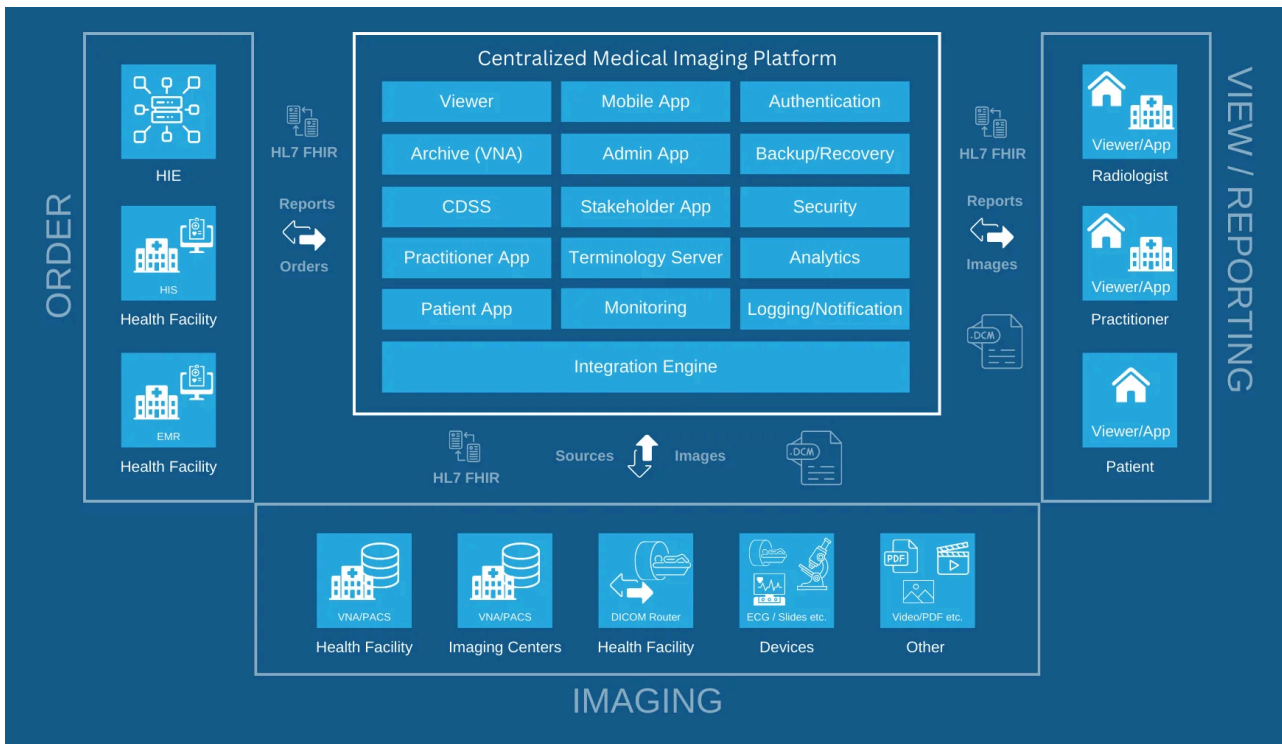


Centralized Medical Imaging Platform



The Centralized Medical Imaging Platform is a comprehensive solution designed to revolutionize medical imaging across healthcare facilities. This platform integrates seamlessly with existing PACS and VNA systems in hospitals, providing a centralized VNA for facilities without their own. It enables radiologists to access and report on patient images from any location, and allows patients to view their own images and reports, regardless of where the images were taken. Additionally, the platform ensures that medical imaging can be managed on a national level, supporting workflow management and integrating with EMR, HIE, and HIS systems to streamline the diagnostic and treatment process.

Key Features

Integration and Compatibility

- 🕒 **Seamless Integration:** Works with existing PACS and VNA systems.
- 🕒 **Centralized VNA:** Acts as a VNA for hospitals without one.
- 🕒 **Universal Viewer:** Zero-footprint viewer with advanced features like windowing, rotation, moving, 3D rendering, and mark-up tools.
- 🕒 **Mobile Application:** View images and reports on the go.

- ⦿ **Cloud Compatibility:** Supports Azure, Amazon, Google, and other major cloud services.
- ⦿ **Standard Support:** Compliant with HL7 FHIR, SNOMED, ICD10, and LOINC terminology standards.

Accessibility and Management

- ⦿ **Radiologist Access:** Radiologists can access and report on images taken anywhere.
- ⦿ **Patient Access:** Patients can view their images and reports from any hospital.
- ⦿ **Workflow Management:** Doctors can manage patient reports and request new examinations through EMR, HIE, and HIS systems.
- ⦿ **Data Transfer:** Image data is transmitted via WADO, while reports, requests, and more are exchanged using HL7 FHIR standards.
- ⦿ **Stakeholder Applications:** Manage data and integrations with applications for doctors, patients, administrators, and stakeholders.

Advanced Features

- ⦿ **Security and Privacy:** Robust security and privacy measures.
- ⦿ **Disaster Recovery and Backup:** Advanced recovery and backup algorithms.
- ⦿ **Radiation Dose Management:** Helps minimize patient radiation exposure and reduces repeat examinations.
- ⦿ **Diverse Image Support:** Supports storage and analysis of various types of medical images, including PDFs, videos, EKGs, and digital pathology images.
- ⦿ **Role-Based Access:** Configurable roles and permissions to suit the country's facility structure.
- ⦿ **Clinical Decision Support:** Enhances clinical decision-making with integrated support systems.
- ⦿ **Research Facilitation:** Allows researchers to develop and apply models nationally, following necessary approvals.
- ⦿ **Workflow Customization:** Enables definition and management of diverse workflows.

Benefits

For Patients

- ⦿ **Access to All Images:** View images and reports from any hospital.
- ⦿ **Faster Diagnosis and Care:** Reduces delay in receiving care, improving overall health outcomes.
- ⦿ **Patient-Centric Care:** Empowers patients to initiate sharing of studies or portfolios with clinicians and family.
- ⦿ **Global Efficiency:** Optimizes costs and efficiency for overseas treatments.
- ⦿ **Care Anywhere:** Provides access to care from any location.

For Radiologists

- ⦿ **Enhanced Reporting:** Supports high-performance reading and reporting capabilities in various environments.
- ⦿ **Access to Prior Images:** Improves diagnostic outcomes with access to previous images and reports.
- ⦿ **Radiation Management:** Manages and minimizes radiation dosage for patients.

For Clinicians

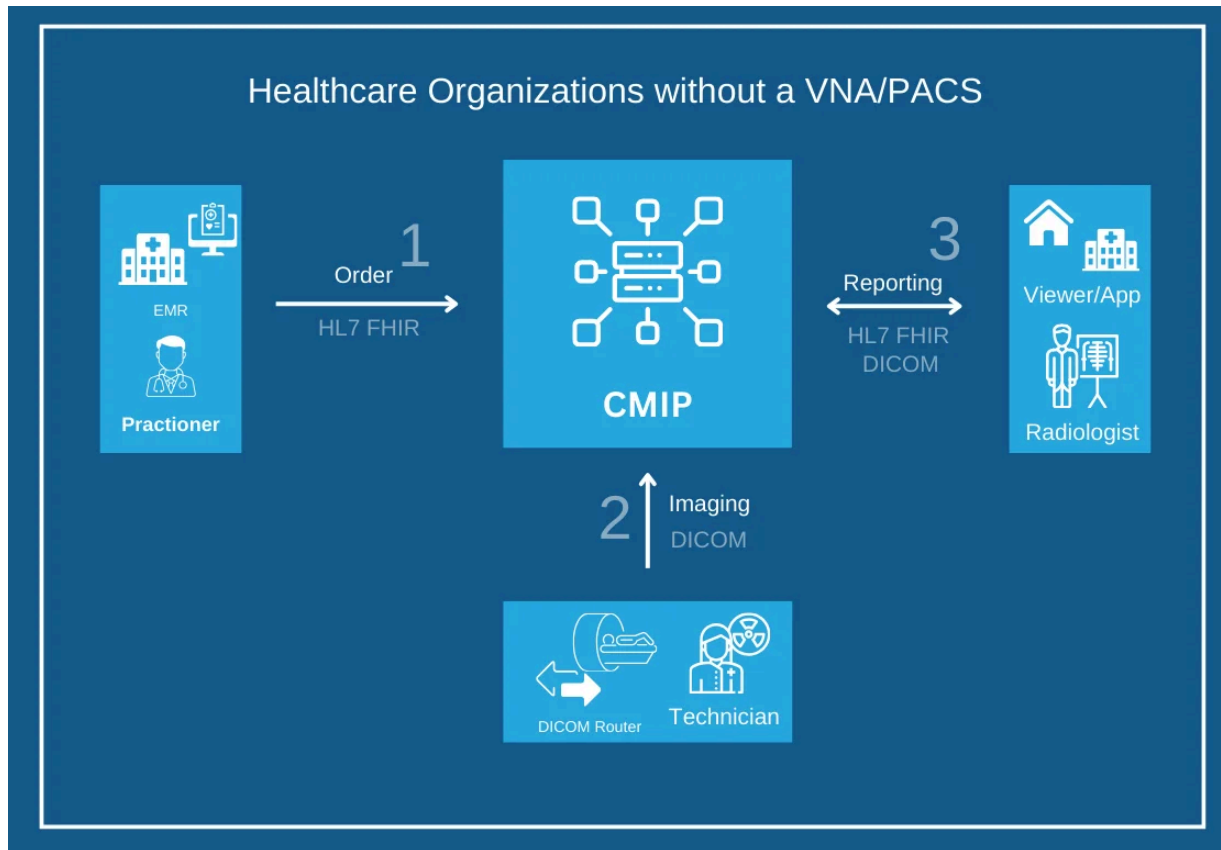
- ⦿ **Comprehensive Access:** Provides a patient-centric view and access to imaging data.
- ⦿ **Expedited Diagnosis:** Speeds up the diagnostic process and care delivery.
- ⦿ **Seamless Integration:** Allows easy access through HIE and EHR systems.
- ⦿ **Trauma and Telestroke Care:** Improves response times in trauma and telestroke cases.
- ⦿ **Clinical Collaboration:** Facilitates collaboration among clinicians and referring physicians.
- ⦿ **Outcome Improvement:** Standardizes care and enhances outcomes.

The Centralized Medical Imaging Platform is designed to enhance the efficiency, accessibility, and quality of medical imaging services. It supports healthcare providers in delivering better care, empowers patients with access to their health

information from any hospital, and facilitates research and innovation in medical imaging.

Example Workflows:

+ Healthcare Organizations without a VNA/PACS



Step-by-Step Process

1-Practitioner Initiates Imaging Order:

A practitioner uses the EMR system to place an order for a chest X-ray for a patient.

2-Check for Existing Images:

The system checks if the patient has any recent similar imaging orders to avoid unnecessary repeat imaging.

3-Send Order to X-ray Department:

The chest X-ray order is sent to the X-ray department within the same hospital via the Centralized Medical Imaging Platform (CMIP).

4-Perform the X-ray:

The X-ray department receives the order and performs the chest X-ray as requested.

5-Store Image in Central VNA:

The captured X-ray image is stored in the central VNA managed by CMIP.

6-Radiologist Reviews and Reports:

A radiologist, located either at home or in another hospital, accesses the X-ray image using the universal viewer provided by CMIP and writes a report.

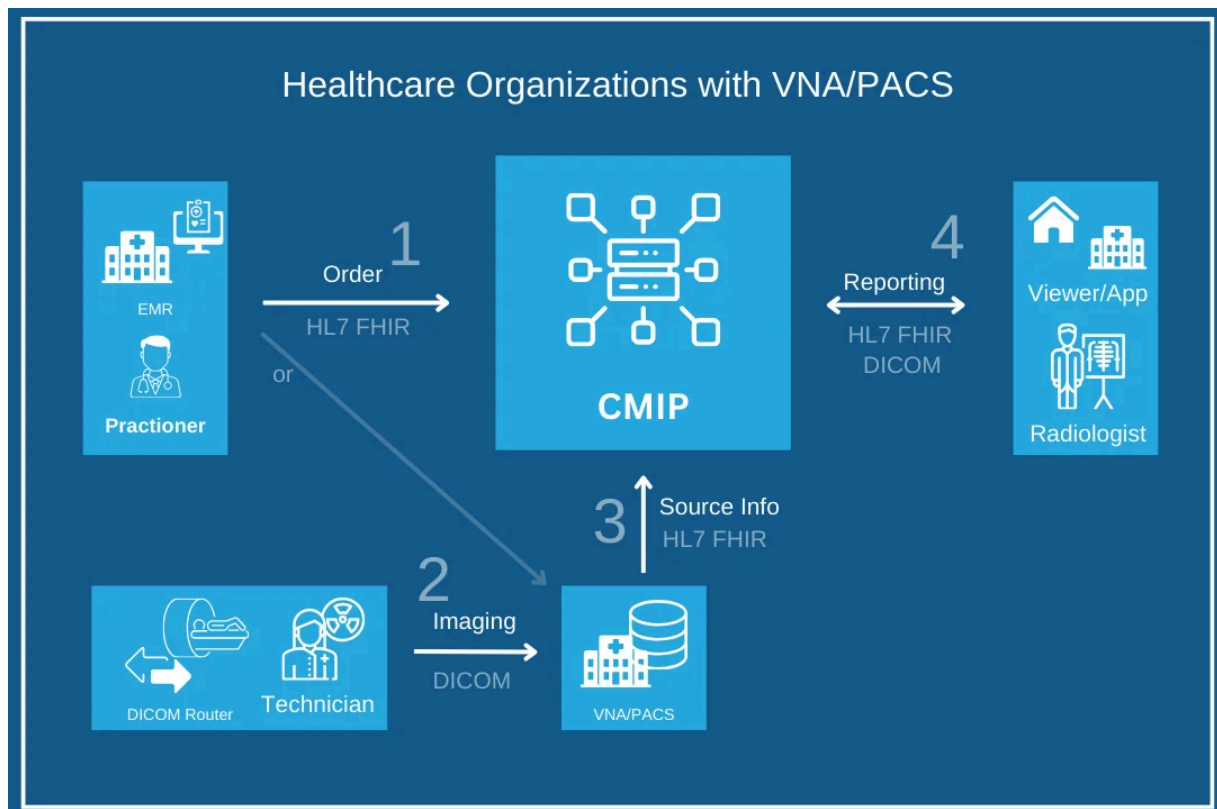
7-Send Report via HL7 FHIR:

The radiologist's report is sent to CMIP using HL7 FHIR standards.

8-Practitioner Reviews Report:

The report is made available to the ordering practitioner through the EMR system, where it can be reviewed and used for patient care decisions.

— Healthcare Organizations with VNA/PACS



Step-by-Step Process

1-Practitioner Initiates Imaging Order:

A practitioner uses the EMR system to place an order for a chest X-ray for a patient.

2-Check for Existing Images:

The system checks if the patient has any recent similar imaging orders to avoid unnecessary repeat imaging.

3-Send Order to X-ray Department:

The chest X-ray order is sent to the X-ray department within the same hospital via the hospital PACS/VNA.

4-Perform the X-ray:

The X-ray department receives the order and performs the chest X-ray as requested

5-Store Image in Hospital VNA/PACS:

The captured X-ray image is stored in the hospital VNA/PACS. Metadata and image access information are sent to CMIP.

6.Radiologist Reviews and Reports:

A radiologist, located either at home or in another hospital, accesses the X-ray image using the universal viewer provided by CMIP (data retrieved from the hospital PACS) and writes a report.

7-Send Report via HL7 FHIR:

The radiologist's report is sent to CMIP using HL7 FHIR standards.

8-Practitioner Reviews Report:

The report is made available to the ordering practitioner through the EMR system, where it can be reviewed and used for patient care decisions.