

NILREAD

V25 feature descriptions

General features

- Verified browsers: MS Edge, IE11, Chrome, Firefox, Safari
- Verified operating systems: Windows, iOS, Android
- Multi-touch support on Windows 10
- Local NilRead authentication non-AD users
- Public and private folders
- Custom branding — designated locations for logos
- MDT/tumor board workflows: Custom folders, batch queues, keyword flagging, folder notes, date stamps
- Study UID grouping with the same accession number (squishing)
- Tool Tips in settings

Technical infrastructure

- DICOM, C-Store, SCU/SCP & MWL SCU
- DICOMweb (WADO-RS, QIDO-RS, STOW-RS)
- Federated search: DICOM, XDS repositories, Web Services, etc.
- DICOM activity monitor
- XDS and XDS-I Consumer
- Life cycle management
- Prefetch
- Multi-tenant (virtual sites and unique governance)
- Hub and spoke — bi-directional integrations
- UPS-RS support for modality reconciliation
- DICOM tag morphing

Integrations/APIs

- FHIR integrations
- FHIRcast integration for Powerscribe One
- API interface to VNAs
- Printing
- Epic encrypted URL integration
- Fujifilm encrypted URL integration
- Open API for launch, authentication and report ingestion
- Integration with external worklists (RIS, EMRs, dictation, enterprise worklist, etc.)
- Radiologist notification for unviewed images
- Launch integration with EHR, dictation, specialty viewers

Administrative tools and features

- Enables access to features as a system, group or user
- Tools and feature usage statistics by site
- Crash / exception statistics / IIS alerting
- Admin dashboard
- Study statistics
- Loading / rendering / SQL statistics
- Data analytics
- Break glass notifications
- Common Access Card authentication
- Enhanced Security Audit page
- UI for Epic AES-256 encryption
- Multiple Active Directory authentication

Sharing, collaboration, remote reading

- NilFeed: Securely ingest imaging studies and documents from remote sites
- Privilege controlled, zero-footprint upload/download with Web CD Uploader
- Authorized one-time secure use link to external user to support web-based upload
- Send and share secured study links
- Real-time collaboration
- Share images via QR code
- Remote Reading/Viewing
 - Hub and Spoke
 - Edge rendering
 - Bi-Directional propagation of preferences
 - Study or Streaming mode

Standards

- DICOM
- HL7
- IHE Integration Profiles
 - Image Display (ARI, BRI, CPI, ED, KIN, IID)
 - Report Reader (ARI, SINR)
 - Evidence Creator (CPI, ED, KIN)
 - Display (RID)
 - Document Consumer (XDS.b)
 - Imaging Document Consumer (XDS.b-l)
 - Content Consumer (XDS-SD)
 - Patient Demographics Consumer (PDQ)
 - Patient Identified Cross-Ref Consumer (PIX)
 - Client Authentication Agent (EUA)
 - Secure Note & Secure Application (ATNA)
 - Time Client (CT)

Study comments

- Tech Notes — ad hoc communications
 - User defined and system admin templates
 - Persistent or watermarked
 - Customize colors & Icons
 - Criteria based filtering
 - Private or shared
 - Tech note communication presets
 - Customizable site workflows
 - Tech QC Folder with notes
 - Site defined templates
- SR Study Notes
 - Aligned with best practices as outlined in the RSNA Reporting Initiative Program (RadReport.Org)
 - Customizable and portable HTML5 format
 - Stored as DICOM SR objects
 - Add DICOM data and images to a report
 - Floating report window

Quality assurance

- DICOM attribute editing
- Reconciliation with MML scheduled procedures
- Series splitting
- Masking, label, markers
- Anonymization/confidentiality masks
- Outbound IOCM messaging to third-party systems
- QC Toolbar
- Advanced QC interface for video editing
- Quality control and data assurance components
- Video editing
 - Save video without audio
 - Define one or more clips and save as new video
- Copy DICOM header — allows editing, viewing, data mining in Word, Excel, etc.
- Editing of non-DICOM-stored encapsulated documents
- Single-step splitting and labeling
- Folder creation
- Ability to print images

Basic image viewing

- 2D image manipulation: W/L, zoom, pan, rotate, etc.
- Cine
- Non-DICOM: JPEG, PNG, TIFF, PDF, MPEG4
- Display of reports
- Custom toolbar configuration
- Modality-specific toolbars
- Batch viewing
- Multiplanar reconstruction (aligned, oblique, curved)
- 3D (volume rendering, MIP average)
- Create Secondary Capture
- Hyland Doc Filters integration
- Non-symmetric layouts
- Mouse wheel display

Hanging protocols

- Highly customizable
- Mammo CAD preference to turn off or on
- Multi-specialty in a single pane
- Customizable to source data (DICOM tags)
- Rules-based any tag
- Ability to filter timeline
- Linking
- Multi-stages

Advanced image viewing

- +1 Priors (adjacency)
- Anatomical region filtering
- Anatomical registration
- Display/creation of presentation states
- Save/send bookmarks
- Create key images
- Cross-correlation between series (localizer)
- Prior support
- Linking between multiple series
- Arrow and text annotations
- Basic measurements: point, ruler, 3-points angle
- Grease pen (annotation without measurement)
- Advanced measurements: Ellipse, Contour, Region of Interest (ROI), Cobb Angle, Spine Tools, Reference Line Caliper
- Blur/sharpen, gamma correction
- Curved Reformat
- Extended Patient Timeline
- Patient Heat Map
- Advanced CT and MR Protocols (Automatic Multiple Series, 2D, MPR and 3D)
- Support for Radiopharmaceutical Radiation Dose DR IOD
- Presentation-state annotations on ePDF
- MPR dynamic localizer lines “interactive” crosshair system setting”
- Tumor Tracking

Patient portal enablement

- EHR integration to patient portals with Image Viewing
- Simplified license
- Simplified user interface
- Study upload (by the patient)
- Secure link sharing (by the patient)

Multi-specialty capabilities

- Nuc Med/PET
 - Fusion (PET-CT and PET-MR)
 - Pet/CT fusion indicator
- Mammography diagnostic workflow
 - Mammography CAD display preference
 - Edge amp and Edge detection
 - Implant Masking
 - Reference of anatomical location
 - BTO formats for Breast Tomosynthesis Object (the DICOM standard object intended for the purpose and defined for use by the IHE DBT profile)
 - DBT slabbing
 - Chest tissue density alignment
 - Nipple alignment
 - Viewport orientation alignment
 - Step zoom through anatomy
- Ophthalmology (eye care) diagnostic workflow:
 - Ophthalmic photography 8-bit image storage
 - Ophthalmic photography 16-bit image storage
 - Ophthalmic tomography image storage
 - Wide field ophthalmic photography
 - Stereographic projection image storage
- Cardiology
 - DICOM-ECG standard (view, measure and document diagnostic ECG waveforms)
 - ECG viewing layouts (3×4+1, 3×4+3, 6×2)
 - ECG tools panel: Frequency features, timescale adjustments, gain adjustments
 - ECG area calculations: BPM, time, MVs
 - ECG viewing of QT retrieval, RR interval and QT and QTc formulas
 - Simpson Measurement, Ejection Fraction, GSPS
 - Heart rate measurements

Multi-specialty capabilities (continued)

- Radiation treatment support functions, including:
 - Display of radiotherapy plans
 - Add/delete/edit isodoses
 - Switch absolute to % isodose values
 - Color editing, opacity and line thickness of isodoses
 - ROI structures: Color editing and opacity of structures
 - DVH graphing, allow histogram computing
- Orthopedics
 - Image stitching
 - Ortho templating integration
- Neurology
 - NIfTI image support
- Dental imaging
 - Customizable display protocols
 - Bitewings, pano, CT, MR
- Referential pathology viewing (U.S. only)
 - FDA approved for referential viewing
 - Tools include zoom, pan, scroll
 - Included with NilRead
- Diagnostic pathology viewing (EU, U.K. only)
 - Virtual microscope functions
 - White viewer background
 - Forced horizontal or vertical image panning (no diagonal)
 - Specialty-specific structuring of pathology studies
 - Support for 4K monitors
 - Web-based, zero-footprint viewing technology that allows users to perform pathology image interpretation remotely on nearly any device
 - Manages larger data sets at higher speeds than traditional image archive systems
 - Ingests and reads special DICOM SOP classes to pathology
 - Inherently manages visible light/photography macro images of tissue samples

Learn more about [Hyland's enterprise imaging solutions](#).