

EMC Picture Archiving Communications Systems (PACS) Solution for Healthcare

Information infrastructure for medical imaging

Business Challenges

Healthcare organizations around the world are investing in radiology and cardiology Picture Archiving Communications Systems (PACS) to predict, diagnose, treat, and monitor disease. With each new imaging deployment, healthcare providers face challenges in meeting increasing demands for high availability of systems and networks, security, and automated tools to simplify the complexity of managing this expanding imaging environment.

While advanced medical imaging technologies such as multi-slice CTs and wider functional fMRI applications contribute to improved patient health through early diagnosis of disease, imaging technologies are also being deployed in other areas of medicine, like oncology, pathology, obstetrics, mammography, and orthopedics. The deployment of medical imaging applications and modalities to improve clinical workflow and outcomes is resulting in rapid increases in the image size of individual procedures and the overall volume of procedures being performed with the storage required.

For healthcare providers looking to upgrade or replace their initial PACS investments, the ability to migrate medical images is critical. But migrating data from a legacy application to a more recent version of that same software, or from one PACS application to a different PACS, or simply moving images from one storage platform to another can often be a slow, difficult, and costly process with older image files not adhering to current formats and standards.

Solution Description

EMC® Picture Archiving Communications Systems (PACS) Solution for Healthcare represents the integration of industry-leading PACS applications from our strategic healthcare partners with an EMC information infrastructure, leveraging best-in-class hardware, software, and services. This solution enables healthcare providers of all sizes to dramatically accelerate their PACS deployments—saving time and cost from day one.

Long-standing EMC partnerships with leading PACS application vendors generate joint engineering development to integrate, test, and certify partner applications with EMC storage platforms and management software. Application programming interface (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 established and partner delivery resources receive technical training and certification on EMC products.

Solution Components

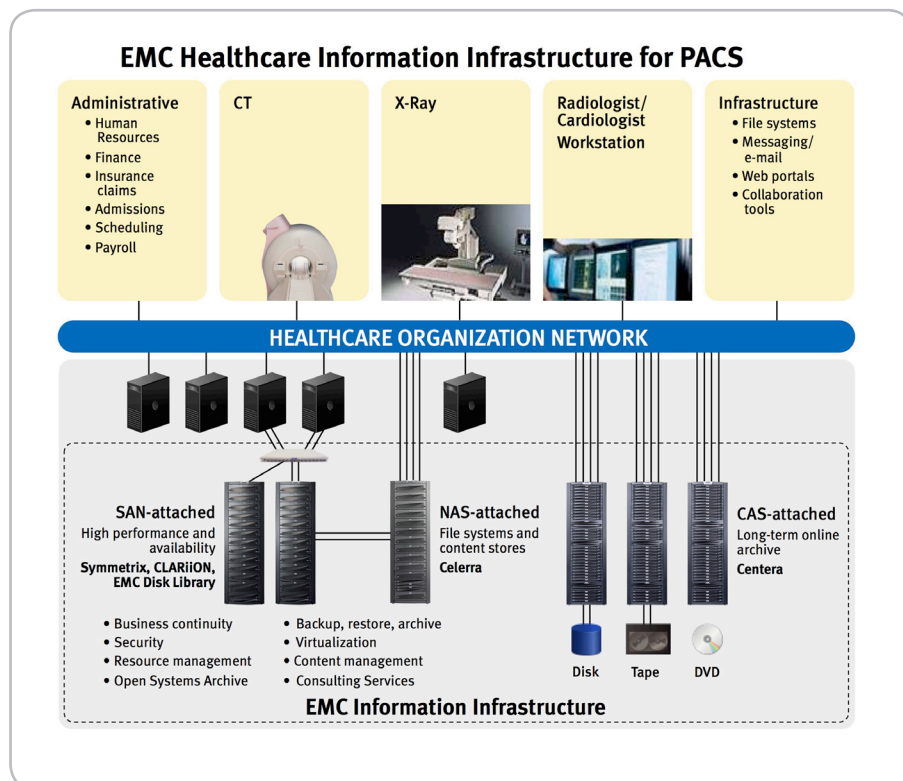
The EMC Picture Archiving Communications Systems (PACS) Solution for Healthcare addresses growing information infrastructure demands from small ambulatory clinics, imaging centers, community hospitals, multi-site academic teaching institutions, to national health systems. Radiologists and cardiologists need immediate access to images and reports, anytime, anywhere to make informed patient-care decisions. Whether you're implementing PACS for the first time or image-enabling your Radiology Information System (RIS) or your Electronic Health Record (EHR), an EMC information infrastructure will help you to:

- Store medical images more efficiently and cost-effectively
- Keep Protected Health Information (PHI) and Personally Identifiable Information (PII) available and secure
- Support DICOM and HL7 standards for medical imaging
- Reduce the time and cost required to migrate medical images

Store clinical and business information more efficiently

To build an efficient information infrastructure for PACS that lets your healthcare organization store, protect, optimize, and leverage your images and patient information, start with EMC storage platforms:

- EMC CLARiiON® CX series of midrange networked storage helps you manage and consolidate your healthcare data.
- EMC Symmetrix® DMX series offers a flexible, high-end networked storage system that enables massive consolidation and scalability.
- EMC Celerra® unified storage delivers IP, iSCSI, and Fibre Channel connectivity with high availability with compliance “built in.”
- EMC Centera® for active archiving to provide online access with assured authenticity and is tightly integrated with EMC PACS partner applications.



Keep protected health information available and safe

Protection and security of patient images and related information are top priorities for healthcare organizations. Business continuity and disaster recovery contingency plans, privacy, security, and retention of patient information must be considered in the context of state, federal, and country requirements such as HIPAA, Joint Commission, and EU Data Directives. Protected Health Information (PHI) and Personally Identifiable Information (PII) are required to be protected and secured throughout their entire lifecycles, whether kept inside or outside of the healthcare organization.

Implementing EMC's portfolio of affordable information protection, business continuity, and disaster recovery solutions, ensures that your medical images are always available and aligned with the most stringent regulatory requirements. The EMC Business Continuity Services Assessment for Healthcare Environments helps your organization identify threats that impact critical healthcare and IT operations by analyzing your current business continuity strategies, capabilities, processes, staffing, and testing programs and then comparing these to your ability to meet established business and regulatory requirements.

The EMC Backup, Recovery, and Archiving portfolio offers a comprehensive, integrated set of solutions including EMC Disk Library, Centera, and NetWorker® to help with “refresh to re-design” of your backup and recovery infrastructure. These solutions, with built-in hardware redundancy, RAID protection, and the availability features of disk technology, ensure that data can be quickly and accurately restored.

To meet security and privacy requirements, EMC Information Risk Management Solutions for Protected Health Information offer an information-centric approach to security that empowers healthcare organizations to meet the needs of patients, physicians, contractors and other healthcare staff by mitigating risks to information that directly contribute to the quality of patient care.

The security offering builds on EMC RSA® products and services including: RSA Data Loss Protection Suite that prevents unauthorized outflow of highly sensitive data from your network and end points, RSA enVision™ platform for reporting and auditing, RSA Encryption Suite to encrypt sensitive data and manage the lifecycle of encryption keys across the enterprise, and RSA Information Rights Management Suite to enable secure document sharing across an extended enterprise.

EMC Open Systems Archive

Based on a services-oriented architecture (SOA) and deployed in a modular fashion, the EMC Open Systems Archive Solution for Healthcare Organizations aggregates content from clinical, operational, and financial applications. Leveraging IT and healthcare industry standards, the solution provides an open, flexible, and highly scalable information repository. And it represents a complementary architecture to your traditional PACS—allowing images, documents, patient records, prescriptions, invoices, and other unstructured content to be easily accessed via a secure, virtual, and federated repository.

This solution leverages medical image management software to facilitate a DICOM-compliant infrastructure that supports standards-based migration of medical images and infrastructure. It captures extensive metadata from all content assets and collects this information into a virtual or physical repository. The EMC Open Systems Clinical Policy Engine is purpose-built to integrate your organization's specific rules, clinical protocols, and business process requirements. This tool captures clinical codes from orders, DICOM headers from diagnostic imaging procedures, impressions from diagnostic reports, relevant prior images, and other elements and then applies intelligence to the data to create knowledge and situational awareness.

Solution Value

The EMC Picture Archiving Communications Systems (PACS) Solution for Healthcare provides:

- Reliable and highly available storage platforms that provide rapid access to images required by radiologists and cardiologists—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 partners that save time and cost—and lower TCO over the solution lifetime.



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