBM Scale Out Network Attached Storage and IBM Storwize V7000 Unified, please contact your IBM sales representative or IBM Business Partner, or visit:

ibm.com/systems/storage/network/sonas
or
ibm.com/storage/storwizev7000

To learn more about the TeraMedica Evercore ClinicalEnterprise Suite, visit: teramedica.com

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Route 100
Somers, NY 10589
Produced in the United States of America
March 2012
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