



Nexus Release Notes

Version 3.06.00

Pukka-j Limited

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1 Introduction

This release introduces some new features for main the Nexus application and has extended the functionality of some features from the previous release.

2 New Features

There are some new Nexus nodes and better Nexus configuration access control in this release's new features.

2.1 RPA Integration

Added a new service and associated components to be able to communicate document and information retrieval from external systems via an RPA service. New RPA node to create RPA tasks from incoming DICOM files. RPA management UI to manually create jobs to retrieve data via an RPA.

2.2 JWT System Integration

Added the option for Nexus services to integrate with external services via JWT authentication.

2.3 White Listed HTML Files

Added properties to white list certain html entry points to user groups to prevent users being able to access UI components beyond their roles.

2.4 External Database Driven DICOM Import

Added a new service which is connected to an external PJ schema database for importing patient DICOM history and selectively importing DICOM Studies or Series. The service monitors the PatientLevel Database Table for new patient IDs being added. The service uses this to query external DICOM archives for the Imaging History for the patient ID. The resulting CFIND results are inserted into the StudyLevel and SeriesLevel of the same database. The service also monitors those tables for the status to be changed to indicate that the study or series should be imported and when a positive status change is found, the DICOM studies or series are CMOVED to a specified DICOM Destination AET (which needs to be known on the archives

holding the data).

2.5 Nexus Vue HTML5 DICOM Viewer

Integrated the NexusVue DICOM Viewer with the reporting platform to launch the viewer from the selected worklist entry.

3 Improvements

3.1 File Type Detection

Detect file type from File object by reading in first 20 bytes (should be big enough to cover all but the most obscure magic numbers). Removed unused FileType detection methods (duplicated in FileType enum).

3.2 Modality Shorthand

Added shorthand modality method in Modality class (e.g. R = CR, N = NM).

3.3 DICOM Constants

New enum for PhotometricInterpretation with getter based on ColorSpace constants.

3.4 PNG Dicomisation

Added the ability to convert PNG images to DICOM secondary captures.

3.5 RIS Import Visibility and Access

Added the ability to view what jobs have been created for importing data from an external RIS as part of the workflow management service and UI. The option to manually create a RIS job to pull in prior reports and clinical docs has been added to the workflow manager user interface.

3.6 Continuous Mode HL7 File Reader

Added the option to the HL7 File Reader node to operate in continuous mode in the same way it was possible to use the DICOM File Reader.

3.7 Referral Portal UI

Cleaned up the referral portal UI and improved the GP searching.

3.8 Neuro Referral Service UI

General improvements to the look and feel of the Neuro-Referral Service user interface and made dark mode the default.

3.9 Manual Purging

Changed the access for manual purging so that only admin users can manually purge data.

3.10 Tele-reporting dashboard

Updated the dashboard view to restrict the report list by clinical group and to have the option to turn off the search bar query.

3.11 Reporting Platform UI

Removed the reporter and status labels from reporting page.

3.12 Workflow Manager

Implemented a CSV download of DicomExportJobs from Workflow Status Page. Added label to show number of CSV jobs on auto-upload. Added default priority config.

3.13 DICOM Tag Editor UI

Modified DICOM tags and AET to include placeholder text and tooltips. Modified the AET layout and alignment. Created a DICOM Tag Lookup to search, filter and automatically input DICOM tags from a list and modified the tooltip functionality. Modified TagMappingConfig class to be able to add the field from DICOM tag lookup to all the panels.

3.14 Nexus Preferences UI

Added feature to enable/disable tooltip

3.15 General UI

Changes have been made to tidy up the UI components in places. The look and feel options have been reduced to two; a light and dark mode. Tidied up the login screen.

3.16 DICOM Lite Viewer Update

Converted possible signed array to unsigned and fixed pixel interception for correct windowing. Removed irrelevant tools, adjusted sizing and orientation locations and added scaling for windowing sensitivity. Modified rotation application, added new customisable Snackbar and added dismiss feature. Added dismiss button as an option and improved text centring. Added loading for initial loading, added vertical scroll and improved scroll delta. Modified snackbar positioning and changed remove icon and text to close instead for image viewer. Enabled X-Ref and fixed some bugs. Fixed scout views and intercept application on CTs Fixed contour canvas scale, added placeholder text for blank series names and reduced colour-bar sizes.

4 Bug Fixes

4.1 HTML Character Encoding

Issue: The back tick character was incorrectly encoded in the String utility class.

Resolution: Corrected %60 (back-tick) added back-stroke html encoding.

4.2 HL7 Charset Parsing

Issue: . Null Pointer on some HL7 file streams

Resolution: Fixed charset issue with hidden char on end of charset value (on end of segment not trimmed). .

4.3 Minimum File Age

Issue: The DICOM File reader incorrectly calculated the minimum file age before processing.

Resolution: The node now compares the correct units of time when assessing file age.

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4.5 Splitter Node

Issue: The splitter node had a bug when reordering pipes, the indexing on the config could get mixed up.

Resolution: The splitter now correctly handle branch deletion and reordering.

4.6 DICOM to HL7 Config

Issue: There was an issue with the DICOM to HL7 config not encoding/decoding the HL7 report text in the config editor.

Resolution: The auto-report text is now correctly Base64 encoded/decoded between the client and server.

5 Known Issues

There is an issue reported where when using the DICOM tag editor, private tags in the header may not get correctly re-serialized. This is currently under assessment.

6 Installation Instructions

Before making any changes, the **docs** and **lib** folders in the install directory should be backed up along with the **nexus.jar** in the install root.

The libraries required for this release are:

nexus.jar	3.06.00
pjk.jar	1.20.00
pacsoology.jar	1.25.00
mint.jar	1.28.00

Plugin library versions are:

anon.jar	1.12.06
broker.jar	1.12.04
redact.jar	1.11.04

For Origin users:

websocket.jar	1.13.00
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An update MySQL library is potentially required depending upon the MySQL service.

The UI is updated via the files:

cloe.js.gz
pj.css