Server Update

For eRAD RIS
Version 2.0
Build 43.2

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1. New Features

The purpose of Build 43.2 is to add Remine bug number 9146 - Patient Name to be included in Email message to RADAR. The original feature to support emailing diagnostic reports was introduced in 43.1 and is described below. You will also find the configuration settings required to use the feature were re-added to this document as well.

The following is from 43.1

Distribution of Encrypted PDF via Email

1). Person/Address level configuration of email address and password
For now, this will be configured at the address level and later functionality will be provided to allow a default at the person level (see Outstanding Issues).
Passwords added at the address level are hidden from end users by default. If they have access they can click a button to view the password in plain text. Clicking this button audits their request for access and access to the password.
Changing a password is also an audited event.
Passwords are subject to a "strong password check" as a part of their data validation. The check is running the password against a regular expression. There is a system configuration item for EmailPDFPasswordRegex to house the regular expression, thus allowing it to be customized per install.

2). Queue Poller
Changes were made to the queue poller to pick up any referring or CC addresses that prefer to receive email and create a distribution job with the specified email address.
3). PDF Encryption
In order to password protect the PDF file, an open source PDF library called PDFSharp is being used. This library allows us to pass it a password and a byte array containing a non-encrypted PDF and it then returns the password protected PDF.

3). RADAR
After some discussion of using Mirth to encrypt the PDF and send the email, it was decided that PDFSharp would be used to encrypt the pdf and RADAR would be used to send the email. This required an enhancement to the RADAR dll in order to pass a file to the service so they could attach it to the email. Part of the message to RADAR involves an account name. RIS has always used the practice_code of the revelant practice for this. It is being determine based on the practice related to the_site_code of the study of the distribution job. RADAR uses the account name to determine who the sending message is from. Configuration of the email's format will be done in RADAR, including logos, header, footer, colors, and verbiage.

4). Email Sender
A configuration setting called DDEEnableEmail has been added to the applicationsettings.config file of the RIS services binaries. When this setting is True the main method of the Distribution engine will create a worklist working thread that will poll for Email jobs created by the queue poller. This setting was added in order to provide the ability to disable email functionality on a particular Distribution server, mostly for testing purposes. There is nothing preventing multiple Distribution services from processing email jobs at the same time for scalability purposes.
When the Distribution service finds an email job, it will create a PDF of the report using the Sql Server Reporting Services framework in the same way faxes and print jobs are done. It then encrypts the PDF using the PDFSharp library and sends it via RADAR using the dll the RADAR team has provided.

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5). Send Report Dialog
The Send Report dialog, also used to edit active Distribution jobs, has been enhanced to allow sending emails. The email portion is disabled when the Other radio button is selected. This is because the password used to encrypt the PDF file is set for the particular person and address.
Upon selecting an address with a delivery preference of Email the Email textbox will automatically populate based on the value from the person's address. For addresses with other default delivery preferences, changing the Delivery method dropdown to Email will cause the email textbox to populate if and Email has been specified for that address.
Note there are outstanding issues regarding this screen.

6). Worklists
The Document Distribution Worklists in the RIS client now show Email jobs with a Delivery Method value of "Email" and an Email Address column valued with the destination Email address. See screenshots below.

How to enable the Feature

1) Personnel changes
    a. Any referring physicians that wish to receive reports via email when they are the referring or a CC doctor on a study must be configured with that preference via the Personnel editor.
2) Service setting changes
    a. The queue used by the Distribution Engine must be set up appropriately to subscribe to report related events. If the service is already set up for Fax and Print jobs the queue is already ready.
    b. The applicationsettings.config file for the Document Distribution service now contains a setting called "DDEEnableEmail" which must be set to True for the DD to process email jobs.
3) RADAR settings
    a. RADAR must have accounts for all practices which will be sending emails.

Permission Strings

Config.LookupEditor.Personnel.EmailPassword = full access to this enables users to view personnel address distribution email passwords (Default == None)

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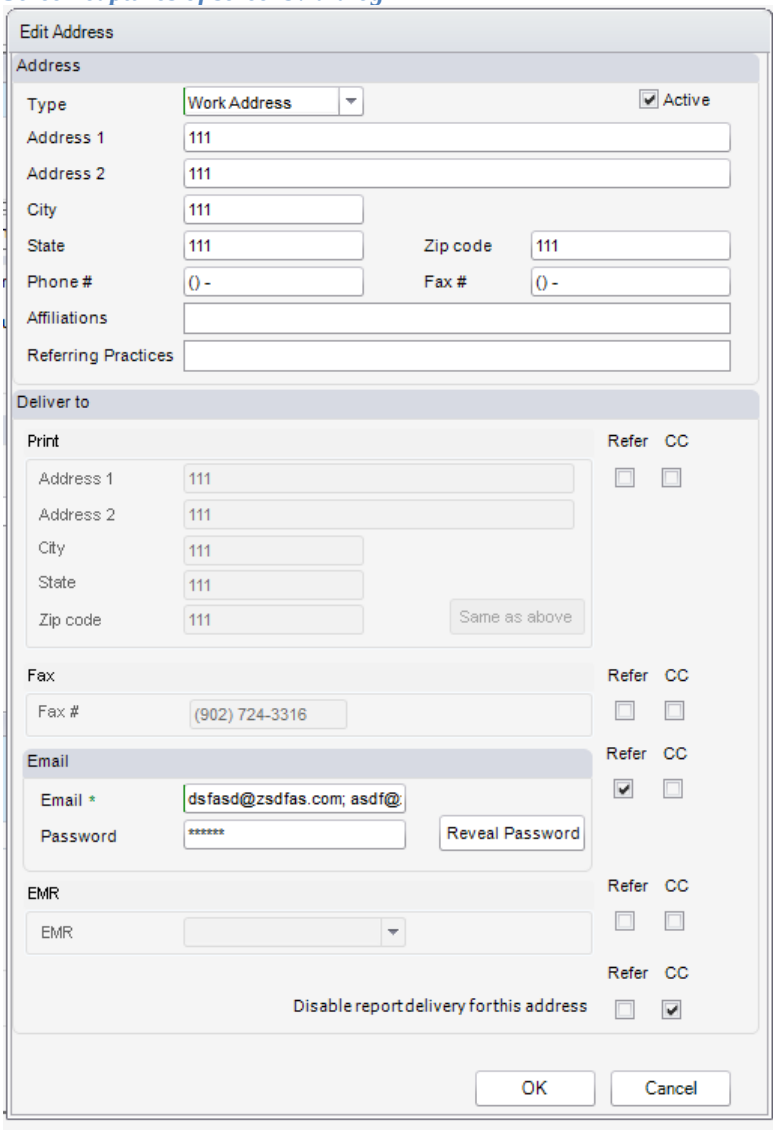
Screen captures of screens / dialog



Showing new Email section of address config

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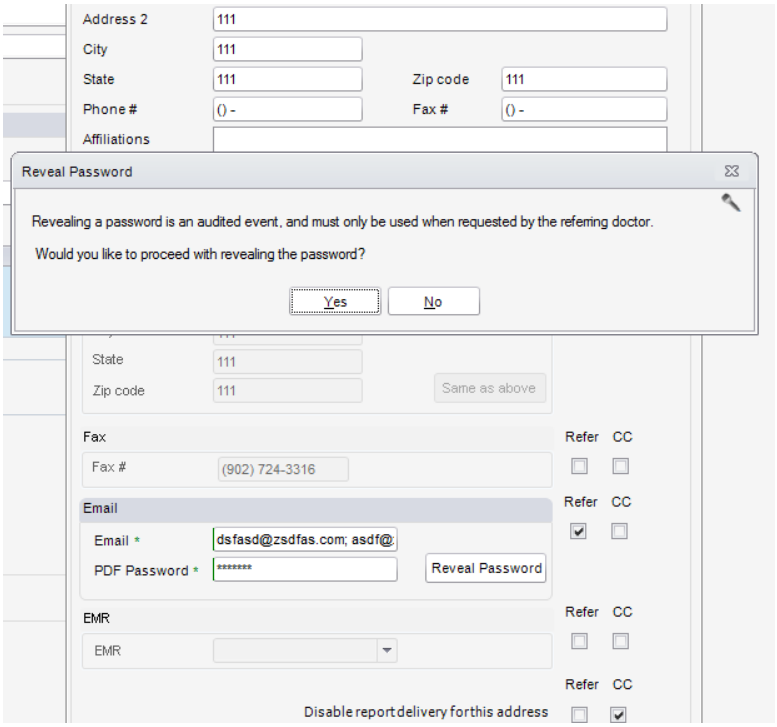
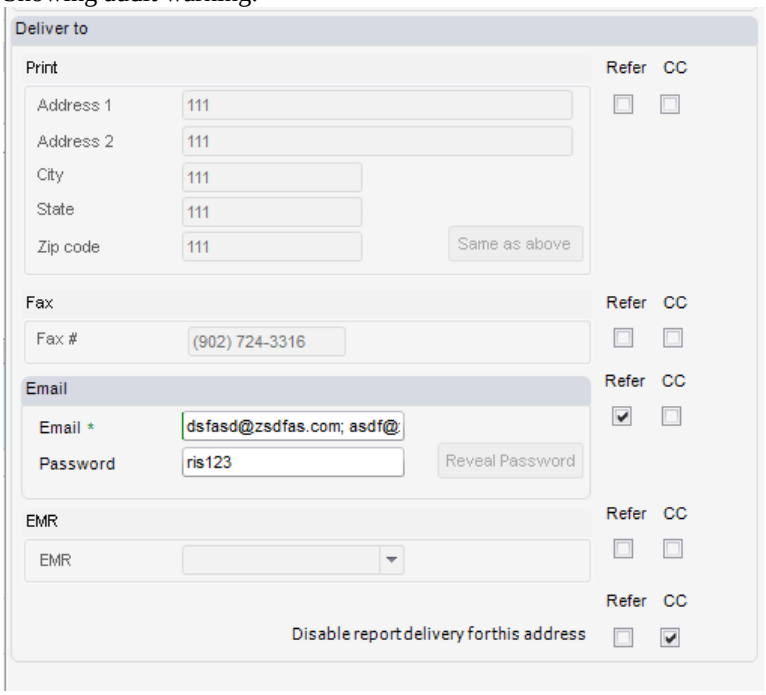


Showing audit warning.



Showing clear text password

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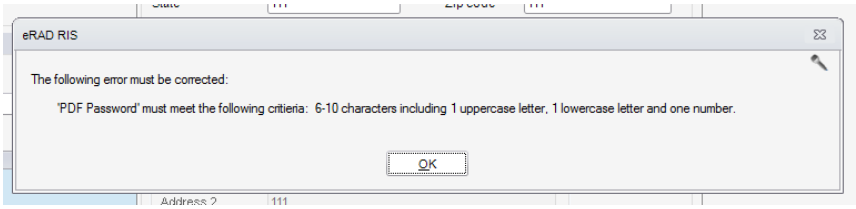
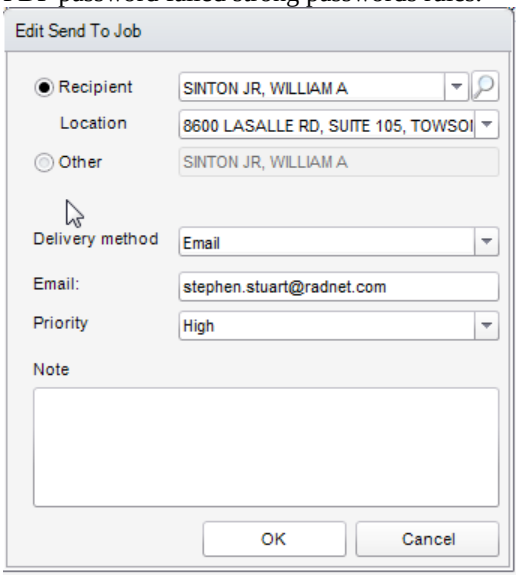
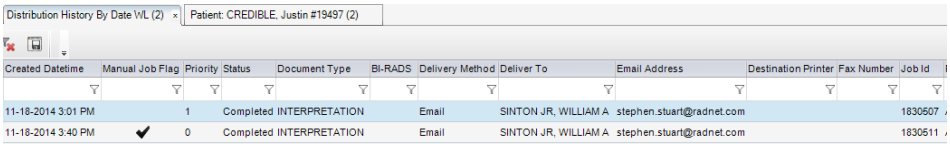


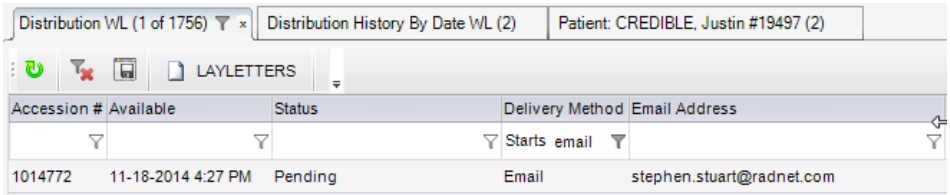
PDF password failed strong passwords rules.



Send Report dialog with Email in the Delivery method dropdown.



Distribution History By Date WL showing two completed Email jobs.



Distribution WL of active jobs, showing one Email job in Pending status

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2. Defects Resolved

Redmine #	Tracker	Subject	Priority
9146	Bug	Patient Name to be included in Email message to RADAR	Urgent

3. Changes to Configuration

The following configuration changes are from 43.1

Setting Placeholder	Setting	Default	Purpose / Controls Access to
Access string / User Group Permission tables	Config.LookupEditor.Personnel.EmailPassword	None	Full access to this enables users to view personnel address distribution email passwords
Applicationsettings.config	DDEEnableEmail	True	Must be set to True for the DD to process email jobs

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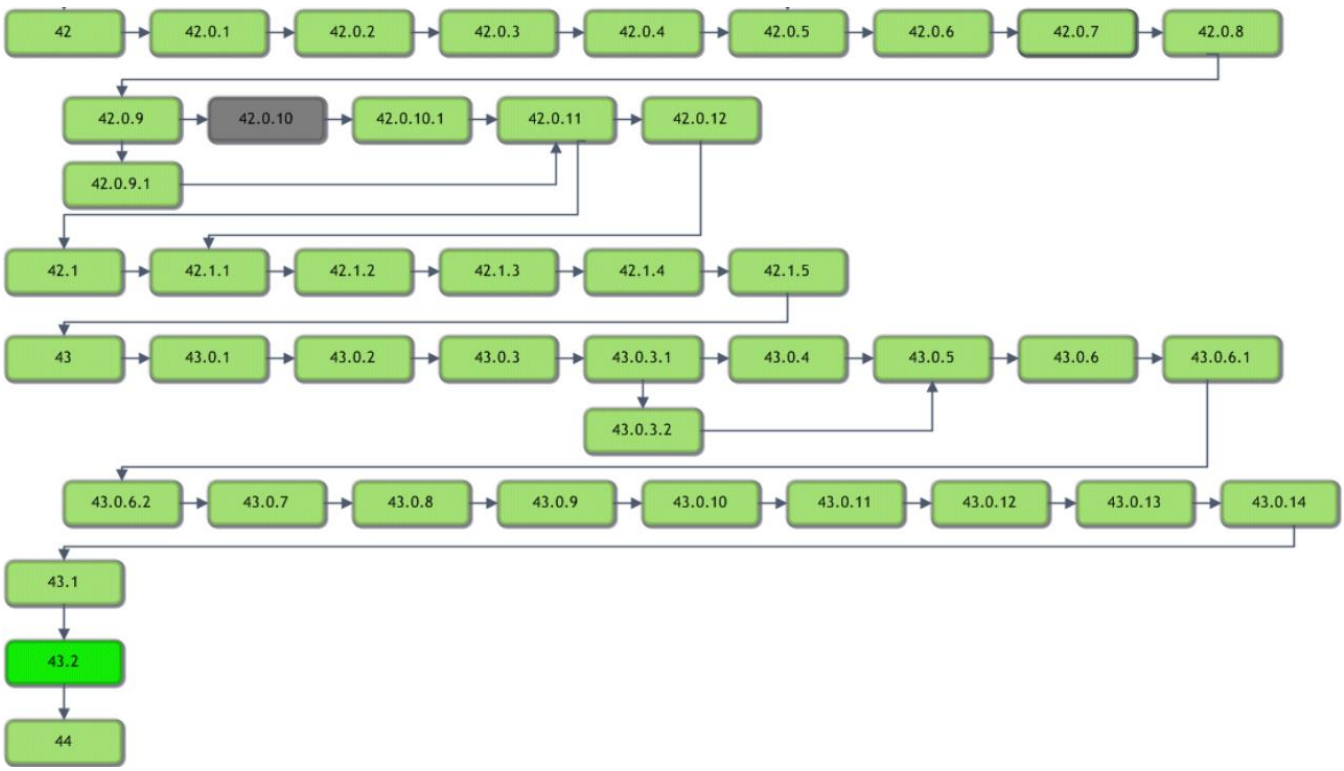
4. Code Stream



Legend:

Light Green = Released software

Gray = Will not be released

Bright Green = Current Release

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5. Package Contents

Files included for this server update:

1) GUI ZIP Updates folder contains:
   - rRIS_1.3.43.2.0.26864.zip

2) RIS_Service_Updates contains:

ABCpdf.dll
ABCpdf9-32.dll
ABCpdf9-64.dll
Antlr3.Runtime.dll
CDSJobManager.dll
CDSJobManager.pdb
CdsLib.dll
CdsLib.xml
CdsLib.XmlSerializers.dll
CommonLib.dll
CommonLib.pdb
DDEngine.dll
DDEngine.pdb
DiffPlex.dll
Interop.ANYMODALCAPTURECTRLLib.dll
Interop.FAXCOMEXLib.dll
Microsoft.Practices.EnterpriseLibrary.Caching.dll
Microsoft.Practices.EnterpriseLibrary.Caching.pdb
Microsoft.Practices.EnterpriseLibrary.Common.dll
Microsoft.Practices.EnterpriseLibrary.Common.pdb
Microsoft.Practices.EnterpriseLibrary.Logging.dll
Microsoft.Practices.EnterpriseLibrary.Logging.pdb
Microsoft.Practices.ServiceLocation.dll
Microsoft.Practices.ServiceLocation.pdb
Microsoft.Practices.Unity.dll
Microsoft.Practices.Unity.Interception.dll
Microsoft.Practices.Unity.Interception.pdb
Microsoft.Practices.Unity.pdb
Microsoft.ReportViewer.Common.dll
Microsoft.ReportViewer.WinForms.dll
Microsoft.ReportViewer.WinForms.xml
Microsoft.Web.Infrastructure.dll
Newtonsoft.Json.dll
Newtonsoft.Json.xml
NLog.dll
O2S.Components.PDFRender4NET.dll
PdfSharp.dll
PDFToImages.exe
Radar.Api.Client.dll
Radar.Api.Client.pdb
Radar.Api.Model.dll
Radar.Api.Model.pdb
Radar.Common.dll
Radar.Common.pdb
Radar.Common.WebClient.dll
Radar.Common.WebClient.pdb
Radar.DirectMessaging.Client.dll
Radar.DirectMessaging.Client.pdb
Radar.DirectMessaging.Model.dll
Radar.DirectMessaging.Model.pdb
rRISServices.exe
rRISServices.pdb
rRISServicesx64.exe
ScheduledTaskManager.dll
ScheduledTaskManager.pdb
ServicesConfigWizard.exe
ServicesConfigWizard.pdb
SignatureApprovalService.exe
SignatureApprovalService.pdb
System.Net.Http.dll
System.Net.Http.Formatting.dll
System.Net.Http.xml
System.Web.Http.dll
System.Web.Http.SelfHost.dll
System.Web.Http.SelfHost.xml
System.Web.Http.WebHost.dll
System.Web.Http.WebHost.xml
System.Web.Http.xml
System.Web.Mvc.dll
System.Web.Mvc.xml
System.Web.Optimization.dll
System.Web.Razor.dll
System.Web.Razor.xml
System.Web.WebPages.Deployment.dll
System.Web.WebPages.Deployment.xml
System.Web.WebPages.dll
System.Web.WebPages.Razor.dll
System.Web.WebPages.Razor.xml
System.Web.WebPages.xml
Tourreau.Gilles.FaxDotNet.dll
Tourreau.Gilles.FaxDotNet.pdb
Tourreau.Gilles.FaxDotNet.xml
WCFService.dll
WCFService.pdb
WCFServiceTests.dll
WCFServiceTests.pdb
WebApi.dll
WebApi.pdb
WebGrease.dll
Wedge.exe
Wedge.pdb

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The rRIS_Service_Updates also contains to subfolders:

A. Deploy folder contains
   a. Applicationsettings.config
   b. ReleaseVersion-connectionstrings.config
   c. rRISServices.exe.config
   d. services.config
   e. rRISServicesx64.exe.config

B. XSL subfolder contains:
   a. Subfolder titled "Stylesheets" which contains:
      a. CDAToHTMLCompleteReport.xslt
      b. CDAToHTMLCompleteReportDark.xslt
      c. CDAToHTMLImpressionSection.xslt
      d. CDATorRIS.xslt
      e. CDAToTxt.xslt
      f. DocumentModelReport.xslt
      g. DocumentModelReportAsXml.xslt

   b. CDA Subfolder contains
      a. C-CDA.xsl
      b. eRadStylesheet.xsl
      c. generalTemplates.xsl
      d. header.xsl
      e. QRDA.xsl
      f. QrdaLevel3_Cypress2.4.0.xsl
      g. QrdaLevel3_ViewHtml.xsl
      h. sectionAdministeredMedications.xsl
      i. sectionAllergies.xsl
      j. sectionEncounters.xsl
      k. sectionFindings.xsl
      l. sectionFuncCogStatus.xsl
      m. sectionImmunizations.xsl
      n. sectionInstructions.xsl
      o. sectionMedications.xsl
      p. sectionPlanOfCare.xsl
      q. sectionProblemList.xsl
      r. sectionProcedures.xsl
      s. sectionQRDAMeasures.xsl
      t. sectionQRDAPatientData.xsl
      u. sectionQRDAReporting.xsl
      v. sectionReasonForVisit.xsl
      w. sectionResults.xsl
      x. sectionSocialHistory.xsl
      y. sectionVitalSigns.xsl

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6. Intended Audience

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

7. Who is affected

Build 43 installs. Server updates are not cumulative. This server update must be applied to 43.1

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8. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
42.1	-	2.42.1.0.22744(3GB)	2.42.0.0.21261	2.42.1.0.22744	2.42.1.0.22736	GUI.zip, Web Service, DB updates and Management Report Deployment
42.1	1	2.42.1.1.2296(3GB)	2.42.0.0.21261	2.42.1.1.22963	2.42.1.1.22864	GUI.zip, Web Service, DB updates
42.1	2	2.42.1.2.23007(3GB)	2.42.0.0.21261	2.42.1.2.23007	2.42.1.2.23007	GUI.zip, Web Service, DB updates
42.1	3	2.42.1.2.23237(3GB)	2.42.0.0.21261	2.42.1.2.23237	2.42.1.2.23007	GUI.zip, Web Services
42.1	4	2.42.1.4.23348(3GB)	2.42.0.0.21261	2.42.1.4.23348	2.42.1.2.23007	GUI.zip, Web Services
42.1	5	2.42.1.5.23406(3GB)	2.42.0.0.21261	2.42.1.5.23406	2.42.1.2.23007	GUI.zip, Web Services
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 Management Report 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 Management Report Deployment
43	5	2.43.0.5.24632(3GB)	2.43.0.0.23171	2.43.0.5.24632	2.43.0.5.24560	GUI.zip, Web Service and DB updates
43	6	2.43.0.6.24914(3GB)	2.43.0.0.23171	2.43.0.6.24914	2.43.0.6.24914	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 Management Report 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 Management Report 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**

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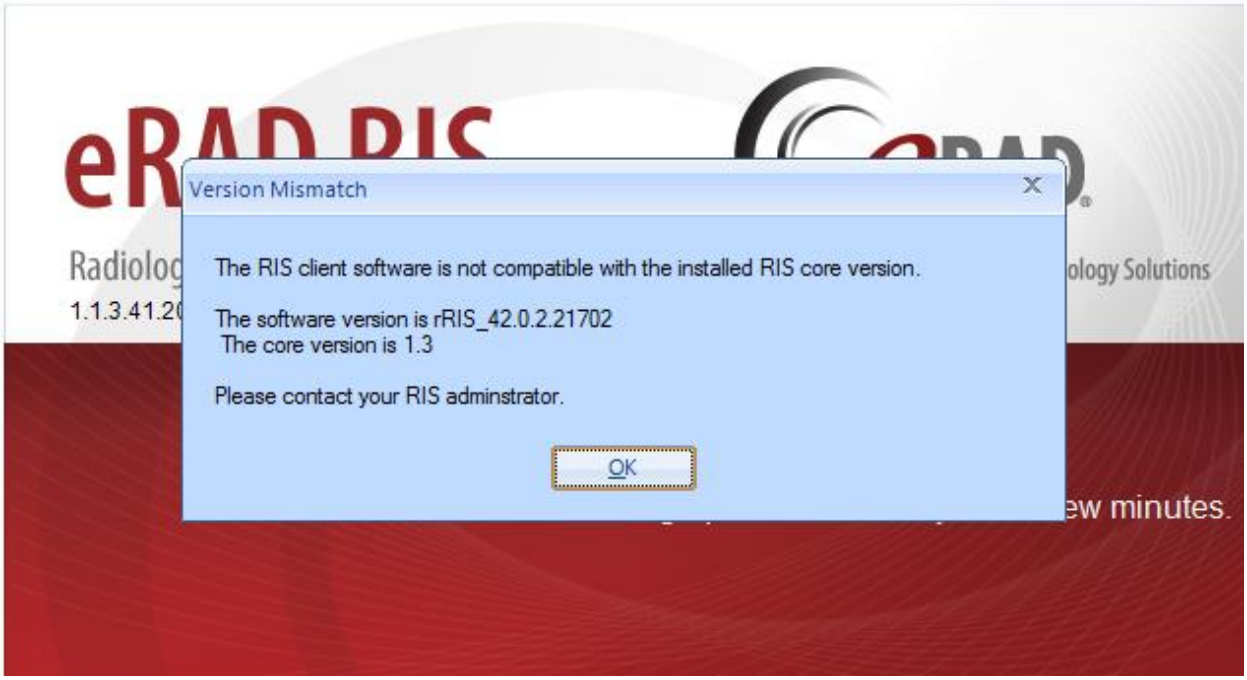
9. Installing

1. Copy and replace the current rRIS…zip file with the rRIS_1.3.43.2.0.26864.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_43.2.0.26864→ rRIS_1.3.43.2.0.26864
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)

2. Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

rRISService directories include:

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

Restart each service.

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