
SYNAPSE VNA v7.2 RELEASE ANNOUNCEMENT

April 13, 2021

The TeraMedica Division of FUJIFILM Medical Systems U.S.A., Inc., a leading provider of Enterprise imaging and medical informatics solutions, is proud to announce the release of Synapse VNA version 7.2. Synapse VNA is an enterprise-wide medical information and image-management solution that serves as a vendor-neutral, scalable, and organizationally aware storage and distribution system for DICOM and non-DICOM objects.

Software Updates

Synapse VNA 7.2 features the following updates and enhancements:

- **Connex Mobile & Connex Web**
 - Create an ad-hoc encounter for any patient in the VNA so you can upload content even if the patient wasn't scheduled on a worklist
 - Supports manual entry of encounter numbers to match existing values in the EHR (for notification purposes), and/or the VNA can auto-generate numbers by the VNA with configurable prefixes
 - View and search for the attending physician on the Connex Web worklist
 - Readiness for Connex Mobile 3.3, which will include all of the above, and
 - Support for Barcode scanning, to make it faster to identify patients
 - Usability enhancements, including the ability to sort and filter the worklist, a clearer link to get back to "today", the inclusion of the encounter date on search results, and a larger upload button
- **Dashboards and Widgets**
 - Display HL7 status trends with gauges, graphs, grids and number widgets
 - Filter on incoming/outgoing, specific clients, message types, responses, etc.
 - Store 1k characters of each message; search on a specific phrase in the grid widget
 - Upgraded the dashboard angular framework
 - Menu is on top and always visible
 - Search for a dashboard by name and keep multiple dashboards open in a tabbed layout
 - Export and import dashboard configurations, to share between users and systems
 - Dashboards dynamically resize based on window size
 - Select which columns appear in grid widgets
- **XDS**
 - Automatically register any non-DICOM content with an XDS registry
 - Create an XDS context to set default document codes and associate it with an STMO; use the rules engine to automatically route XDS data to the desired STMO (and corresponding XDS context)
 - Support for the IHE PIX profile to ensure the correct patient ID is used during registration

Synapse VNA 7.2 Minor Enhancements:

- **Non-DICOM:**
 - Performance improvements handling large files (1GB+) in the non-DICOM range request API, to better support playback of media files such as mp4s
 - Configure non-DICOM policies to shift the mp4 moov atom to the front of the file on dispatch for improved playback performance
 - Metadata Attributes summary is included by default on REST API calls, so Synapse Mobility, Synapse PACS, and other compatible viewers will display the attributes with other content from the folder
 - The attributes summary is also included when the folder is exported from the records screen
 - Added links to jump between the records screen View menu and the related DICOM associations screen for a study
- **Export:** Include patient MRN number in export zip file
- **Task Manager:** Release of a long running task manager, UI, and reporting, allowing controlled execution by authorized admins
 - Sample tasks include resending notifications (e.g. for a specific date range across an STMO), and populating the fields needed for thin slice lifecycle management
- **Rules Engine • Storage • ILM**
 - Added patient fields (full, first and last) as fields to use in rules
 - Updated the ILM simulator UI to show old and new rules side by side, for easier comparison
 - Changed DICOM ILM simulations to use ILM rules
 - Added the ability to copy “rules” so that it’s easier to create variations of complex rules for ILM simulations
 - Added support for IOCM (or GE) rejected flags as conditions in ILM rules, to prune rejected SOP instances and save space
 - Added the ability to change S3 Locations from the UI
- **QA**
 - All issues offer a "Leave as is - bypass QA issue" option
 - When a study fails order validation, a user can search for an existing order with either patient ID or accession number (and wildcards) to resolve the QA issue
- **Security Permissions**
 - Split “Delete MetaData” permission into “Delete Patient” and “Delete DICOM”; both are scoped to the orgs a user can access
 - Added the ability to configure and use a second field containing LDAP bind credentials for easier system-wide password changes

Architectural Changes:

- Upgraded to Java 11, WildFly 18 and related libraries
- Use Oracle flashback to create a rolling 24-hour flashback window that can be used to restore a database post upgrade (if needed)

Synapse VNA Notes:

- Support for the non-DICOM status field was removed from the REST API
- Open Reports will be discontinued in version 7.3 as most customers are using dashboards
- MINT (DICOM policies) will be removed in version 7.4; please work with customer service to transition any MINT policies to online policies
- Previous software versions of Synapse VNA will have a software upgrade path to Synapse VNA version 7.2.

Upgrade Requests: Please contact Nick Donofrio, Director of Client Services: nick.donofrio@fujifilm.com

SYNAPSE VNA v7.1 RELEASE ANNOUNCEMENT

July 7, 2020

Software Updates

Synapse VNA 7.1 features the following updates and enhancements:

- **Study Level Lifecycle Management – Rules Engine**
 - Create reusable lifecycle management rule sets that can be applied to one or more organizations (STMO) and/or policies
 - Leverage the flexibility of the graphical rules engine to quickly create rule sets based on multiple DICOM tags and custom criteria
 - Move studies to different storage tiers, or purge them from the system
 - SOP level image pruning allows selectively removing specific images, such as thin slices based on custom criteria
- **DICOMweb**
 - **Authentication:**
 - Use the same authentication tokens for QIDO-RS and WADO-RS calls as the VNA's non-DICOM REST API to simplify integration with 3rd party systems
 - Eliminates the need for systems to store user credentials for subsequent calls
 - **STMO Visibility:**
 - QIDO-RS supports querying by STMO, and/or returns the source STMO in the results
- **REST API**
 - Extended Patient Folder Metadata Search Query to support searches for multiple attributes
 - Added new Advanced Non-DICOM Search call to optimize Patient/Folder searches across multiple STMOs
 - Accessed from /rest/v2/metadata/nondicom/q
 - Parameters specified in JSON body, with sections for search options, org names, patient info, folder info, study info and attributes.
- **Restricted Content for DICOM Devices**
 - Configure individual DICOM devices to enable or prevent access to restricted content
 - Restricted status is indicated in DICOM tag (0040,1008)
 - Protect access to VIP patients or abuse victims
- **View Worklists in the VNA UI:**
 - View the encounters based worklists directly from the VNA UI
 - Search the worklist for specific encounters, patients, or date ranges
 - View entries that are no longer “active” on capture devices, and/or were filled
- **Map XDS Content to STMOs:** Use the graphical rules engine to route XDS content to specific STMOs based
 - Create rules based on Assigning Authority, Institution ID, Source ID or Specialty ID

Synapse VNA 7.1 Minor Enhancements:

- **UI Changes:**

- Added non-DICOM Folder Date and Last Updated Date to records screen
- Restricted content is hidden from the Orders screen (unless the user has “View Restricted” permissions)
- **Export:** Add passwords to exported Zip files to prevent unauthorized access
- **Security Permissions**
 - Added permission for ‘Export Studies to Desktop’, to allow users to send studies to other DICOM systems but prevent PHI from being downloaded to the desktop
 - Removed unused security permissions
 - Changed many permission names to for consistency and updated documentation
- **DICOM Supplement 205** (Encapsulation of STL Models for 3D Manufacturing) added to list of internal SOP classes
- **S3 API** uses multipart upload to enable storing files larger than 5GB
- **Added Remote Monitoring checks for Oracle RAC and DataGuard**
- **Support full Text Extraction** from common content types (txt, PDF, Word, Excel) for future analytics

Architectural Changes:

- HL7 Server moved to a separate process (outside of JBoss) for improved performance
- Support for Oracle 19c
- Upgraded to Angular 9
- Updated VNA Viewer to use HTML5 and eliminate Flash dependency

Synapse VNA

- Windows Server 2016, 2019
- Windows Server 2012 R2
- If using an Oracle DB the version requirement is 11g, 12c or 19c
- Browser Support: IE 11

Synapse VNA Notes:

- The EpicScan interface and plug-in will be discontinued at the start of 2021. Customers should switch to Connex Web, which offers:
 - A modern UI with drag and drop support for multiple files
 - Direct integration to Epic’s Hyperspace (or other EHRs via URL launch)
 - Department specific attributes, to store additional metadata with the content
- Previous software versions of Synapse VNA will have a software upgrade path to Synapse VNA version 7.1.

SYNAPSE VNA v7.0 RELEASE ANNOUNCEMENT

March 10, 2020

Software Updates

Synapse VNA 7.0 features the following updates and enhancements:

- **DICOMweb**
 - **Authentication:** Added support for basic authentication to the DICOMweb endpoint
 - Synapse VNA will only return studies a specific user is authorized to see, limited by the organizations the user is authorized for and that are configured for the DICOMweb endpoint they are accessing
 - Restricted studies will not be returned unless the user has permissions to view them
 - **Performance Tracking:**
 - DICOM associations search screen adds support for DICOMweb transactions
 - The Aggregate Performance screen includes metrics for QIDO-RS and WADO-RS
- **Worklist Improvements:**
 - Orders and encounters based worklist entries can be configured to fall off the worklist after images are stored or the study closes; the entry can be configured to be removed immediately, after a short delay, or at the end of the day to add flexibility for devices using Synapse VNA's DMWL query feature
 - DMWL responses from Synapse VNA can be configured to include or exclude restricted patients/encounters, to prevent unauthorized access to confidential information
 - ADT A03 messages can remove a worklist entry for a specific encounter, allowing patient cancellations to be reflected in the worklist
 - Added a permission to "View Restricted Worklist Entries", so that Connex Mobile and Connex Web users can see patient demographics for a restricted patient, capture images/content for them, but not have access to the images after upload (assuming the user does not also have View Restricted Content permission)
 - This is useful to allow any caregiver to capture content in a restricted department, but not have access to other restricted images
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- **Large File Uploads:** Improved performance uploading large (non-DICOM) files (> 1GB) using Connex Web and/or from the VNA admin console
 - The underlying architecture chunks large files for efficient transmission
 - The UI shows the progress of each file upload, and offers controls to pause/cancel
 - Validated 50GB files; designed to exceed that file size
- **Attribute Reports:** Synapse VNA creates a summary report of all attribute values and returns it as a file when the (non-DICOM) folder is retrieved
 - Exposes the attribute values to any viewer using the REST API without requiring additional formatting
- **Dashboards – DICOM Performance Trends** and more:
 - Added new widgets to trend DICOM and DICOMweb performance metrics over time
 - Monitor specific activities and/or devices
 - Metrics can include total or average associations, studies, images, total MB or average KBPS

- The "DICOM Current Bytes/Second" has a new configuration parameter to choose between the current calculation, "Rate per Association" and a new "Total System Throughput" calculation
- The "System Monitoring Chart" widget can now show the duration it took the check to run and the average value of the check, and is an excellent proxy to monitor database performance
- Stock dashboards have been updated and optimized for an 1080P HD monitor
- **XDS Repository support for XDS-I.b Manifests:** Synapse VNA can accept Provide and Register requests from an Imaging Document Source actor. Any documents received will be stored to the VNA and the metadata forwarded to the Registry
 - This allows legacy PACS systems to retain their imaging content (as the document source) and simply forward the manifest to the VNA. The VNA does not receive a copy of the images, allowing image federation without a migration.

Synapse VNA 7.0 Minor Enhancements:

- **Thumbnails for Unsupported Epic Object Types:** When Epic's Hyperspace does not support an object type on the SOAP Thumbnail Retrieve API, Synapse VNA returns thumbnail of a "play button", encouraging the user to double click the icon to have Epic launch the enterprise viewer to view the objects
- **Block Restricted over SOAP:** Added an option to prevent restricted content from being accessed over the SOAP API
- **C-FIND / QIDO-RS support for Referring/Requesting Physician:** Only patients with matching criteria will be returned
- **Tag Morphing Rules applied to C-FIND results** when configured in the Rules Engine, to match C-MOVE results
- **UI Changes:**
 - **Message on Login Screen:** System administrators can configure a message for display on the login screen. This can be used to display required acknowledgement messages or general system information
 - Added the STMO field to the Orders page, along with the observation date for easier reconciliation

Architectural Changes:

- Upgrade to Java 8 and change JDK to Corretto for increased performance
- Upgrade to Apache Tomcat 9.0.27 for improved security and performance
- Deprecated server support for the following technologies: AIX, Solaris, and Windows Server 2008
- Added support for Windows Server 2019

Synapse VNA

- Windows Server 2016, 2019
- Windows Server 2012 R2
- If using an Oracle DB the version requirement is 11g or 12c
- Browser Support: IE 11

Synapse VNA Notes:

- Previous software versions of Synapse VNA will have a software upgrade path to Synapse VNA version 7.0.