

Server Update

for eRAD RIS

Version 2.0

Build 2.2016.7

Update 2.2016.7.14

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INTENDED AUDIENCE

The intended audience for this document is the RadNet Clinical Systems team and the eRAD Support/Service team.

It is appropriate to share the document with any customers applying the patch, in order to review new feature descriptions and resolved defects.

WHO IS AFFECTED

Build 2016.7 installs. This server update must be applied to 2016.7.13.

NEW FEATURES

UTILIZATION MANAGEMENT

FEATURE #18166/17708 – SET DEFAULT UM STATUS AND RESOLUTION CODES FOR GOLD CARD AND STAT ORDERS

When configured, special handling for Gold Card or STAT orders requires that the orders be advanced to scheduling, bypassing the UM process. Previously, the UM flag was set to “Y” to allow scheduling, but the order would remain in Received status.

It is now possible to configure which Status and Resolution codes will be used in these scenarios. The defaults are defined by the following System Configuration settings:

- UMDefaultSTATStatusCode
- UMDefaultSTATResolutionCode
- UMDefaultGoldCardStatusCode
- UMDefaultGoldCardResolutionCode

If either UMByPassSTAT or UMGoldCardAutoApprove is set to Y, the order’s status code and resolution code will be immediately changed to match the System Configuration values. In addition, the following values are automatically set:

- UM Finalized Date = Current Date/Time
- UM Finalized by User ID = “system”
- UM Final Status Hours = 0

FEATURE #18168/17580 - AUTOMATICALLY UPDATE EXAM STATUS BASED ON ATTRIBUTES OF SELECTED UM STATUS

Previously, when a UM Reviewer marked all procedures in an order as Not Recommended, the Patient Folder continued to display the order in an Ordered status, with the Procedure column displaying as blank due to the fact that no active procedures were associated. This could be confusing in cases where the UM Reviewer needed to go back to the case (e.g. they receive a call from the referring provider) or to other RIS users.

For this reason, a new System Configuration value has been added called *UMDefaultCancelledReasonCode*. This configuration value is dependent on a corresponding entry in the *CancelStudyReason* look-up table.

The workflow will proceed as follows: First, the system will look at the order once it is marked as UM Complete. UM Complete is determined by looking at each ordered procedure that requires utilization review to see if it is in a final UM Status. Next, the system will determine if the final UM Status can advance to scheduling or not. For example, Recommended can be scheduled while Not Recommended typically cannot. This is determined by verifying that the Final Flag on the UM Status is set to "Y" and the Schedule Flag is set to "N."

If it is determined that all the procedures for the order require utilization review and none can advance to be scheduled, the system will perform the following tasks:

1. Set the Status Code for the order to Order Cancelled.
2. Set the Cancelled by User ID field for the Order to "system."
3. Set the Cancelled Date for the order to the current date and time.
4. Set the Cancelled Reason Code for the order to the *UMDefaultCancelledReasonCode*.

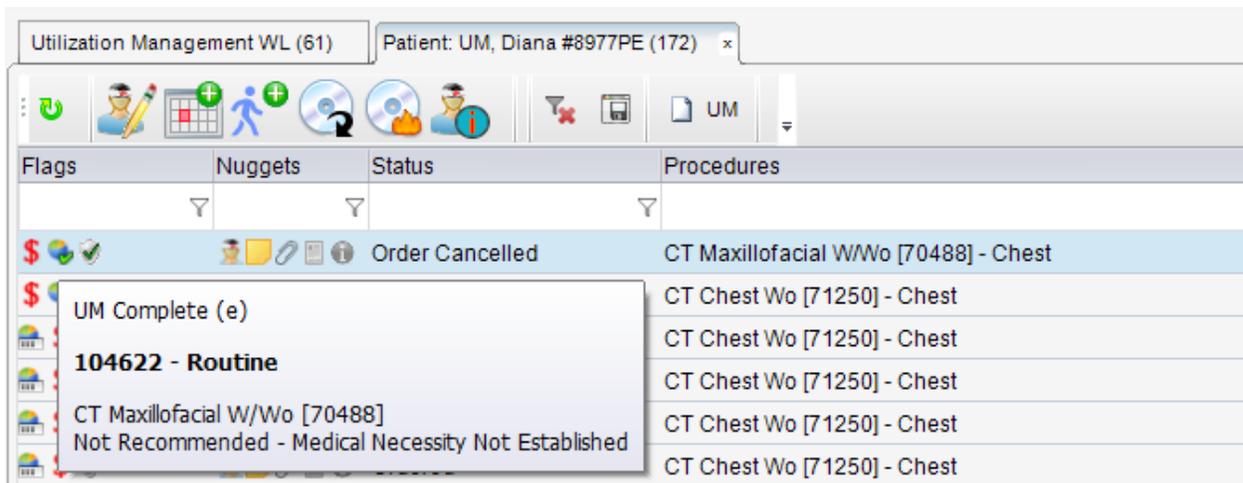
The following is an example of the audit log for the above scenario.

```

Event Time: 08-21-2017 03:38:15.836 PM Client IP Address: ::1

Changed c_order
  status_code: 'OrderCancelled' (was 'OrderSigned')
  cancelled_by_user_id: 'system' (was 'nothing')
  cancelled_reason_code: 'UMDenied' (was 'nothing')
  um_complete_flag: 'Y' (was 'N')
  um_owner_user_id: 'chasinl' (was 'nothing')
  cancelled_date: '08-21-17 3:38:14 PM -03:00' (was 'nothing')
Changed c_order_item
  procedure_code: '70488'
  um_status_code: 'NotRecommended' (was 'Received')
  um_resolution_code: 'MedNec' (was 'nothing')
  um_finalized_date: '08-21-17 3:38:14 PM -03:00' (was 'nothing')
  um_final_status_hours: '40' (was 'nothing')
  um_finalized_by_user_id: 'spencer' (was 'nothing')
  um_reviewed_date: '08-21-17 3:38:14 PM -03:00' (was 'nothing')
  um_reviewed_by_user_id: 'spencer' (was 'nothing')
  um_procedure: 'CT Maxillofacial W/Wo [70488] - Chest' (was 'nothing')
  um_status: 'Not Recommended - Medical Necessity Not Established' (was 'nothing')
  um_clock: '40 of 30' (was 'nothing')
    
```

Below is an example of a UM order for which all exams on the order are moved to a Final UM status that indicates no scheduling is possible.

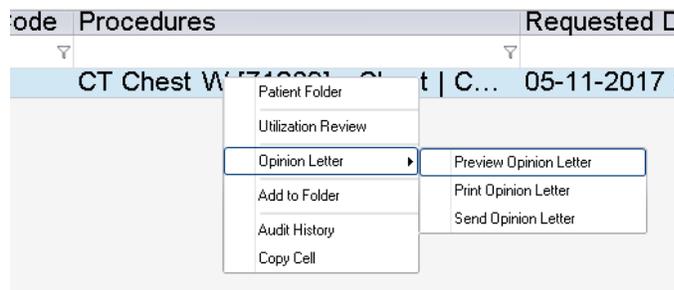


FEATURE #18170/17530 – RIS USERS CAN NOW PREVIEW AND DISTRIBUTE THE UM OPINION LETTER

Previously, the UM Opinion Letter was only available to be previewed from the Utilization Review screen via the UM Opinion Letter tab. Sometimes it is necessary for other RIS users to preview or distribute the UM Opinion Letter. To accomplish this, a new context menu item has been added to the Patient Folder and UM WL called “Opinion Letter.” This option will be available when the UM Required Flag = Y and the user has FULL access to a new access string: [Clinical.OpinionLetter](#).

The Opinion Letter context menu item will have three options:

1. Preview Opinion Letter
2. Print Opinion Letter
3. Send Opinion Letter



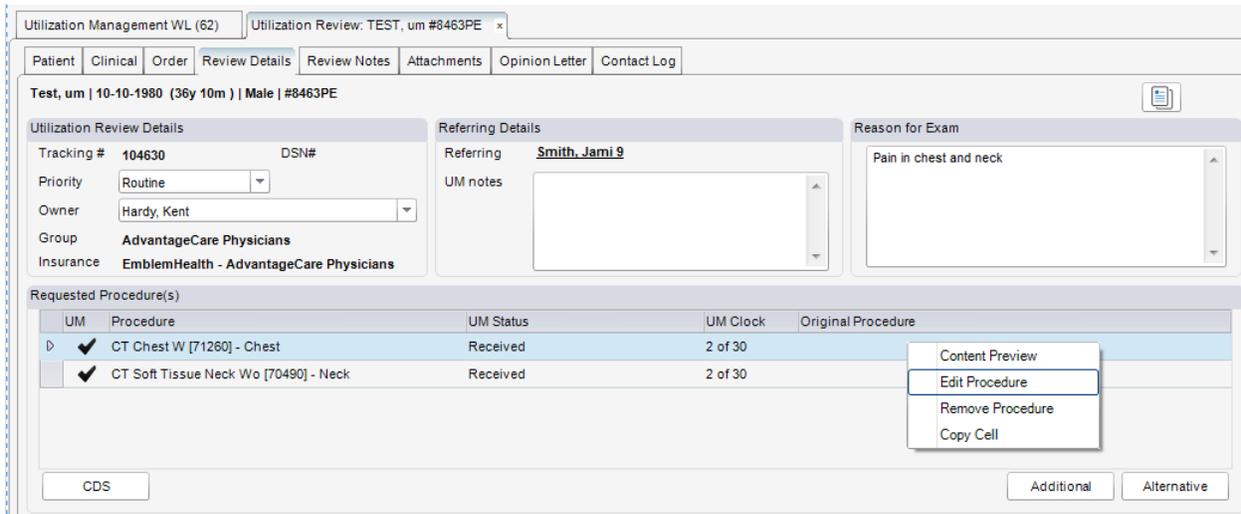
Access to these three sub-menu options can be controlled via the access strings:

- [Clinical.OpinionLetter.Preview](#)
- [Clinical.OpinionLetter.Print](#)
- [Clinical.OpinionLetter.Send](#)

FEATURE #18172/17529 – UM REVIEWERS CAN NOW CHANGE THE REQUESTED PROCEDURE

When adding UM orders to RIS, the data entry team sometimes mistakenly adds the wrong procedure to the order. The UM reviewer would previously have to modify the existing order via the Schedule Order screen because adding the correct procedure as an Alternative exam for a simple data entry error would skew the statistics. It is now possible for the reviewer to modify the ordered procedure from the Utilization Review screen.

The context menu on the Requested Procedure(s) grid on the Review Details tab has been enhanced to include both **Edit Procedure** and **Remove Procedure** menu items.



For the Remove Procedure option, the following logic is used to determine if the user can delete the procedure from the order.

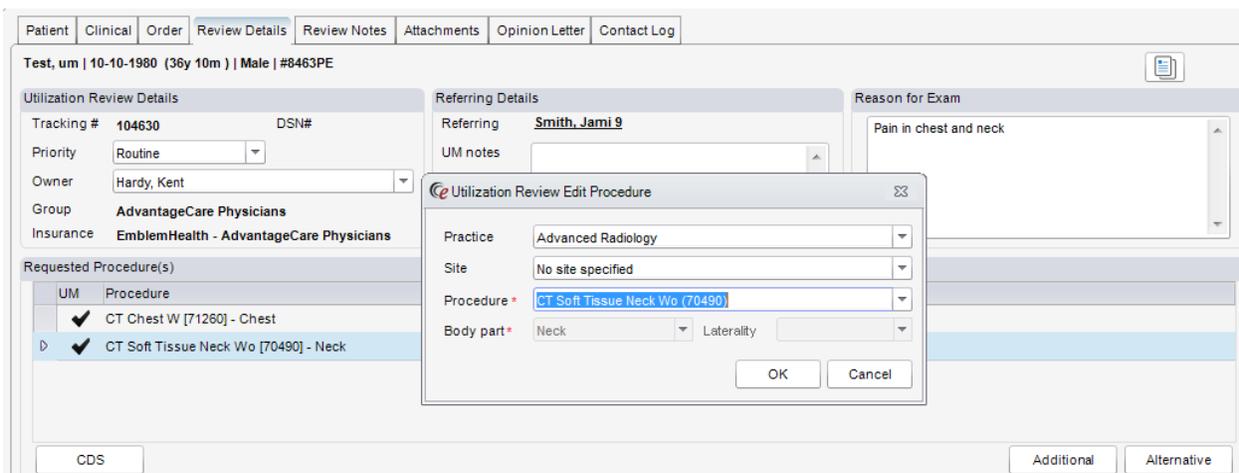
1. If the procedure is the only one for the order, the user is prevented from removing it and prompted with "At least one procedure is required."
2. If the procedure being removed already has a study associated with it (has been scheduled or is further in the workflow), the user is prevented from removing it and is prompted with "The procedure you are deleting is currently in Scheduled status. Please notify the appropriate person to make adjustments to the appointment."

For the Edit Procedure option, similar logic applies. If the procedure being removed already has a study associated with it (has been scheduled or is further in the workflow), the user is prevented from removing it and is prompted with "The procedure you are deleting is currently in Scheduled status. Please notify the appropriate person to make adjustments to the appointment". Note that the word "Scheduled" will be replaced with the actual status of the study.

While adding the above logic to not adjust ordered procedures that have studies associated, it was decided to also prevent and display a message to the user for the following scenarios:

1. When specifying an alternative procedure for an order item that already has a study associated, the user is prompted with: "The procedure you are recommending an alternative to is currently in scheduled status. Please notify the appropriate person to make adjustments to the appointment."
2. When removing an alternative procedure for an order item that already has a study associated, the user is prompted with: "The procedure you are deleting is currently in Scheduled status. Please notify the appropriate person to make adjustments to the appointment."
3. When adding an additional procedure for an order that already has at least one study associated, the user is prompted with: "The order you are adding an additional procedure to has a procedure in scheduled status. Please notify the appropriate person to make adjustments to the appointment."
4. When removing an additional procedure for an order item that already has a study associated, the user is prompted with: "The procedure you are deleting is currently in Scheduled status. Please notify the appropriate person to make adjustments to the appointment."

If the above validation passes when editing a procedure, the user is presented with a procedure picker so he or she can modify the procedure and replace it at the order item level.

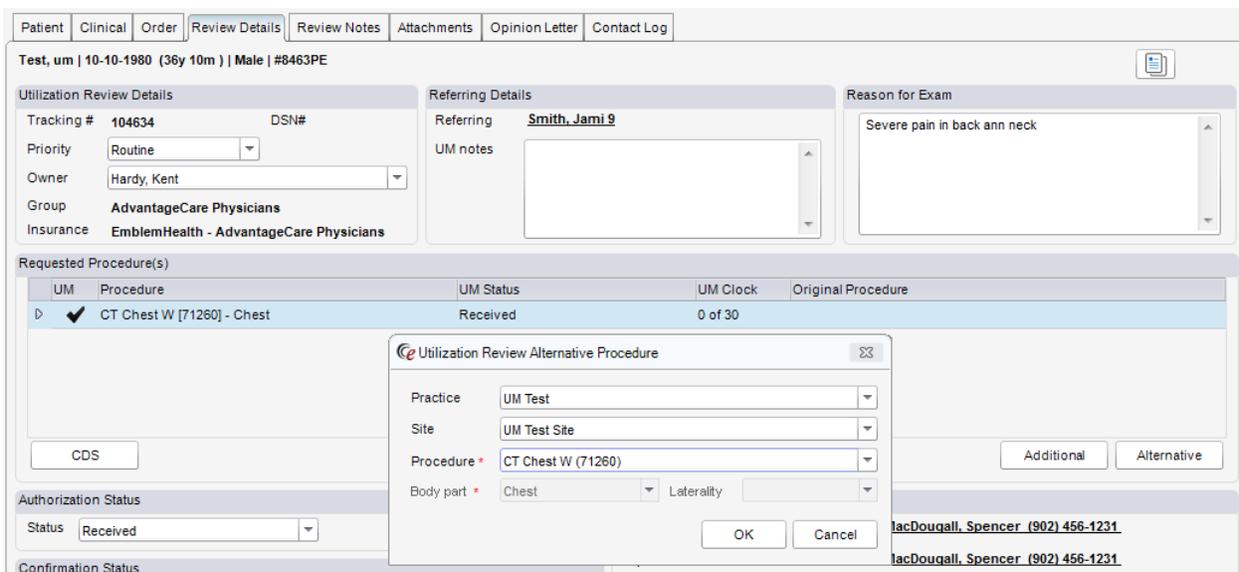


When selecting Remove Procedure, the user is prompted with "Are you sure you want to remove the procedure?" Selecting yes will delete the order item.

18169 - UM REVIEWERS CAN NOW CHOOSE ANY ACTIVE PROCEDURE, UNLIMITED BY THE CURRENT SITE'S SCHEDULE GROUP

When a UM Reviewer wishes to recommend an alternative procedure, or add an additional procedure, or edit the procedure, sometimes it is not a procedure that can be performed at the practice or site for which the order was created. Currently, there are some restrictions on what procedures are available in the dropdown when selecting Alternative or Additional procedures. The UM Reviewer should have access to any active procedure when choosing the procedure via UM workflow.

The utilization review procedure picker has been enhanced to include dropdowns for both Practice and Site. When editing the existing procedure or specifying an alternative procedure, the Procedure dropdown will default to the original ordered procedure.



If the user changes the Procedure dropdown to a procedure that cannot be performed at the site or practice specified with the order, he or she is prompted with “The selected procedure cannot be performed at this Site or Practice. Please select a new Practice and Site from the list.”

If the user changes the Procedure dropdown to a procedure that cannot be performed at the site but is available at the practice specified with the order, he or she is prompted with “The selected procedure cannot be performed at this Site. Please select a new Site from the list.”

The Practice and Site dropdowns are then filtered to present the user with only practices and sites that can perform the newly selected procedure. This is accomplished by comparing active procedure codes against the configured schedule groups.

When adding additional procedures, the reviewer is not limited by the practice and site selection and will not be prompted if the procedure cannot be performed.

NEW CONFIGURATION SETTINGS

SYSTEM CONFIGURATION SETTINGS

Setting	Default	Purpose
UMDefaultCancelledReasonCode	N/A	(value = string) The default cancelled reason code for orders denied during the utilization review process.
UMDefaultGoldCardResolutionCode	N/A	(value = string) The default gold card utilization review resolution code.
UMDefaultGoldCardStatusCode	N/A	(value = string) The default gold card utilization review status code.
UMDefaultSTATResolutionCode	N/A	(value = string) The default STAT utilization review resolution code.
UMDefaultSTATStatusCode	N/A	(value = string) The default STAT utilization review status.

ACCESS STRINGS

Setting	Default	Purpose
Clinical.OpinionLetter	Full	Controls access to the WL context menu Opinion Letter.
Clinical.OpinionLetter.Preview	Full	Controls access to the WL context menu Opinion Letter/Preview Opinion Letter.
Clinical.OpinionLetter.Print	Full	Controls access to the WL context menu Opinion Letter/Print Opinion Letter.
Clinical.OpinionLetter.Send	Full	Controls access to the WL context menu Opinion Letter/Send Opinion Letter.

RESOLVED ITEMS

eRAD RIS

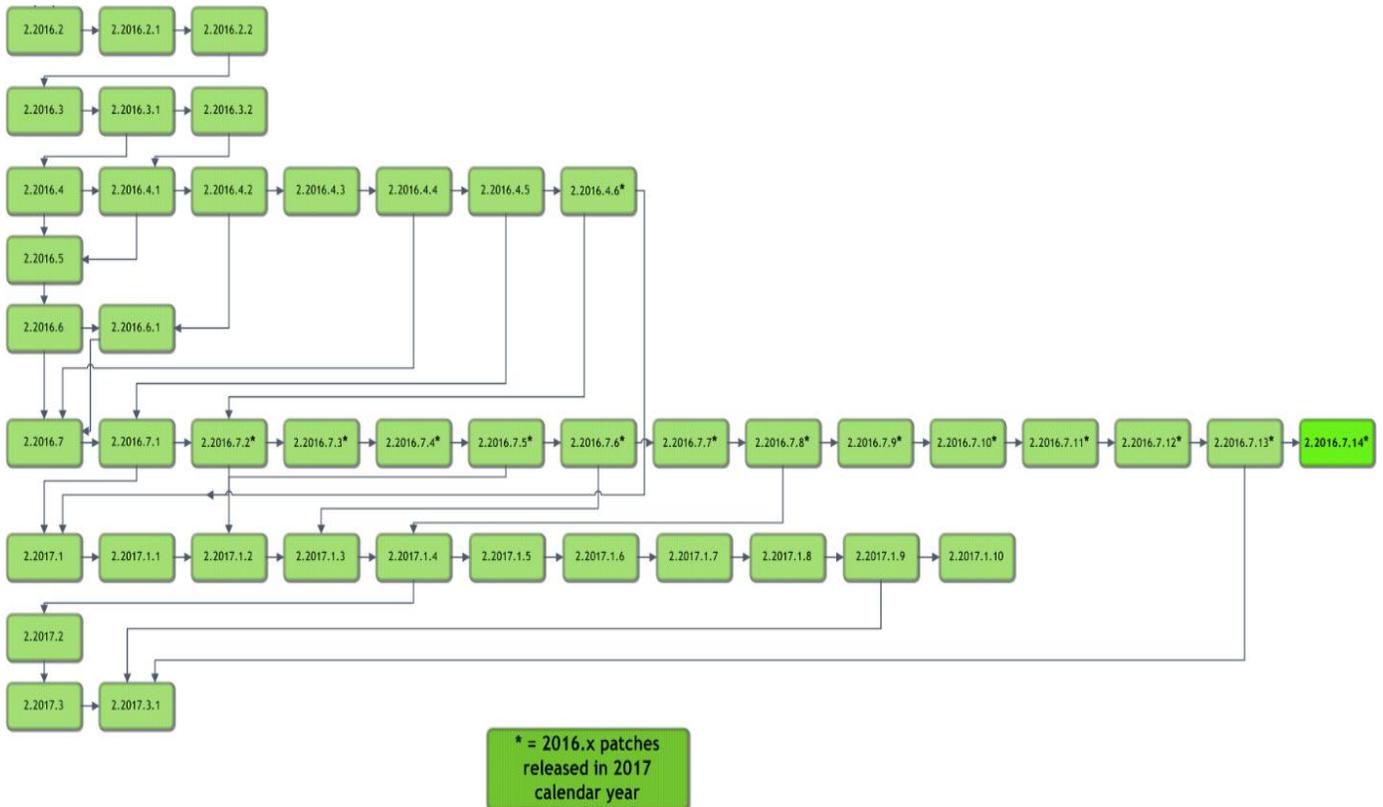
Redmine #	Subject
18267	Rejecting an addendum causes an 'object reference not set' exception.
18132	Some tables that have many updates will run out of identity values for large, high volume customers.
18104	UM Portal 'Get list of orders' stored procedure is not performance tuned.
18078	Poor system performance after updating to 2016.7.13.
18042	The EMR order is erroneously left active after using the 'existing orders prompt' and merging it into a new appointment.

The following list contains bugs or features that have been resolved in “future” RIS versions and have been pulled back to this earlier version of eRAD RIS. Features are also described in the New Features section.

Redmine #	Subject	Original Resolved Version
18172	UM Reviewers can now change the requested procedure.	3.2017.6
18170	RIS users can now preview and distribute the UM Opinion letter outside of the UM screen.	3.2017.6
18169	UM Reviewers can now choose any active procedure, unlimited by the current site's Schedule Group.	3.2017.6
18168	Automatically update Exam Status based on attributes of selected UM Status	3.2017.6

18167	UM - If during scheduling a procedure is removed via the red or black X, the UM Required Flag is changed from Y to N.	2.2017.5
18166	Set default UM status and Resolution codes for Gold Card and STAT orders.	2.2017.5
18107	External interface getting backed up causing HL7 messages to be delayed.	2.2017.5

CODE STREAM



ERAD RIS RELEASE VERSION NUMBERS

Build	Patch	UI Version	Core Version	WS Version	DB Version	Digital Forms	Patient Portal	UM Portal	Provider Portal	Notes
2016.7	-	2.16.7.0 (3GB)	2.16.7.0	2.16.7.0	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		Full version release
2016.7	1	2.16.7.1 (3GB)	2.16.7.0	2.16.7.1	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	2	2.16.7.2 (3GB)	2.16.7.0	2.16.7.2	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	3	2.16.7.3 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	4	2.16.7.4 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI
2016.7	5	2.16.7.5 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI
2016.7	6	2.16.7.6 (3GB)	2.16.7.0	2.16.7.6	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	7	2.16.7.7 (3GB)	2.16.7.0	2.16.7.7	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	8	2.16.7.8 (3GB)	2.16.7.0	2.16.7.7	2.16.7.8.00683507	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and DB updates
2016.7	9	2.16.7.9 (3GB)	2.16.7.0	2.16.7.9	2.16.7.9.00715012	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI, Web Services, DB updates and UM Portal
2016.7	10	2.16.7.10 (3GB)	2.16.7.0	2.16.7.10	2.16.7.9.00715012	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI and Web Service updates
2016.7	11	2.16.7.11 (3GB)	2.16.7.0	2.16.7.11	2.16.7.11.00761267	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI, Web Service and DB updates
2016.7	12	2.16.7.12 (3GB)	2.16.7.0	2.16.7.11	2.16.7.11.00761267	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI
2016.7	13	2.16.7.13 (3GB)	2.16.7.0	2.16.7.13	2.16.7.13.00823274	2.16.7.0	2.16.7.13.805715	2.16.7.13.805717		GUI, Web Service, DB, Patient and UM Portal updates
2016.7	14	2.16.7.14 (3GB)	2.16.7.0	2.16.7.14	2.16.7.14.00888220	2.16.7.0	2.16.7.14.897644	2.16.7.14.897646		GUI, Web Service, DB, Patient and UM Portal updates
2017.1	-	2.17.1.0 (3GB)	2.17.1.0	2.17.1.0	2.17.1.0.00559886	2.17.1.0	2.17.1.0.572290	2.17.1.0.000000		Full Version Release
2017.1	1	2.17.1.1 (3GB)	2.17.1.0	2.17.1.1	2.17.1.1.00589952	2.17.1.0	2.17.1.0.572290	2.17.1.0.000000		GUI, Web Service and DB updates
2017.1	2	2.17.1.2 (3GB)	2.17.1.0	2.17.1.2	2.17.1.2.00621962	2.17.1.0	2.17.1.0.572290	2.17.1.0.000000		GUI, Web Service and DB updates
2017.1	3	2.17.1.3 (3GB)	2.17.1.0	2.17.1.3	2.17.1.3.00640480	2.17.1.0	2.17.1.0.572290	2.17.1.0.000000		GUI, Web Service and DB updates
2017.1	4	2.17.1.4 (3GB)	2.17.1.0	2.17.1.4	2.17.1.4.00692239	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI, Web Service, DB and Patient Portal updates
2017.1	5	2.17.1.4 (3GB)	2.17.1.0	2.17.1.5	2.17.1.4.00692239	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		Web Service
2017.1	6	2.17.1.6 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI and DB Updates
2017.1	7	2.17.1.7 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI update
2017.1	8	2.17.1.8 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI update
2017.1	9	2.17.1.9 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI update
2017.1	10	2.17.1.10 (3GB)	2.17.1.0	2.17.1.10	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.000000		GUI and Web Service update
2017.2	-	2.17.2.0(3GB)	2.17.2.0	2.17.2.0	2.17.2.0.00695782	2.17.2.0	2.17.2.0.702238	2.17.2.0.702213	2.17.2.0.702226	Full Version Release. First release of Provider Portal
2017.3	-	2.17.3.0(3GB)	2.17.3.0	2.17.3.0	2.17.3.0.00764112	2.17.3.0	2.17.3.0.321	2.17.3.0.321	2.17.3.0.321	Full Version Release. Including Patient, Provider and UM Portals
2017.3	1	2.17.3.1(3GB)	2.17.3.0	2.17.3.1	2.17.3.1.00846328	2.17.3.1	2.17.3.1.853299	2.17.3.1.853301	2.17.3.1.856171	GUI, Web Service, DB. Including Patient, Provider and UM Portals

INSTALLING

CLIENT/GUI

Copy and replace the current rRIS...zip file with the eRAD_rRIS_2016.7.14.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

WEB SERVICE

This updated is only required for the Wedge Web Services. The Core RIS Service and Document Distribution Service are not required to be updated.

1. The web service upgrade consists of replacing the files in the RIS Web Service directory with the files supplied in the rRISService folder with this build. Always create a backup of the files being replaced. This upgrade includes 136 files in the rRISService folder and 9 sub folders. Of those folders, 1 is a folder titled **"XSL"** that contains a sub folder and files within the subfolder. Another folder is titled **"deploy"** that contains the new .config files that will be deployed with the user of the file called "ServicesConfigWizard.exe" (see instructions below). Folders ar (Arabic), he (Hebrew), pt_BR (Brazilian Portuguese) and es-AR (Argentina Spanish) are localization folders. The WedgePlugins folder contains various plugin files for RADAR, MIRTH, Ensemble, etc...

Services Configuration Wizard

With the release of 42 to decrease the chance of losing configuration setting and missing new configuration options, we will no longer include the configuration files in the release in the main set of files, but they will now exist in a "deploy" folder, which will contain the three site configurable config files; applicationsettings, connectionstrings, and services as well as a copy of the rRISServices.exe configuration file. The contents of this folder should not be required to be touched.

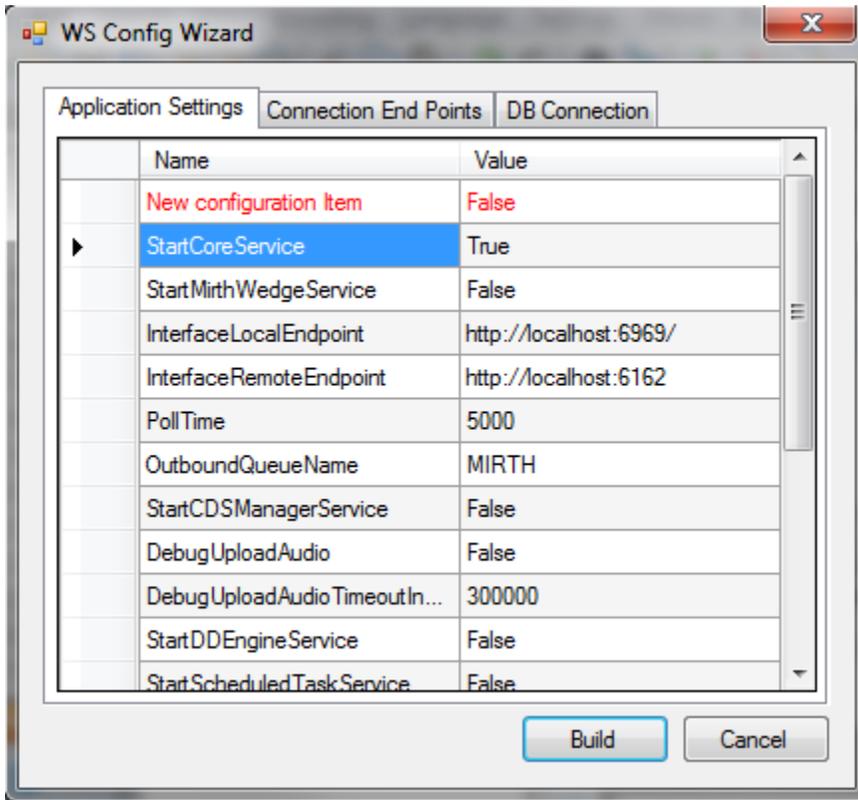
On the install of a new service, all files will be copied to the appropriate locations on the server (no configurations will be over written). If instructed or to confirm no new configurations have been added the user can run the new application "ServicesConfigWizard.exe"

This application will read the existing configuration file(s) (if files exist), and compare to the provided new configuration files then will display three tabs, for each configuration file:

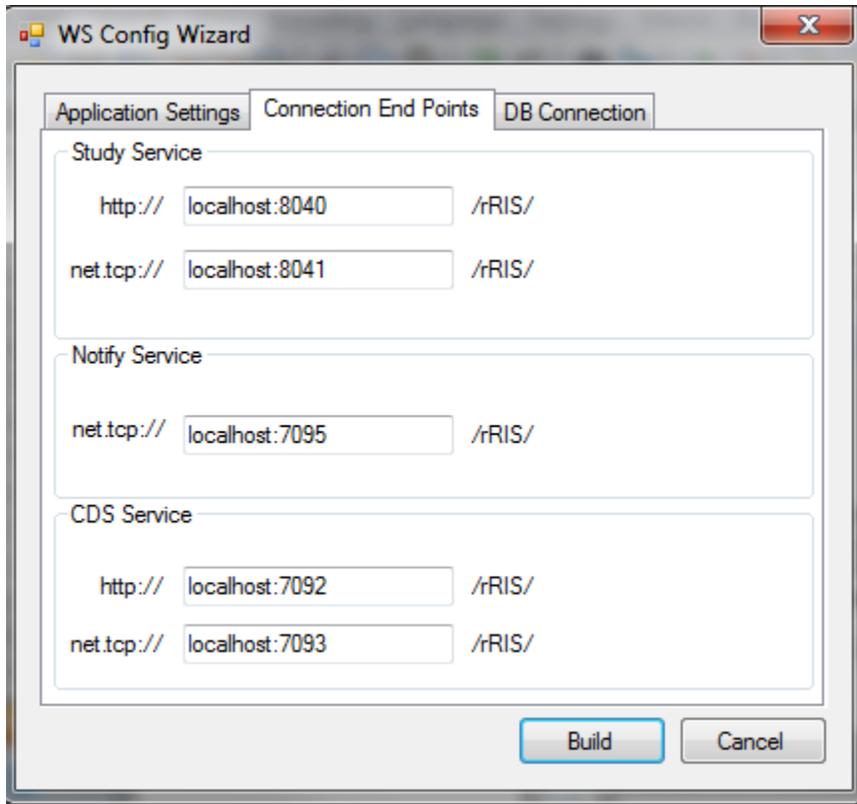
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Application Settings: all existing configuration value will be displayed, if there are any new configuration entries they will be displayed in red.



Connection End Points: will display the existing configuration, if the value is left blank then that entry will not be created, in the case of “Study Service” or “CDS Service” if both http and net.tcp were not provided then that endpoint will not be created at all.



DATABASE UPDATES

Always run the upgrade scripts in a test environment of the actual database to make sure they run cleanly. If any errors occur please contact development.

Note: There is a new upgrade process introduced with B43.1 called "RunUpgrade.bat". The batch file will open a command window. This process will prompt you for the database server name, database name and authentication credentials. There is no need to run the database upgrade scripts manually as was done in previous releases.

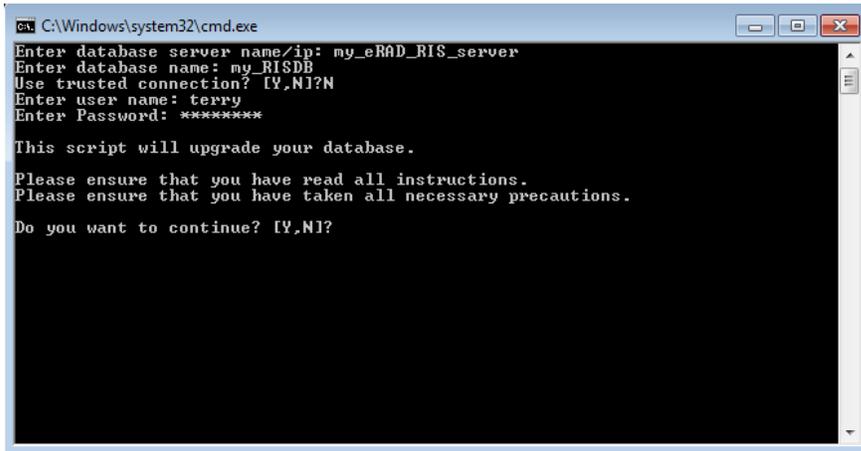
- 1) From the upgrade folder, double click the “RunUpgrade.bat” command file.
- 2) Enter the server name, database name and authentication credentials to the database. You have 2 choices for authentication credentials.

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- 3) You can choose to use “Trusted connection”. Using this option will pass the identity of the currently logged on user. If this user has “db_owner” access to the eRAD RIS database then feel free to use this options.
- 4) If you decide not to use “Trusted connection” then you will be prompted for user id and password.

Example:



```
C:\Windows\system32\cmd.exe
Enter database server name/ip: my_eRAD_RIS_server
Enter database name: my_RISDB
Use trusted connection? [Y,N]? Y
Enter user name: terry
Enter Password: *****

This script will upgrade your database.
Please ensure that you have read all instructions.
Please ensure that you have taken all necessary precautions.
Do you want to continue? [Y,N]?
```

- 5) After the upgrade program has finished you can find the upgrade logs in the “log” folder. The file name will be eRAD_RIS_db_upgrade_timestamp.log, where timestamp is a value representing the date and time the upgrade started. If you see any errors please contact the development team