

Server Update

For eRAD RIS
Version 2.0
Build 45.1
Update 45.1.1

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New Features

Questionnaire

11685 – Support for Cross Questionnaire Ruleset Actions

There is a process that runs when questionnaires are loaded into RIS. Checkboxes with the same short name will be kept in sync with each other provided that they are both open on the same screen, and that their short name begins with “z_linked_”.

For example, front desk staff open a procedure in the registration screen that has multiple Questionnaires and each one contains a checkbox called “z_linked_q1”. Completing this checkbox will update the checkbox on the other as well. After a checkbox is updated through this linked question process, the rules are automatically triggered so that the behavior will be the same whether the user manually checks the checkbox or the linked question process makes the change.


Currently, this feature only applies to checkboxes.

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10819 – Allow Questions to be Marked as Required and Validate on Save

The user can now designate questions to be required fields in the Questionnaire editor.

When completing the questionnaire in the GUI, required fields will be highlighted in red when not answered. Once the required field is completed the red indicator will turn to green. Essentially it works the same as required fields on data windows within eRAD RIS.

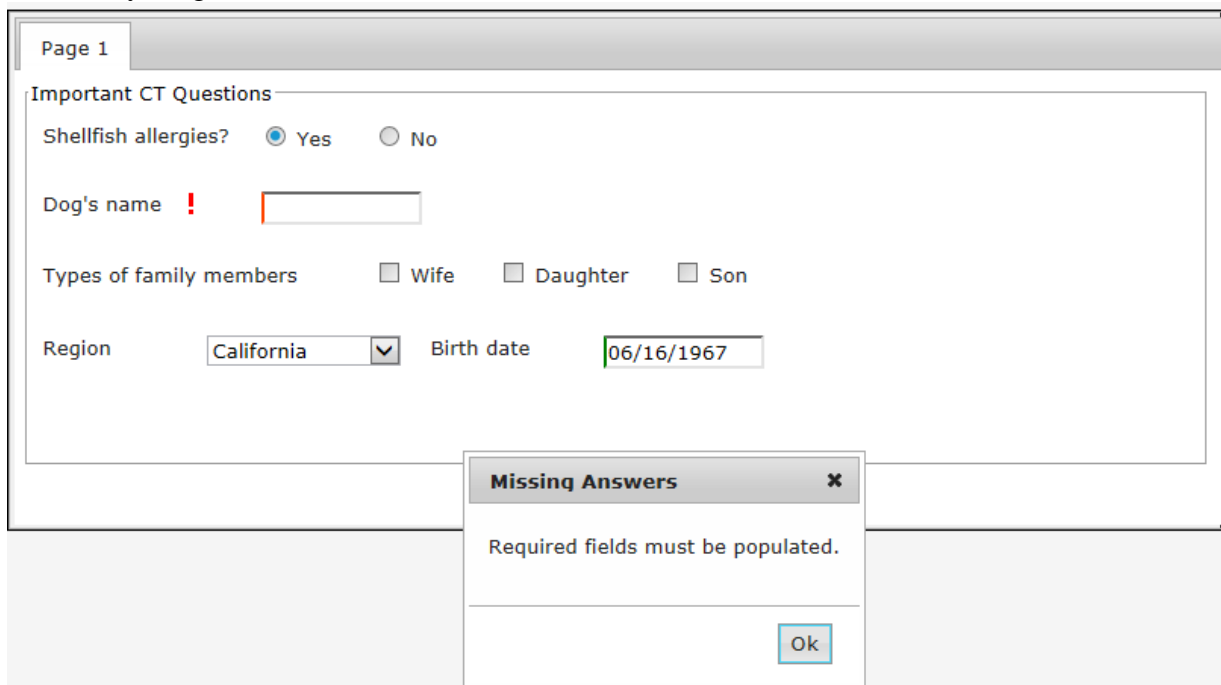
Dog's name 

Example of red indicator informing user field is required.

Dog's name  Toto

When the field has a value, the indicator turns green.

On validation, unanswered required fields will have an exclamation mark appear beside them and a message will appear to remind the user to answer the marked questions. In the event the questionnaire server is unavailable, RIS will allow the user to skip questionnaire validation and save everything else.



The screenshot shows a web-based questionnaire titled "Page 1" and "Important CT Questions". It contains several input fields: "Shellfish allergies?" with radio buttons for "Yes" (selected) and "No"; "Dog's name" with a red exclamation mark icon next to it and a red vertical bar in the input field; "Types of family members" with checkboxes for "Wife", "Daughter", and "Son"; "Region" with a dropdown menu showing "California"; and "Birth date" with a text input showing "06/16/1967". A modal dialog box titled "Missing Answers" is displayed in the foreground, containing the message "Required fields must be populated." and an "Ok" button.

If the field is not visible on the Questionnaire we will bypass this requirement

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Interface Updates

11769 – Radiologist Identified by License Number via Interface

In the Personnel Editor we can store the License number for a Radiologist.

The screenshot shows the Personnel Editor interface with the following sections:

- General** (selected tab)
- Resource Type**
 - ☐ Referring physician
 - ☒ Radiologist
 - ☐ Editor
 - ☐ Technologist
 - ☐ UM Reviewer
 - ☐ Injection Physician
- Additional Resources** (text input field)
- Resource Information**
 - NPI** (text input field)
 - ☒ Unknown NPI
 - UPIN** (text input field)
 - DEA** (text input field)
 - License #** (text input field, highlighted with a red box, containing the value 6996)
 - Primary state license** (text input field)
 - Specialties** (checkboxes for Radiology, Diagnostic X-Ray, etc.)

We now support the ability to identify a radiologist from the License # value. If the message received from the external system sends in the License #, we will be able to determine the radiologist and assign appropriately to the study.

If more than one Radiologist User is assigned the same License #, when sent to eRAD RIS, a message will be returned informing that it is a duplicate. Similarly, if the license # doesn't exist, a message will be posted. These messages will only be available in MIRTH Management Console.

11555 – Allow for Data Masking on Portal Data Variables

A portal plugin framework was created to support the ability to “massage” or manipulate the data value that is sent in a URL for a portal.

This feature resolves an issue of the leading zeros that may be present on a National ID for example. eRAD RIS will store the leading characters, where a portal may need to have the leading zeros stripped.

When the new PortalPluginIntParser.dll is present in the PortalPlugins folder, using the following data variable in the Portal URL will remove the leading zeros:

```
{patient.c_patient.patient_id?issuer_of_patient_id=1|ParseInt}
```

This is the only variable supported at this time.

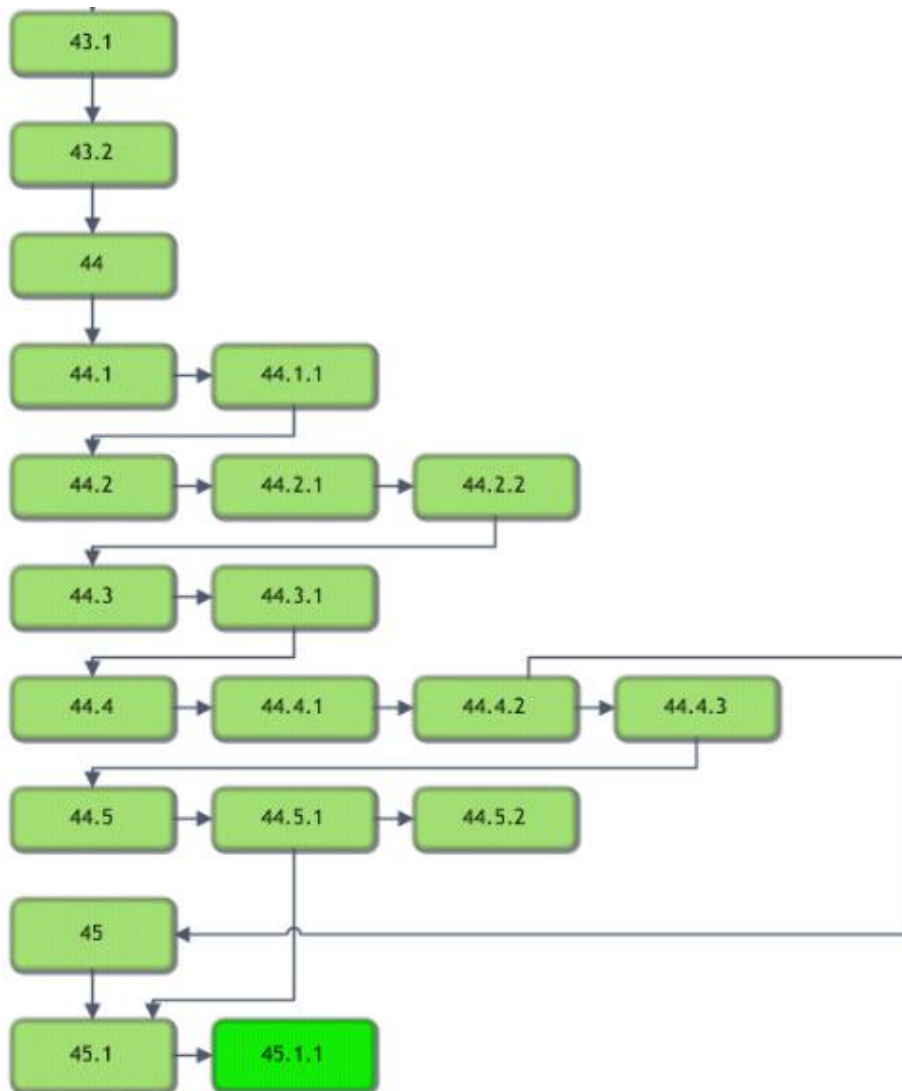
Resolved Items

Redmine #	Subject	Priority
11882	Worklists taking long time to return data - need to modify the worklist views	Immediate
11898	Unable to map questionnaire data into diagnostic reports in Hebrew culture	Immediate
11742	MemoryLeak in QuestionnaireAnswersView control for radiologist screen	Urgent
11873	Scheduling - Opening a scheduled study from appointment book throws error	High
11803	Exception clicking Bold toolbar button in report editor.	High
11801	Error loading macros when using conditional fields	High
11785	Scanner dropdown list in PerformExam and ViewEdit should display modality short description if specified	High
11783	Error in Field Editor when saving Conditional Values	High
11764	Findings - Error when submitting a dictation when the findings value is not entered. Cannot submit the dictation.	High
11763	Support for international date formats	High
11744	Memory Leak In GridFlagCellElement	High
11727	MRN - [primary] getting appended to description on Issuer lookup (for primary issuers only)	High
11690	Discontinued non-primary studies prevent reporting of other linked studies	High
11661	Questionnaire - Mapped date fields - problems with dd/MM/yyyy format	High
11610	Cannot merge patients with primary issuer MRN's	High
11592	Questionnaire Answers pane is not read-only	High
11909	Drawing control localization changes	Normal
11814	Inbound Diagnostic Reporting - Leaking a ReportOnAccessionNumber control each time it is opened	Normal
11784	Client file storage path Config setting RISOutputFilePath doesn't accept the default value	Normal
11746	MemoryLeak in ReportingRadiologist due to FindingFollowup EventHandler	Normal
11717	Remove Follow Up Required Flag - spelling mistake in context menu	Normal
11701	Biopsy - Missing access strings for Remove and Set Pending Biopsy Result	Normal
11700	Missing access strings for setting/removing Follow Up Required Flag	Normal

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11693	Citrix - call to launch eRAD view session doesn't return a list of open studies.	Normal
11692	Citrix - log files need to have more details	Normal
11650	Data Exception while trying to Reschedule from the Reception WL	Normal
11805	Questionnaire Answers - Users can close individual questionnaire tabs	Low
11788	Finding follow up recommendation drop down is not using display order	Low

Code Stream



Legend:









Light Green = Released software

Gray = Will not be released

Bright Green = Current Release

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Package Contents

Name	Date modified
 _ReleaseNotes	10/09/2015 8:46 AM
 DB	10/05/2015 1:29 PM
 PACS Citrix Bridge	10/05/2015 1:30 PM
 Questionnaires	10/05/2015 1:30 PM
 rRISService	10/09/2015 11:17 ...
 SQLReporting	10/05/2015 1:29 PM
 ThickClient	10/05/2015 1:27 PM
 WebHelp	10/05/2015 1:28 PM

Intended Audience

This document is created by the RIS Development team for the RadNet/eRAD RIS Implementation teams.

Who is affected

Build 45.1 installs. This server update must be applied to 45.1.1

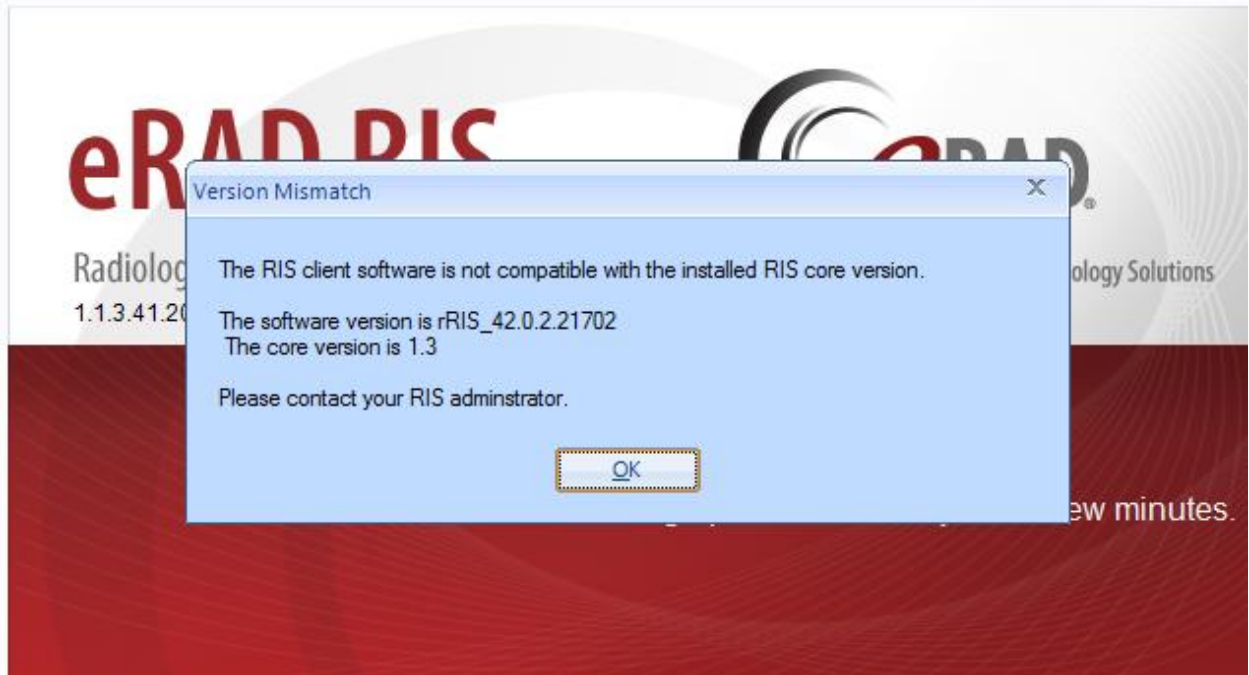
eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
43	-	2.43.0.0.23715(3GB)	2.43.0.0.23171	2.43.0.0.23715	2.43.0.0.23743	Full Version Release
43	1	2.43.0.1.23798(3GB)	2.43.0.0.23171	2.43.0.1.23798	2.43.0.1.23770	GUI.zip, Web Service, DB updates
43	2	2.43.0.2.24017(3GB)	2.43.0.0.23171	2.43.0.2.24017	2.43.0.2.24023	GUI.zip, Web Service, DB updates and Management Report Deployment
43	3	2.43.0.3.24298(3GB)	2.43.0.0.23171	2.43.0.3.24298	2.43.0.3.24283	GUI.zip, Web Service, DB updates and SSRS Deployment
43	3.1	2.43.0.3.24450(3GB)	2.43.0.0.23171	2.43.0.3.24298	2.43.0.3.24421	GUI.zip, and DB updates
43	3.2	2.43.0.3.24450(3GB)	2.43.0.0.23171	2.43.0.3.24298	2.43.0.3.24421a	DB updates
43	4	2.43.0.4.24447(3GB)	2.43.0.0.23171	2.43.0.4.24447	2.43.0.4.24442	GUI.zip, Web Service, DB updates and SSRS Deployment
43	5	2.43.0.4.24632(3GB)	2.43.0.0.23171	2.43.0.4.24632	2.43.0.4.24560	GUI.zip, Web Service and DB updates
43	6	2.43.0.4.24(3GB)	2.43.0.0.23171	2.43.0.4.24	2.43.0.4.24	GUI.zip, Web Service and DB updates
43	6.1	2.43.0.6.24937(3GB)	2.43.0.0.23171	2.43.0.6.24937	2.43.0.6.24914	GUI.zip, Web Service
43	6.2	2.43.0.6.24970(3GB)	2.43.0.0.23171	2.43.0.6.24970	2.43.0.6.24914	GUI.zip, Web Service
43	7	2.43.0.7.25258(3GB)	2.43.0.0.23171	2.43.0.7.25258	2.43.0.7.25226	GUI.zip, Web Service, DB updates and SSRS Deployment
43	8	2.43.0.8.25440(3GB)	2.43.0.0.23171	2.43.0.8.25440	2.43.0.8.25425	GUI.zip, Web Service, DB updates and SSRS Deployment
43	9	2.43.0.9.25477(3GB)	2.43.0.0.23171	2.43.0.9.25477	2.43.0.8.25425	GUI.zip and Web Service
43	10	2.43.0.9.25477(3GB)	2.43.0.0.23171	2.43.0.10.25477	2.43.0.8.25425	Web Service
43	11	2.43.0.11.25512(3GB)	2.43.0.0.23171	2.43.0.11.25512	2.43.0.8.25425	GUI.zip and Web Service
43	12	2.43.0.12.25554(3GB)	2.43.0.0.23171	2.43.0.12.25554	2.43.0.12.25536	GUI.zip Web Service and DB Updates
43	13	2.43.0.12.25610(3GB)	2.43.0.0.23171	2.43.0.12.25610	2.43.0.12.25536	GUI.zip and Web Service
43	14	2.43.0.14.25644(3GB)	2.43.0.0.23171	2.43.0.13.25610	2.43.0.12.25536	GUI.zip
43.1	-	2.43.1.0.25850(3GB)	2.43.0.0.23171	2.43.1.0.25850	2.43.1.0.25771	GUI.zip Web Service and DB Updates
43.2	-	2.43.2.0.26864(3GB)	2.43.0.0.23171	2.43.2.0.26864	2.43.1.0.25771	GUI.zip and Web Service
44	-	2.44.0.0.26570(3GB)	2.44.0.0.26405	2.44.0.0.26570	2.44.0.0.26475	Full Version Release
44.1	-	2.44.0.0.26984(3GB)	2.44.0.0.26405	2.44.0.0.26984	2.44.0.0.26906	Gui.zip, Web Service, and DB
44.1	1	2.44.1.1.27093(3GB)	2.44.0.0.26405	2.44.1.0.26984	2.44.1.0.26906	Gui.zip
44.2		2.44.2.0.27410(3GB)	2.44.0.0.26405	2.44.2.0.27410	2.44.2.0.27365	Gui.zip, Web Service, and DB
44.2	1	2.44.2.1.27959(3GB)	2.44.0.0.26405	2.44.2.1.27959	2.44.2.1.27909	Gui.zip, Web Service, and DB
44.2	2	2.44.2.1.27959(3GB)	2.44.0.0.26405	2.44.2.2.28094	2.44.2.1.27909	Web Service
44.3	-	2.44.3.0.28292	2.44.0.0.26405	2.44.3.0.28277	2.44.3.0.28138	Gui.zip, Web Service, and DB
44.3	1	2.44.3.1.28535(3GB)	2.44.0.0.26405	2.44.3.1.28535	2.44.3.0.28138	Gui.zip and Web Service
44.4	-	2.44.4.0.28762(3GB)	2.44.0.0.26405	2.44.4.0.28762	2.44.4.0.28676	Gui.zip, Web Server, DB, SSRS Deployment
44.4	1	2.44.4.1.28953(3GB)	2.44.0.0.26405	2.44.4.1.28953	2.44.4.0.28676	Gui.zip and Web Service
44.4	2	2.44.4.2.29327(3GB)	2.44.0.0.26405	2.44.4.2.29327	2.44.4.0.28676	Gui.zip and Web Service
44.4	3	2.44.4.2.29722(3GB)	2.44.0.0.26405	2.44.4.2.29327	2.44.4.0.28676	Gui.zip and Web Service
44.5	-	2.44.5.0.30022(3GB)	2.44.0.0.26405	2.44.5.0.30022	2.44.5.0.29976	Gui.zip, Web Server, DB
44.5	1	2.44.5.1.30451(3GB)	2.44.0.0.26405	2.44.5.1.30451	2.44.5.1.30449	Gui.zip, Web Server, DB
44.5	2	2.44.5.2.30705(3GB)	2.44.0.0.26405	2.44.5.1.30705	2.44.5.1.30554	Gui.zip, Web Server, DB
45	-	2.45.0.0.29559(3GB)	2.45.0.0.26107	2.45.0.0.29559	2.45.0.0.29558	Full Version Release
45.1	-	2.45.1.0.30774(3GB)	2.45.0.0.26107	2.45.1.0.30774	2.45.1.0.30738	Gui.zip, Web Service, DB, SQLReporting, Questionnaire, Citrix support
45.1	1	2.45.1.1.31175(3GB)	2.45.0.0.26107	2.45.1.1.31175	2.45.1.1.31174	Gui.zip, Web Service, DB, SQLReporting, Questionnaire

Installing

Client/GUI

- 1) Copy and replace the current rRIS...zip file with the rRIS_1.3.45.1.1.31175.zip file provided with this release.
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.



If you receive the Version Mismatch error above the GUI.zip will need to be renamed to add 1.3. to it. The GUI.zip file name change is from rRIS_45.1.1.31175→ rRIS_1.3.45.1.1.31175

NOTE: the GUI.zip included with this release has already been renamed to include 1.3.

This is required for installs that have not reached build 42. Because the software installed on your local workstation is a pre-42 build it detects a version mismatch in the software naming and won't allow the newest build to be launched (it is looking for 1.3. in the name). Once the workstation(s) have reached a build of 42 we will no longer need to add "1.3." to the GUI.zip name. Also note that a core install will not resolve this issue below.

NOTE: If your upgrade is coming from 40.016.1 or prior a core install will be required. Versions (builds) of 40.017 and greater do not require a core install as long as you are at least at 40.017 (Core Version 1.3.40.18756)

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Web Service

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 88 files in the rRISService folder and 2 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).

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, services as well as a copy of the rRISServices.exe configuration file. The contents of this folder should not be required to be touched.

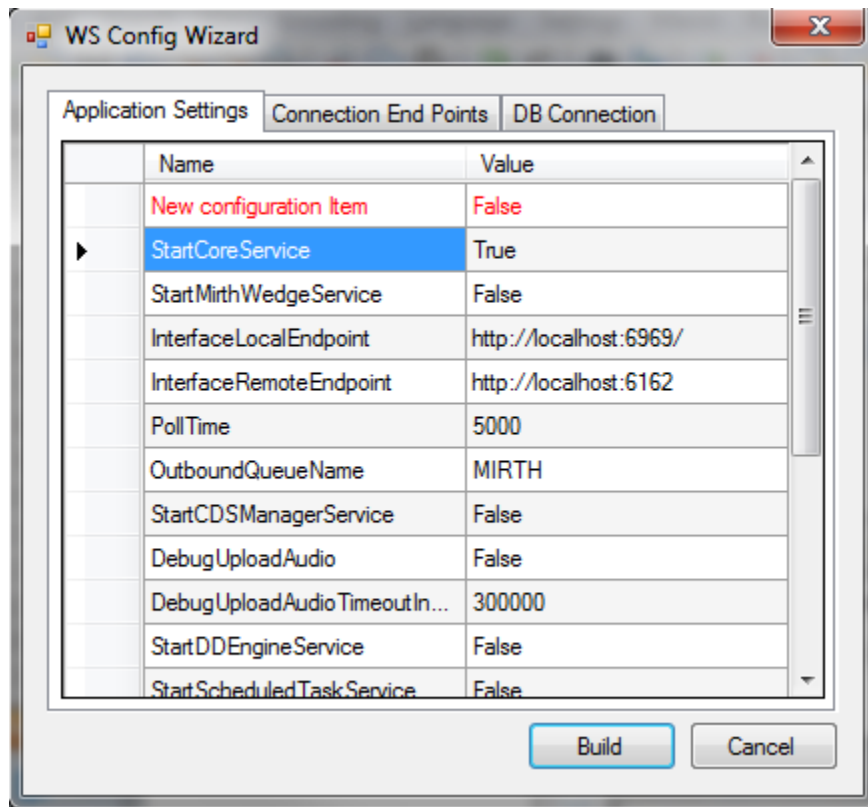
On the install of a new service, all files will be copied to the appropriate locations on the server (no configurations will be over written). If instructed or to confirm no new configurations have been added the user can run the new application “ServicesConfigWizard.exe”

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:

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

NOTE: the rRISServices.exe.config file is also included in the deploy folder. If this file has changes it **will not** update your current file in the Web Service directory. Any changes to this file will require a manual update of the rRISServices.exe.config and rRISServicesx64.exe.config files.

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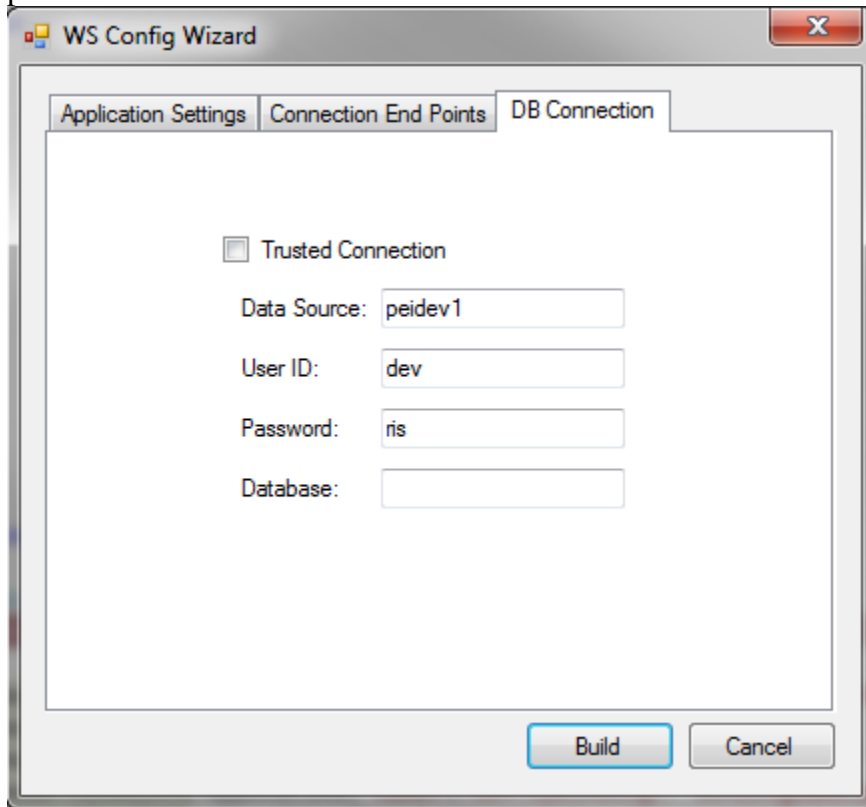
Connection End Points: will display the existing configuration, if the value is left blank then that entry will not be created, in the case of “Study Service” or “CDS Service” if both http and net.tcp were not provided then that endpoint will not be created at all.

The screenshot shows the 'WS Config Wizard' dialog box with the 'Connection End Points' tab selected. The dialog has three tabs: 'Application Settings', 'Connection End Points', and 'DB Connection'. The 'Connection End Points' tab contains three sections: 'Study Service', 'Notify Service', and 'CDS Service'. Each section has two rows of input fields for 'http://' and 'net.tcp://' protocols, followed by a '/rRIS/' label. The 'Study Service' section has 'localhost:8040' and 'localhost:8041'. The 'Notify Service' section has 'localhost:7095'. The 'CDS Service' section has 'localhost:7092' and 'localhost:7093'. At the bottom right, there are 'Build' and 'Cancel' buttons.

Service	Protocol	Host:Port	Path
Study Service	http://	localhost:8040	/rRIS/
	net.tcp://	localhost:8041	/rRIS/
Notify Service	net.tcp://	localhost:7095	/rRIS/
	http://		
CDS Service	http://	localhost:7092	/rRIS/
	net.tcp://	localhost:7093	/rRIS/

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DB Connection: will display the existing configuration, if the Connection is to be used as a trusted connection, then the user ID and password will become disabled and will not be used, and will rely on the provided database value, When not using the trusted connection, The Database value is not needed but can be used to force a specific database connection as long as the provided user has access to that database.



It is always good practice to do a compare of the .config files.

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.

rRISService directories include:

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

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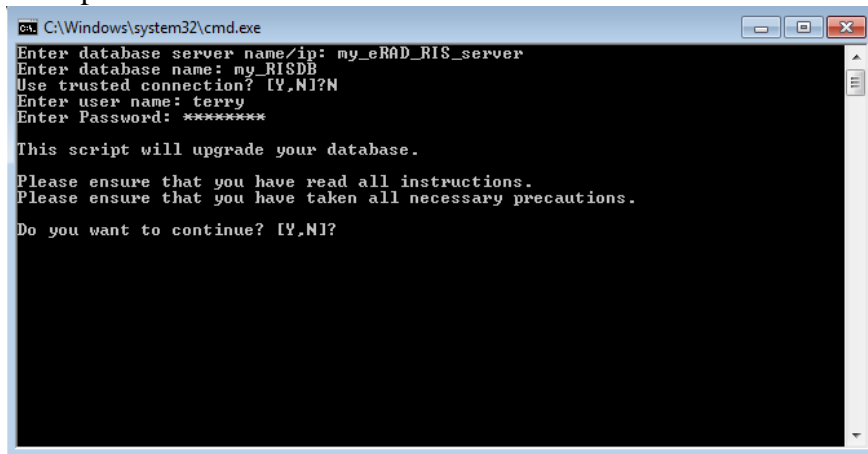
Database Updates

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.
- 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]?N
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
- 6) In the Common folder there is a subfolder of MU. The MU folder contains updates to lookups relevant for MU as well as updates for Zip Code table to add the County. Copy the

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MU folder to the database server before running the batch file. There is a readme file contained in the MU folder. The details have also been included below

- a) The mu bulk install process must be run from a path on the database server!
 - b) Copy Files ImportDataFileUpgradeDB.bat and ImportDataFileUpgradeDB.sql from upgrade folder to a location on the database server(This location will be referred to as the "Script Folder Path".)
 - c) Copy Folder scripts and Source files from the upgrade folder to "Script Folder Path"
....Note source files must be inside the scripts folder
 - d) Run bat file
 - i) Enter Script Folder path [C:\Temp\SNOMED]:
 - ii) Enter database server name/ip: [ie peidev1]
 - iii) Enter database name: [ie rRIS_MU]
 - iv) Use a trusted connection to log on to SQL Server:
"N" means you will have to enter db [username] [password]
"Y" means you have a trusted connection and will not have to enter [username][password]
 - v) Do you wish to load SNOMED concept codes?
"N" no files will be loaded into the l_snomed_concept table
"Y" yes means l_snomed_concept table will be truncated and reloaded with the latest US concept codes
Source File [sct2_Concept_Snapshot_US1000124_20140301.txt]
 - vi) Do you wish to load SNOMED descriptions codes?
"N" no files will be loaded into the l_snomed_description table
"Y" yes means the l_snomed_description table will be truncated and reloaded with the latest US description codes
Source File [sct2_Description_Snapshot-en_US1000124_20140301.txt]
 - vii) Do you wish to load ICD9 to SNOMED mappings codes?
"N" no files will be loaded into the l_snomed_icd9_map table
"Y" yes means the l_snomed_icd9_map table will be truncated and reloaded with the latest US ICD9 to SNOMED mapping codes
Source File [ICD9CM_SNOMED_MAP_1TO1_201312.txt and ICD9CM_SNOMED_MAP_1TOM_201312.txt]
 - viii) Do you wish to load ICD10 to SNOMED mappings codes?
"N" no files will be loaded into the l_snomed_icd10_map table
"Y" yes means the l_snomed_icd10_map table will be truncated and reloaded with the latest US ICD10 to SNOMED mapping codes
Source File [xder2_iisssccRefset_ExtendedMapSnapshot_US1000124_20131220.txt]
 - ix) Do you wish to load US zip codes?
"N" no files will be loaded into the z_zipCodesWithCounty table
"Y" yes means the z_zipCodesWithCounty table will be truncated and reloaded with the latest US zip codes
Source File [5-digit Commercial.csv]
-

Note: the following files should be loaded once only with B43!

x) Do you wish to load CMS codes?

"N" no files will be loaded into the s_mu_code table

"Y" yes means the s_mu_code table will be truncated and reloaded with the latest CMS codes

Source File [s_mu_code.txt]

xi) Do you wish to load HL7 support sets for CCDA?

"N" no files will be loaded into the l_hl7v3_voc_value_set table

"Y" yes means the l_hl7v3_voc_value_set table will be truncated and reloaded with the latest hl7v3_voc_value_set codes

Source File [l_hl7_voc_value_set.txt]

xii) Do you wish to load HL7 support codes for CCDA?

"N" no files will be loaded into the l_hl7v3_voc_value_code table

"Y" yes means the l_hl7v3_voc_value_code table will be truncated and reloaded with the latest l_hl7v3_voc_value_code codes

Source File [l_hl7_voc_value_code.txt]