



eRAD RIS

RELEASE ANNOUNCEMENT

Build 4.2024.081

UPDATED AUGUST 1, 2024

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PUBLICATION HISTORY

Revision	Author	Description
August 1, 2024	Kevin Brooks, Michelle Mahabir / Hilary Saltmarsh	<ul style="list-style-type: none"> Commercial release.

SUMMARY

Release Announcement

This release of ERAD RIS 4.2024.081 updates and enhances the DICOM Image download workflow.

New Features

This release introduces the following features and enhancements:

Category	Redmine #	Subject	Description
Patient WF - Images	34789	Security enhancements to DICOM Image download	Configurable DICOM Image download request authentication messaging.
Provider Images	35431	Support for Image DICOM Download in Provider Portal	This enhancement to Provider Images adds support for DICOM download of images in the Provider Portal in ZIP and ISO formats.
Provider Images	35741	Failure monitoring and user notification for DICOM Download	This enhancement to Patient WF - Images introduces automatic failure monitoring and user notification for media requests.

SORTED BY CATEGORY AND REDMINE

Refer to the [FEATURE DETAILS](#) section below for configuration and usage information.

Resolved Issues

This release resolves the following issues:

Category	Redmine #	Subject
Provider Images	34653	Resolved Provider Images issue where the notification indicating downloads were ready was not displaying.

SORTED BY CATEGORY AND REDMINE

FEATURE DETAILS

Patient WF - Images

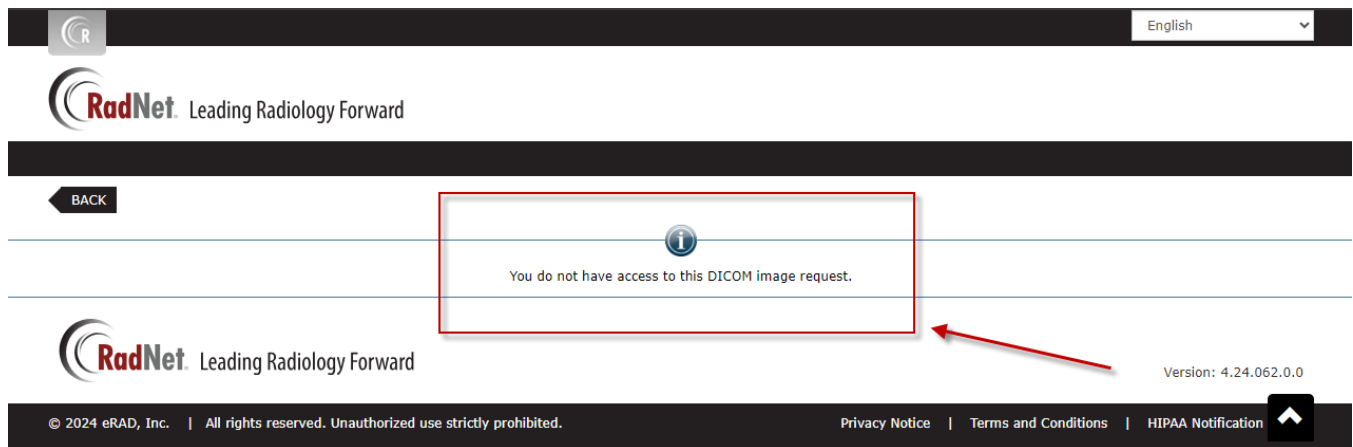
Feature #34789 - Security enhancements to DICOM Image download

Summary

Configurable DICOM Image download request authentication messaging.

Feature Description

With these changes, the unauthorized access message displayed when clearing DICOM download media requests is now configurable.



Configuration Instructions

No System Administrator actions are necessary to enable this feature.

RIS Client

Changes to ParagraphConfig Lookup Table

- Optionally, adjust the text of the new `PortalDicomRequestDoNotHaveAccess` and existing `PortalDicomFileDoNotHaveAccess` messages.

The following related settings were added or updated:

Setting	Default	Purpose
<code>PortalDicomRequestDoNotHaveAccess</code>	You do not have access to this DICOM image request.	The message to display if a user attempts to access a DICOM Image Request not associated to them. Updated by #34789

Provider Images

Feature #35431 – Support for Image DICOM Download in Provider Portal

Summary

This enhancement to Provider Images adds support for DICOM download of images in the Provider Portal in ZIP and ISO formats.

Background

Previously, the Referring Portal did not support downloading images in DICOM format.

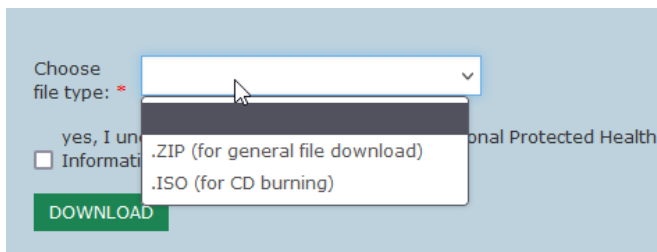
Feature Description

With this change, Referring Physicians can now download images as DICOM for their selected exam from the Referring Portal.

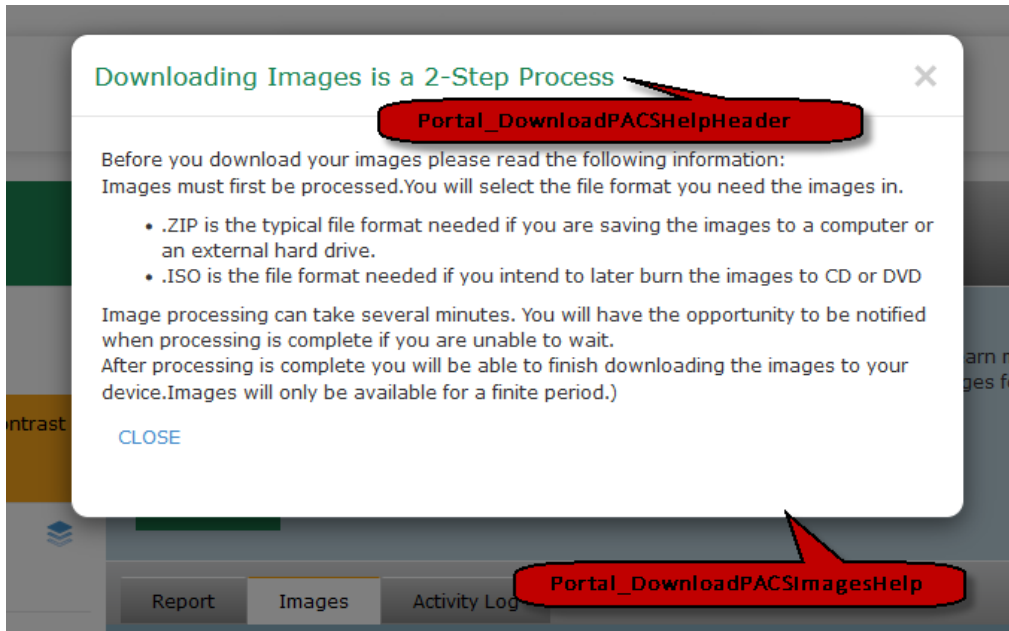
1. From the **Images** tab, click the **Download** button to expand the download panel.



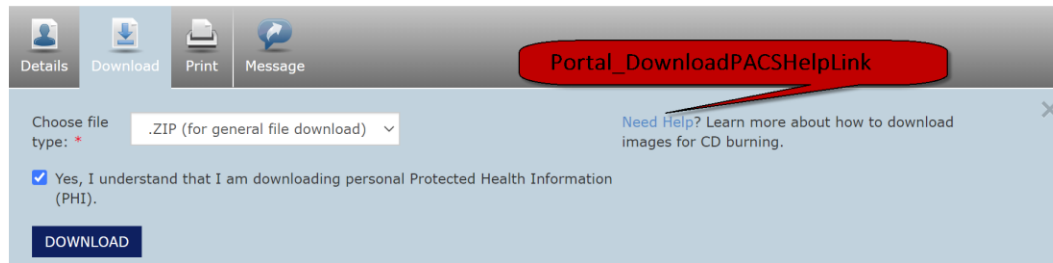
2. Select the type of download file (.ZIP, .ISO):



- a. PortalDicomFileTypeZip
 - ZIP file (Paragraph config: “PortalDicomFileTypeZIP”) which will request a Zip file to be generated for the patient to download the file once it is available.
 - b. PortalDicomFileTypeISO
 - ISO file (Paragraph config: “PortalDicomFileTypeISO”) which will request a ISO file for burning to a CD/DVD to be generated for the patient to download the file once it is available.
3. The first request to download images (or clicking the Need Help? link) presents a dialog describing how to use the download feature:



4. Check the consent to download PHI checkbox:



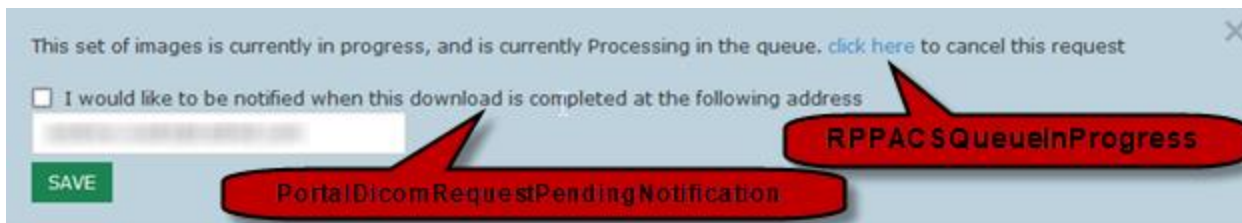
5. Click **Download** to initiate the request:

- The Portal presents a progress icon while a background process sends a request to PACS to query, retrieve, and package the DICOM in the selected file format.

CT Angiography Head
 7-14-2021 | 7:55 AM
 Signed1



A PROCESSING ICON WILL DISPLAY NEXT TO THE EXAM LIST WHILE THE REQUEST IS PENDING.



The patient's primary email address will pre-populate into the email address field. However, a notification will not be sent to the desired email address unless the **I would like to be notified** checkbox is selected and the changes are saved.

6. Once the request is processed and the download is available.

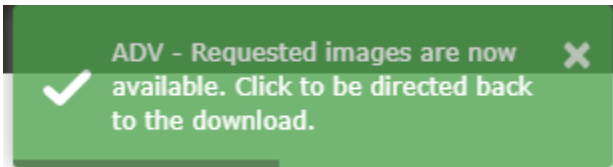
CT Abdomen -- with and without...
 10-14-2020 | 9:35 AM
 Signed1



A DOWNLOAD ICON WILL DISPLAY ONCE THE FILE IS AVAILABLE.



7. Upon clicking, the user will receive a notification guiding them back to the downloaded exam.
 - a. **RPPACSDownloadIsAvailableNotification**



WHEN CLICKED THE USER WILL BE DIRECTED BACK TO THE DOWNLOADED EXAM.

8. All download requests will be stored in the database and a history is available via the **Provider's Account Page** in the Image Download tab.
 - a. A similar grid is available to the Portal Admin to View/Cancel/Remove image request that are pending/downloading.

User Details		Preferences	Proxy & Affiliations	Account	Add Ons	Image Download
Patient Name	Exam Date	Exam Description	Created	Completed	Download	
Blair, M	7/09/2024 10:21 AM	X-Ray Feet	7/09/2024 11:21 AM	7/09/2024 11:23 AM	7/09/2024 11:35 AM	Remove
Smith, M	7/08/2024 1:28 PM	CT Leg without Contrast	7/08/2024 3:01 PM	7/08/2024 3:01 PM	7/08/2024 3:03 PM	Remove
Smith, M	7/08/2024 1:25 PM	CT Cervical Spine without Contrast	7/08/2024 2:55 PM	7/08/2024 2:56 PM		Remove
Smith, M	7/08/2024 1:26 PM	CT 3 Phase	7/08/2024 2:51 PM	7/08/2024 2:52 PM		Remove
Smith, M	7/08/2024 1:27 PM	CT Ankle Arthrogram	7/08/2024 2:39 PM	7/08/2024 2:41 PM		Remove
Smith, M	6/10/2024 11:13 AM	CT Cervical and Lumbar Spine without Contrast	7/08/2024 10:11 AM	7/08/2024 10:12 AM		Remove
Smith, M	7/08/2024 9:28 AM	CT Cervical and Lumbar Spine without Contrast	7/08/2024 10:06 AM	7/08/2024 10:07 AM		Remove

Download Limiting

To prevent abuse, users are limited to the frequency and number of downloads. Limiting criteria is controlled via system configuration settings. If the user does exceed one of these restrictions, they will be prompted to delete an active request and the download form will be disabled.

The Image Download tab can be accessed to remove any pending downloads to help alleviate the queue.

- The **PortalPACSMediaRequestQueueLimit** System Config setting limits the number of requests a user can be downloading concurrently. No additional requests can be started (queued) until an active request is completed.
- The **PortalPACSMediaRequestDownloadLimit** System Config setting limits the number of study files a user can have downloaded at any given time. No additional files will be downloaded until a previous file has been removed via the **PortalPACSMediaDownloadAutoDeleteHours** setting or manually by the user.

Additionally, if the URL for the current active session is modified to a different media session ID, which is not associated to the active user, a message from **PortalDicomFileDoNotHaveAccess** will present and notify the user that they do not have access to download the file.

Known Limitations

There is additional functionality planned for a future release that will change the implementation approach, and is expected to impact how this feature will be configured:

- A related future enhancement will add support for uploading CD images from the Portals:
FEATURE #31692 – UPLOAD CD IMAGES FROM PORTALS

Service Team Upgrade Instructions

The Service Team must complete the following actions to deploy this feature:

Portals

See also CHANGES TO PARAGRAPHCONFIG LOOKUP TABLE.

Changes to applicationsettings.config

- Enable this feature by setting `PACSIImageDownloading` to `True` and;
- Setting the `DICOM_Download` appconfig option to `True` for any PACS servers that are associated with the desired images.

Changes to ParagraphConfig Lookup Table

Setting	Default	Purpose
RPPACSActiveQueueLimit	You are limited to {0} active downloads and {1} queued requests. To download these images, click here to remove a previous image request.	Text displayed when <code>PortalPACSMediaRequestQueueLimit</code> has been exceeded. Updated by #34531
RPPACSDownloadIsAvailable	Images are available to download {0}. This download will expire on {1}.	Text displayed once a file is available to download, which will also contain the link for the download. Updated by #34531
RPPACSDownloadIsAvailableNotification	Requested images are now available. Click to be directed back to the download.	Toast notification displayed when a file becomes available to download. Updated by #34531
RPPACSIImageReadyForDownload	Your images are now available to download from the portal {0}.	Email message html sent when a file becomes available to download. Optionally includes link referring back to the study. Updated by #34531
RPPACSIImageReadyForDownloadSubject	Images ready for download.	Email Subject sent when a file becomes available to download. Updated by #34531
RPPACSIImageReadyForDownloadText	Your images are now available to download from the portal at {0}.	Email message text sent when a file becomes available to download. Optionally includes link referring back to the study. Updated by #34531
RPPACSLastDownloadDate	Last downloaded on {0}.	Text displayed with the most recent date when a file has previously been downloaded. Updated by #34531
RPPACSQueueInProgress	This set of images is currently in progress and is currently {0} in the queue. Click here to cancel this request.	The message to display to the referring portal user when the study is currently in the PACS request queue. Updated by #34531

Existing settings in the ParagraphConfig Lookup Table

The following settings were introduced with Feature #27190 – Image DICOM Download in the Patient Portal

Setting	Default	Purpose
Portal_DownloadPACSIImagesHelp	<p>Process for Downloading Images</p> <p>Downloading Images is a two-step process:</p> <ol style="list-style-type: none"> Select images to be processed: <ul style="list-style-type: none"> Select the file format for your images: <ul style="list-style-type: none"> .ZIP is the typical format when saving images to a computer or an external hard drive. .ISO is used if you intend to later burn the images to CD or DVD. Download processed images to your device. <ul style="list-style-type: none"> Image processing can take several minutes. You will be notified when processing is complete. <p>Once processed, images will only be available for a finite period.</p>	<p>Help dialog text displayed to provide directions on how the download process works.</p> <p>May include system config values for queue limits:</p> <ul style="list-style-type: none"> {0} PortalPACSMediaRequestActiveQueueLimit {1} PortalPACSMediaRequestAvailableDownloadLimit {2} PortalPACSMediaDownloadAutoDeleteHours <p>Updated by #27190</p>
Portal_DownloadPACSIImagesHelpLink	{Need Help?} Learn more about how to download images for CD burning.	Link to directions on how the download process works. Displayed on right side of download form. Updated by #27190
Portal_DownloadPACSIImagesHelpHeader	How To Download Images	Title text of help dialog displayed to provide directions on how the download process works. Updated by #27190
PortalDicomFileDoesNotExist	There was a problem downloading your images, please make a new request.	The message to display if a user attempts to download a file that was manually removed from the server. Updated by #27190
PortalDicomFileDoNotHaveAccess	You do not have access to this download.	The message to display if a user attempts to download a file not associated to them. Updated by #27190
PortalDicomFileTypeISO	.ISO (for CD burning)	Text displayed in the <input type="text" value="Choose file"/> type: dropdown. Updated by #27190
PortalDicomFileTypeZIP	.ZIP (for general file download)	Text displayed in the <input type="text" value="Choose file"/> type: dropdown. Updated by #27190

Setting	Default	Purpose
PortalDicomRequestPendingNotification	I would like to be notified at the following address when this file is completed and available for download.	Checkbox text displayed for option to notify the patient when request is processed and available for download. Updated by #27190
PortalDicomWillBeNotified	Your request to be notified has been updated.	Text displayed when a user updates desired notification information. Updated by #27190

Configuration Instructions

System Administrators must complete the following actions to enable this feature and Service Team assistance is required for some actions:

RIS Client

Changes to SystemConfig Lookup Table

- Configure `RPPACSMediaDownloadLocation` for your installation.
- Adjust other settings in consultation with the Service Team.

The following related settings were added or updated:

Setting	Default	Purpose
RPPACSMediaDownloadLocation	Value=Path as String [a network share or local drive], Default=[C:\PACS_Media_Files\]	Target path to save downloaded PACS image files requested via the Referring Portal. Updated by #34531
PortalPACSMediaDownloadAutoDeleteHours	Value=Hours as Integer, Default=[72]	Number of hours PACS image files will be available for download from the server. Updated by #27190
PortalPACSMediaRequestDownloadLimit	Value=Image Files as Integer, Default=[10]	Maximum number of downloaded PACS study image files allowed per user. Additional studies allowed after cleanup by <code>PortalPACSMediaDownloadAutoDeleteHours</code> . Updated by #27190
PortalPACSMediaRequestQueueLimit	Value=Requests as Integer, Default=[3]	Maximum number of (concurrent) queued PACS image requests allowed per user. Updated by #27190

Feature #35741 - Failure monitoring and user notification for DICOM Download

Summary

This enhancement to Patient WF - Images introduces automatic failure monitoring and user notification for media requests.

Background

Previously, media requests were failing to terminate properly, remaining active within the environment and continuously attempting to retry indefinitely. The only way to clear requests was to manually remove them from the queue.

Feature Description

With these changes, the system will now log error events from the check media request, as well as monitor the length of time the media request has been active. Additionally, requests that have failed and retried can be monitored and removed from the queue via

`PACSIImageDownloadingNumberOfAttemptAfterAutomaticCancel` to ensure the queue is being cleared as needed.

If the request has been active too long, or the max attempts have been reached, the request will be canceled and the user will be notified, if an email address was specified.

Service Team Upgrade Instructions

No Service Team actions are necessary to deploy this feature; however, optional configuration is available:

Database

Changes to Database

Three new columns have been added to the `c_pacs_media_request` table:

`request_date`: Initially the value will match with the created date of the media request, but then will be updated to the current date for each new request.

`error_note`: Errors that might have occurred while checking for the media request on the PACS server.

`attempts`: The number of attempts the system tried a new media request.

Portals

Changes to applicationsettings.config

- `PACSIImageDownloadingInterval` – The number of milliseconds that elapse before looping through and checking for an update on the active media request on the PACS server.
 - Default = 6000 milliseconds
- `PACSIImageDownloadingDaysToCancel` – The number of days since the request date before cancelling and trying to re-create a new request attempt.
 - Default = 1
- `PACSIImageDownloadingNumberOfAttemptsAfterAutomaticCancel` – The number of times that the system will try to recreate a media request that has failed or timed out previously. (The initial request from the user would be the first attempt, and a new attempt would be when the current request errors out of has reached (`PACSIImageDownloadingDaysToCancel`) days.
 - Default = 3
- `PACSIImageDownloadingMaxDaysToCancelFromCreated` – Max number of days a media request can be active regardless of number of attempts, to allow to be proceeds and checking on the PACS media server.
 - Default = 5

Configuration Instructions

No System Administrator actions are necessary to enable this feature; however, optional configuration is available:

RIS Client

Changes to ParagraphConfig Lookup Table

- Optionally, adjust the text of the new paragraph configs for either the Patient Portal or the Provider Portal.

The following related settings were added or updated:

Setting	Default	Purpose
<code>PPPACSDownloadRequestCancelled</code>	One of your image download requests, submitted on {0}, has failed and the request has been cancelled. To retry your request, use the following link: {1} here.	Email message sent when a PACS media request has been auto cancelled. Updated by #35741

Setting	Default	Purpose
PPACSDownloadRequestCancelledSubject	An image download request has failed.	Email message subject sent when a PACS media request has been auto cancelled. Updated by #35741
PPACSDownloadRequestCancelledText	One of your image download requests, submitted on {0}, has failed and the request has been cancelled. To retry your request, use the following link: {1}.	Email message text sent when a PACS media request has been auto cancelled. Updated by #35741
RPPACSDownloadRequestCancelled	One of your image download requests, submitted on {0}, has failed and the request has been cancelled. To retry your request, use the following link: {1} here.	Email message subject sent when a PACS media request has been auto cancelled. Updated by #35741
RPPACSDownloadRequestCancelledSubject	An image download request has failed.	Email message subject sent when a PACS media request has been auto cancelled. Updated by #35741
RPPACSDownloadRequestCancelledText	One of your image download requests, submitted on {0}, has failed and the request has been cancelled. To retry your request, use the following link: {1}.	Email message text sent when a PACS media request has been auto cancelled. Updated by #35741

VERSION DETAILS

Code Stream

The following source code branches have been merged into this release:

