



# ACCELERATING COLLABORATIVE HEALTHCARE WITH EMC ADVANCED MEDICAL IMAGING SOLUTIONS

PET/CT. MRI. 3D/4D. Medical imaging exams, radiation therapy, and image-guided procedures are transforming patient care delivery as they replace more invasive procedures and often, more costly techniques. To better predict, diagnose, treat, and monitor disease, healthcare providers are deploying advanced, feature-rich and data-intensive imaging applications and modalities to improve clinical workflow and outcomes.

As the utilization of diagnostic imaging has grown, so has the amount of data generated per study and the importance this data plays in completing a patient's medical record. In turn, storage requirements for imaging data continue to grow, as a primary copy of the information may be kept along with a replicated image for disaster recovery and business continuity.

Compounding this rapid growth of images is the challenge in managing the IT infrastructure with existing departmental imaging systems for Radiology, Cardiology, Oncology, Orthopedics, and other "ologies." Organizations must also integrate these images with other critical applications such as the EMR.

EMC PERSPECTIVE

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**EMC's portfolio of imaging capabilities incorporate best-in-class hardware, software, solutions, and services to meet the diverse challenges of your medical imaging strategy today—and to support imaging innovations of tomorrow.**

To provide optimum patient care delivery and to choose imaging as a "Stage 2" objective for meaningful use of the EHR, healthcare providers are investing in next-generation imaging solutions to securely capture, share, view, and exchange medical images.

## **EXPANDING SOLUTIONS PORTFOLIO AND PARTNER ECOSYSTEM**

Whether your organization is upgrading an existing, "on-premise" PACS, consolidating disparate systems with a vendor-neutral architecture (VNA), or is building a cloud-based PACS/RIS offering, EMC and our partners can help transform your medical imaging strategy. We provide hospitals, imaging centers, and radiology practices of all sizes with a flexible, scalable, end-to-end solution to meet your unique imaging requirements for performance, security, and ease of management.

EMC's portfolio of imaging capabilities incorporate best-in-class hardware, software, solutions, and services to meet the diverse challenges of your medical imaging strategy today—and to support imaging innovations of tomorrow. We work with industry-leading medical imaging and VNA application partners, systems integrators, and service providers to integrate, test, and certify EMC infrastructure with partner applications for enhanced clinical workflow and provider productivity.

With the continued growth of medical imaging data generated each year, you may also be exploring cloud computing solutions with a service provider or building a services catalog within your delivery network. EMC cloud-based systems and "as a Service offerings" can provide platform-independent access to images, reports, and other documents to minimize the existing limitations of a legacy-based approach to radiology image and information sharing. We can help you formulate and build your cloud computing strategy, paying only for the gigabytes used.

## **PROVEN SOLUTIONS WITH PACS PARTNERS**

EMC Infrastructure Solutions for PACS represent the integration of PACS applications from industry-leading PACS partners with EMC best-in-class hardware, software, solutions, and services. Our solutions enable healthcare providers of all sizes to dramatically accelerate their PACS deployments and transitions—saving time and cost from day one.

These long-standing partnerships generate joint engineering development to integrate, test, and certify partner PACS applications with EMC storage platforms and management software. API integration is also completed to automate archiving processes between these applications and EMC purpose-built archiving platforms. Customer support plans with formal problem escalation policies are also established and partner delivery staff receive EMC technical training.

EMC Archiving Solutions can help create an accessible online medical image archive to lower operational costs, enable compliance with regulatory requirements, and facilitate retrieval of patient information.

## SHARE AND MANAGE DIAGNOSTIC IMAGES WITH A VENDOR-NEUTRAL ARCHITECTURE

Hospitals and specialty facilities are investing in vendor-neutral imaging solutions that provide an open, flexible, standards-based architecture incorporating database management, storage, disaster recovery, and secure information lifecycle management for both DICOM and non-DICOM data. EMC and our partners provide solutions ranging from a single, departmental VNA to a multi-site XDS-based VNA encompassing all DICOM and non-DICOM images.

The EMC VNA Solution provides enterprise-class data management, consolidating medical image data coming from multiple imaging departments into a Master Directory and an associated storage infrastructure. It provides a single, unified enterprise-wide repository for medical images that can be seamlessly viewed from your EMR. Healthcare providers can choose from our comprehensive portfolio of on-premise and cloud platforms, which can be deployed independently or in parallel. We can help you develop a VNA roadmap that incorporates a modular approach to provide the breadth of technology needed to meet your requirements now and in the future.

EMC provides the building blocks to form a foundation for collaborative healthcare with lab-tested solutions designed with IHE standards combined with products and services with our clinical application and technology partners' offerings. With the ability to link PACS, EMR and other unstructured patient data with a virtualized, cloud-ready EMC storage infrastructure, caregivers gain "anywhere, anytime access" to patient data and are enabled to make better care decisions.

Healthcare providers can leverage XDS software and services from the EMC Healthcare Integration Portfolio, EMC XDS Registry, EMC XDS Repository, and EMC XCA Gateway to provide a directory for medical images and related content to store patient content for healthcare applications to consume. These capabilities enable multiple healthcare providers and clinical end-users to federate and share information, enhancing the completeness and value of an electronic medical record that incorporates patient images. EMC has also tested our medical imaging sharing and management solution in our labs with offerings from RSA (the security division of EMC), along with EMC backup, deduplication, workload balancing and data mobility products and software tools.

## TRANSFORM YOUR HEALTH IT INFRASTRUCTURE

For scale-out storage, EMC Isilon provides simple, efficient scale-out NAS storage to support your medical imaging strategy. It combines the three layers of traditional storage architectures—the file system, volume manager, and RAID—into one unified software layer, creating a single intelligent distributed file system that runs on an Isilon storage cluster. OneFS intelligently stripes data and metadata across all nodes in a cluster to create a single, shared pool of storage.

For imaging content and services providers, as well as global enterprises that require distributed Big Data in a private or hybrid cloud, EMC Atmos offers multi-petabyte storage, drives data lifecycle with automated policies, eases provisioning with secure multi-tenancy, and provides any device self-service access, enabling Big Data management at a global scale.

For next-generation data protection, EMC Data Domain offers a purpose-built backup appliance to provide a highly efficient and scalable solution to protect imaging data. Through the use of deduplication, EMC Data Domain can drastically store more backup data, longer to disk.

EMC Consulting can help you craft a vendor-neutral platform to provide efficient access, distribution, viewing, and storage of image data in consistent open systems formats such as DICOM and HL7. We can help you build an integrated universal work list that unifies technologies at multiple imaging domains and facilities to enable the utilization of subspecialty expertise and a workload balance among all experts, regardless of location.

Team with EMC and our expanding ecosystem of analytics software partners to capture, aggregate, analyze, and visualize imaging data for precision medicine and operational decisions. Meet the constantly changing clinical and business demands of your healthcare organization with configurable, easy-to-use analytic tools that link data across your organization.

## TAKE THE NEXT STEP

Leverage EMC and our partners to move forward your advanced medical imaging strategy. Radiologists, cardiologists, and other providers need immediate access to images and reports, anytime, anywhere to make informed patient-care decisions. With our solutions, you gain:

- Reliable and highly available storage platforms that provide rapid access to images required by clinicians—anywhere, any time.
- Efficiencies and cost reductions through higher asset utilization and virtualization via automation of processes and workflows.
- Multi-site image review anywhere in the clinical service and securely throughout the enterprise.
- Business continuity and security for your PHI and PII with management of authorized access to it.
- Integrated and tested solutions with EMC PACS and VNA partners that save time and cost—and lower TCO over the solution lifetime.

## CONTACT US

To learn more about how EMC products, services, and solutions can help transform your healthcare IT, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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