

**Department of Radiodiagnosis and Interventional Radiology
A.I.I.M.S., NEW DELHI-110029**

Dated: 24.08.2026

Short Rate Enquiry No. 1/2026-27/Radiodiagnosis & IR/AIIMS

The Department of Radiodiagnosis & Interventional Radiology requires a PACS Data Migration Utility for secure, accurate, and efficient migration of medical imaging data from the existing PACS/archive system to the designated/new PACS system.

PACS data Migration Utility – Tender Specifications

The proposed Migration solution shall provide a **PACS Migration Utility** designed to simplify, automate, monitor, and validate the migration of DICOM medical imaging data of 100 TB from an existing PACS/archive (Siemens Plaza, located in the Room 8, Department of Radiodiagnosis and interventional radiology, Main building, AIIMS, Delhi) to the proposed target PACS/archive (Fuji Synapse, located in the 7th floor of Maternal and child block, AIIMS, Delhi). This has to be done within a period of 8 months from the date of order.

The Migration Utility shall provide an intuitive, end-user-oriented interface and shall support **two migration methodologies**:

1. **Traditional DICOM Migration** using standard DICOM Query/Retrieve and communication services.
2. **Direct DICOM File/Archive Migration** by accessing DICOM files directly from the source storage directory, where the source archive contains standard DICOM-compliant files.

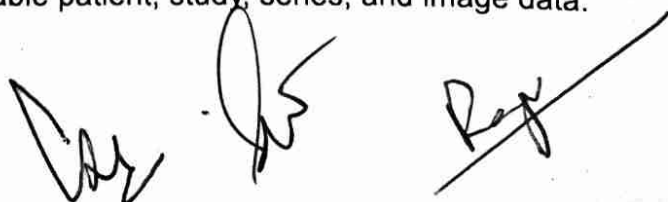
The system shall provide comprehensive migration management, scheduling, monitoring, auditing, validation, error handling, and reporting capabilities.

1. PACS-to-PACS Migration – Traditional DICOM Migration Mode

The system shall support migration from an existing PACS/archive where image data is stored in a proprietary or PACS-managed storage environment through standard DICOM communication services.

1.1 Source PACS Inventory

The Migration Utility shall be capable of communicating with the source PACS/archive using standard DICOM services and shall issue **DICOM C-FIND queries** to identify and inventory available patient, study, series, and image data.



The inventory shall, where available, include:

- Patient ID and Patient Name.
- Accession Number.
- Study Instance UID.
- Series Instance UID.
- SOP Instance UID.
- Modality.
- Study Date and Study Time.
- Number of series and images.
- Other relevant DICOM attributes.

1.2 Migration Scheduling

The system shall allow administrators to configure and execute migration schedules based on configurable parameters such as:

- Study date.
- Modality.
- Patient/study criteria.
- Date range.
- Time of day.
- Day of week.
- Migration priority.

The migration shall be capable of running automatically according to the predefined schedule.

1.3 DICOM Image Transfer

The system shall issue **DICOM C-MOVE requests** to the source PACS/archive to retrieve studies and transfer them to the target PACS/archive.

The migration engine shall maintain the status of each study and shall provide appropriate handling of successful, failed, pending, and interrupted transfers.

1.4 Target PACS Validation

The Migration Utility shall perform **post-migration validation** by issuing DICOM C-FIND requests to the target PACS/archive.

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The system shall compare the source inventory against the target inventory to verify that the migrated studies are available in the target system.

1.5 Migration Audit and Progress Monitoring

The system shall maintain detailed migration audit logs and provide real-time progress monitoring.

The audit mechanism shall identify:

- Successfully migrated studies.
- Failed studies.
- Pending studies.
- Interrupted studies.
- Studies requiring reprocessing.
- Migration errors and exceptions.

The system shall allow failed or incomplete studies to be reprocessed without restarting the entire migration.

2. Archive-to-PACS Migration – Direct DICOM File Migration Mode

Where the source PACS/archive stores images as standard DICOM files in an accessible storage location, the system shall support **direct migration from the source DICOM storage directory to the target PACS/archive**.

This mode shall minimize dependency on the source PACS application and shall significantly improve migration throughput where technically feasible.

2.1 Source Storage Scanning

The Migration Utility shall be capable of scanning the configured source storage location and identifying DICOM files.

The system shall create an inventory of the available DICOM studies and shall extract relevant DICOM metadata from the files.

The system shall support migration where DICOM files are organized in different directory structures, subject to the source archive being accessible and the files being valid DICOM files.

2.2 DICOM File Validation

The system shall validate the identified files to determine whether they contain valid DICOM data before migration.

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Invalid, corrupted, or unsupported files shall be identified and reported separately without interrupting the overall migration process.

2.3 Migration Scheduling

The administrator shall be able to configure migration schedules based on:

- Study Date.
- File Date/Time, where applicable.
- File name/path, where supported.
- Modality.
- Configured date range.
- Time of day.
- Day of week.
- Migration priority.

2.4 Direct DICOM Transfer to Target PACS

The Migration Utility shall open/read the DICOM files from the source storage location and shall transfer the image data to the target PACS/archive using standard **DICOM C-STORE** communication.

The system shall maintain the migration status of each study and shall ensure that successfully migrated studies are not unnecessarily retransmitted.

2.5 Real-Time Migration Validation

The system shall support automated validation of migrated studies by querying the target PACS/archive using **DICOM C-FIND**.

The system shall compare source and target study information and shall identify missing or incomplete data.

Where supported, validation shall be performed automatically for each migrated study without requiring manual intervention.

2.6 Source Registry Audit

The system shall provide an option to perform an audit of the **source PACS/archive database or registry**, where access is technically and contractually permitted.

The audit shall identify records present in the source PACS registry for which corresponding DICOM files cannot be located in the configured source storage directory.

Such records shall be reported as potential:

- Missing data.
 - Offline data.
 - Data stored on removable media.
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- Data stored in another archive/location.
- Unavailable or inaccessible data.

2.7 Migration Audit and Exception Management

The system shall maintain comprehensive audit logs for the complete migration process.

The system shall allow administrators to review and reprocess failed or exceptional studies at any stage of the migration.

3. Migration Management Features

The Migration Utility shall provide the following operational capabilities:

3.1 Unattended Migration

The system shall support **unattended/automated migration**, allowing migration activities to continue without continuous user intervention.

3.2 Manual Migration

Authorized users shall be able to manually select and initiate migration for individual or multiple:

- Patients.
- Studies.
- Series.
- Date ranges.
- Modalities.

3.3 Predefined Migration Schedule

The system shall support predefined migration schedules and shall automatically start and execute migration according to configured time periods.

3.4 Migration Throttling

The system shall provide configurable **migration throttling** to control CPU, network, storage, or transfer utilization during peak clinical hours.

The administrator shall be able to configure higher migration throughput during off-peak hours and lower throughput during peak hours to minimize impact on clinical operations.

3.5 Configurable Migration Order



The system shall allow administrators to configure migration order based on study date.

At minimum, the system shall support:

- Latest-to-oldest migration.
- Oldest-to-latest migration.
- Configurable study date ranges.
- Priority-based migration, where supported.

3.6 Start, Stop, Pause and Resume

The system shall allow authorized users to **start, stop, pause, and resume migration at any time.**

The system shall retain migration state and shall automatically determine which studies have already been successfully migrated.

Upon resumption, the system shall continue from the pending/failed queue without unnecessarily retransmitting completed studies, thereby minimizing the risk of missing studies or creating duplicate transfers.

3.7 Automatic Retry

The system shall provide automatic retry/reprocessing functionality for studies that fail due to temporary network, source, destination, or communication errors.

The number of retry attempts and retry intervals shall be configurable wherever supported.

4. Migration Audit and Reporting

The system shall provide comprehensive audit and reporting facilities throughout the migration lifecycle.

The audit report shall, at minimum, provide:

- Total studies identified at source.
- Total studies scheduled for migration.
- Total studies successfully migrated.
- Total studies pending.
- Total studies failed.
- Total studies skipped.
- Total studies validated at target.
- Missing studies.
- Duplicate/previously migrated studies.

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- Failed transfers and error details.
- Migration start and completion time.
- Migration throughput/progress.
- Source and destination information.

Reports shall be available in real time and upon completion of migration.

The system shall support export of migration reports in commonly used formats such as **PDF, CSV and/or Excel**.

5. Migration Integrity and Validation

The system shall maintain study-level migration status throughout the migration process.

The system shall provide mechanisms to ensure that:

- Studies successfully migrated are recorded.
- Failed studies are clearly identified.
- Interrupted migrations can be resumed.
- Failed studies can be reprocessed.
- Source and target inventories can be compared.
- Missing studies can be identified.
- Migration exceptions can be investigated.
- Migration progress can be monitored in real time.

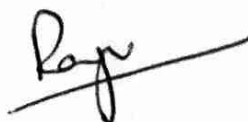
The system shall provide a final **Migration Completion and Validation Report** indicating the overall migration status and any outstanding exceptions.

6. Prefetching Based on Modality Worklist

The proposed solution shall provide an **intelligent study prefetching mechanism** integrated with the RIS/modality worklist.

The system shall be capable of:

- Monitoring configured modality worklists.
- Identifying upcoming scheduled examinations.
- Identifying the patient scheduled for the examination.





- Searching the configured PACS/archive for the patient's relevant historical studies.
- Automatically prefetching the identified studies to the designated cache or target PACS.
- Making historical studies available to the radiologist before or during the examination.
- Supporting configurable prefetch rules based on modality, study type, patient, and historical study date range.

The prefetching mechanism shall operate automatically without requiring manual image retrieval by the radiologist.

7. User Interface and Administration

The Migration Utility shall provide an intuitive graphical user interface for authorized users.

The interface shall provide, at minimum:

- Migration job creation and configuration.
- Source and target configuration.
- Migration scheduling.
- Migration queue management.
- Start/Pause/Stop/Resume controls.
- Migration progress dashboard.
- Failed and pending study lists.
- Retry/reprocessing controls.
- Audit and validation reports.
- Migration logs.
- Exception/error reports.

Access to migration configuration and administrative functions shall be controlled through **role-based access control**.

8. Performance and Operational Requirements

The Migration Utility shall be designed to support large-scale PACS/archive migration with minimal disruption to ongoing clinical operations.

The solution shall support:



- Parallel migration where supported by the infrastructure.
- Configurable migration throughput.
- Bandwidth/transfer throttling.
- Scheduled migration during off-peak hours.
- Resumable migration.
- Automated error recovery.
- Real-time migration monitoring.
- Study-level audit and validation.

The proposed solution shall be capable of supporting both **PACS-to-PACS migration using standard DICOM Query/Retrieve mechanisms** and **direct migration from accessible DICOM storage repositories**, with the latter providing optimized migration performance where the source archive consists of valid DICOM files.

Vendor Qualification Criteria

1. Vendors should have minimum 2 engineers based out of Delhi / NCR
2. Should be 10 years old company registered in India
3. Should have data migration experience from at least PACS vendors
4. Vendor should demonstrate the migration capability as per the specification during the technical bid evaluation. Bidder's who failed to demonstrate the migration as per the terms will be rejected

The sealed quotations are invited by post/ per bearer for the PACS Data Migration Utility for the department of Radiodiagnosis & IR, AIIMS, New Delhi-29.

The quotation duly signed should reach the office of Professor & Head, R. No. 69, Ground Floor, Old RAK OPD, Department of Radiodiagnosis & IR, New Delhi-110029 on or before 15.09.2026 at 4:00 PM. The rate should be valid for one year.

Raju Sharma

**Dr. Raju Sharma
Professor & Head**

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