



PowerScribe[®] 360 | Reporting

Troubleshooting Guide



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1 - Client Issues

Client Failures

Client Closing Unexpectedly

Many Client failures and exceptions are caused by missing Microsoft updates.

An example is the message "**Client is Closing Nuance.PowerScribe360.exe...**". This issue occurs because of a known issue in Ole32.dll which is fixed with <http://support.microsoft.com/kb/2541119>.

To address this cause, run and apply all current MS updates. NOTE: If you are on V 1.x, do not apply the .NET update 4.5 and above.

Editor Client Hangs/Crashes

Failure / Error When Playing Back Audio

The nssystem.ini file "Maximal amount of differences between two texts" limit value for the workstation may be exceeded.

This is a workstation specific modification and will not follow the users profile. Be sure that the PowerScribe 360 Client is closed before you modify the Maximal amount of differences between two texts value. To change the value:

1. Edit the nssystem.ini file located at:
C:\ProgramData\Nuance\Dragon SDK Client Edition12
2. Within the [Settings] section of the nssystem.ini file, add the following line if it does not exist.

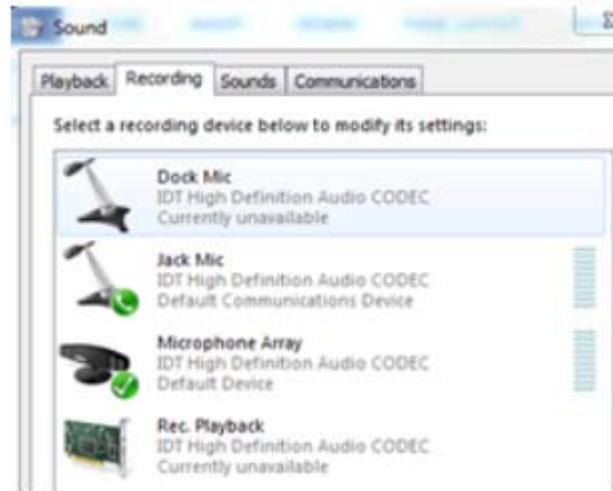
Maximal Amount of Difference Between Two texts=xxx

If this line is not in the nssystem.ini, the default value is 100. The xxx represents a limit value based on the number of edits within the report. Adding the line modifies the default value. The performance to load the report is slower when the default value is higher, but playback highlighting/concordance improves.

Increment the value by 200 until the desired playback is obtained. Do not exceed a value of 600.

1. Go to the Control Panel > Sounds and Settings dialog.

2. Ensure the Audio Mixer Device shows under Recording Devices as shown below:



3. If you do not see the device, right-click and select **Show Hidden Devices**.

4. Right-click **Rec Playback**, and select **Enable**.



If the device does not show, even if hidden devices are shown, it means the audio drive needs to be upgraded.

Installation Issues

Install Wizard Interrupted

"The wizard was interrupted before Nuance Powerscribe 360 | Reporting - Client could be completely installed. The system has not been modified. To install this program at a later time, run the installation again."

1. Check to make sure the Philips Speech Mike software is not running on the workstation. Exit the Speech Mike application from Task bar and run the Client install again.
2. Check to make sure there is no Microsoft Office Application open on the workstation. Close any Word documents, Outlook, Excel, etc. that are open and run the Client install again.

"Your system must be restarted due to another program install/uninstall" and you have already restarted your system, that is because the system registry has a key that needs to be deleted.

1. Launch the Registry editor.
2. Navigate to the following destination.

**Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\
Control\Session Manager**

3. Locate and delete the key named: **PendingFileRenameOperations**

Copy the link below in your browser address bar to view an eTIPS video image for a brief demonstration on how to delete the registry key.

http://healthcare1content.nuance.com/Video/eTIPS_2013/PowerScribe360/WindowsRestart/WindowsRestart.html

Log-in Issues

Client Does Not Display

When attempting to launch the PowerScribe 360|Reporting Client, the Client does not display, but appears on the task bar. Even when clicking the taskbar, the Client will not display.

1. Go to Start>Run, and type in regedit. Hit enter.
 2. Rename the HKCU\Software\Nuance\PowerScribe360 folder. This will regenerate automatically.
-

PACS Error

When launching the Client in standalone or integrated, PowerScribe 360 displays an error message:

"An error occurred initializing PACS. Please notify support. Invalid parameter specified for the log file path or logging level."

This is caused by Windows 7 PCs having the wrong TEMP and TMP user environmental variables (check: Start > Run >%temp%).

To fix the error, update the environmental variables:

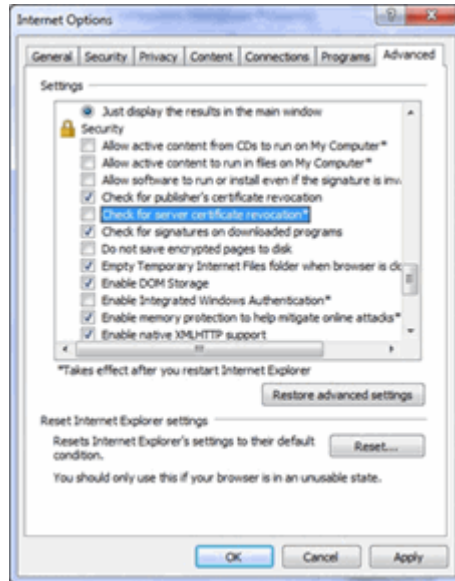
Right-click **Computer > Properties > Advanced System Settings > Environment Variables** and change the User Environment Variables for Temp and TMP from %USERPROFILE%\Local Settings\Temp to %USERPROFILE%\AppData\Local\Temp.

Slowness Logging In

Error / delays when logging into Client may be due to internet access not available for the user logged in. When the Client launches it goes to the internet to check the certificate revocation list. This is a security feature in IE when the local machine has an outdated list. Disabling the revocation check in production environments isn't recommended. Certificate revocation checking protects your clients against the use of invalid server authentication certificates either because they have expired or because they were revoked (e.g., when a server certificate was compromised).

1. To get the updated list you can download it from Microsoft at <http://support.microsoft.com/kb/2677070>

2. As an alternate, your site IT can disable certificate revocation check in IE. Starting with IE 7.0, server certificate revocation checkin is enabled by default. You can disable this feature by clicking Internet Options on the Tools menu, selecting the Advanced Tab, and clearing the Check for server certificate revocation check box, as shown below. You need to restart IE in order for this setting to take effect.



Error Loading Speech Files

When logging in, the Client fails during the Speech profile download process.

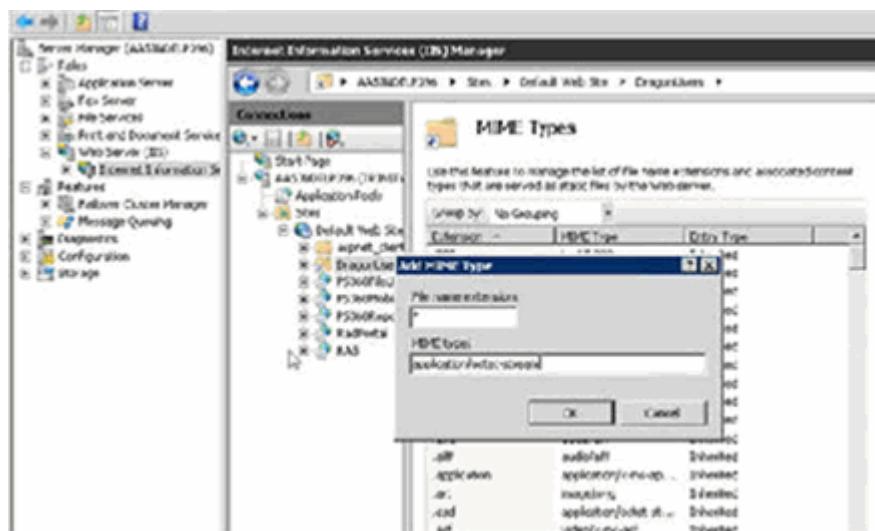


You should review the Dragon log and look for the following:

09:05:26.536 Roaming: RoamingInternetCopySOptionsIni can't copy soptions ini file from http://AASJCSSTLV398SQL/DragonUsers/luckt/current/soptions.ini to C:\Users\luckt\AppData\Local\Temp\dra1838\current\soptions.ini error = 151 Server return =404 Not Found

09:05:26.781 Roaming Error: Can't copy options.ini file down from network luckt\current\soptions.ini to C:\ProgramData\Nuance\Dragon SDK Client Edition12\RoamingUsers\Default Server\Location_1\luckt\current\soptions.ini in RoamingInternetAcousticNew error = 151 Server return =404 Not Found

The cause of this issue is that the Mime Type is missing from the IIS configuration. To resolve, go to the server and add the mime type as shown below.



Time Out When Logging In through GE ImageCast

When PowerScribe 360 | Reporting is integrated with GE ImageCast 10.8 update 3 or earlier, a GE ImageCast Timeout error can occur. **Timeout for launching Report Creation System expired. Dictation session will be terminated.**



To resolve, the client needs to upgrade to a more recent version of GE.

Receiving the Audio Wizard Setup Prompt

Each Dragon Medical profile can retain audio settings for ten (10) computer and input device combinations.

Once a specific user roams and attempts to open the eleventh (11th) combination, a previous combination will be overwritten. When that overwritten combination is next accessed by the user, Dragon considers this to be a new combination and will therefore prompt to complete ASW again.

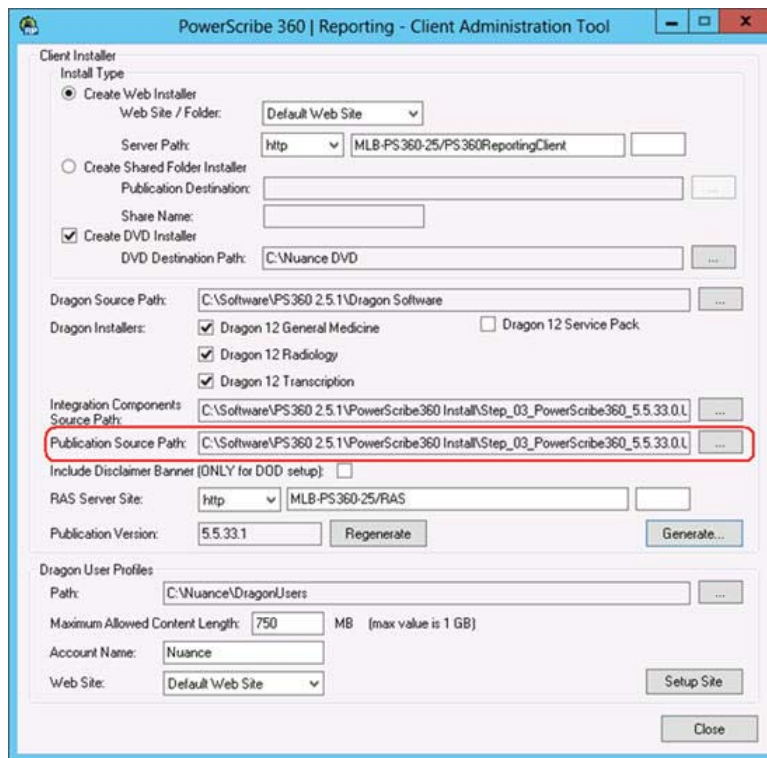
There is a workaround to increase the default number of audio setting combinations supported by Dragon. This can be increased through manually editing the nssystem.ini file in the following steps:

1. Locate and make a backup copy of the nssystem.ini file
(default location: C:\Documents and Settings\All Users\Application Data\Nuance\NaturallySpeaking10).
2. Open nssystem.ini with any text editor (i.e. Notepad).
3. Navigate to the last entry of the [Settings] section.
4. Add the following line:
Number of Audio Settings=
For example: Number of Audio Settings=15
5. Save the file, and then re-launch Dragon Medical.

Queue Empty Error Messages Crashing the Client

To resolve this error, you must edit the Nuance.PowerScribe360.exe.config file and republish the client.

1. On the Web server, launch the Client Admin, and note the Publication Source Path.



2. Open the directory to the Application Files\Nuance.PowerScribe360_X_X_XX_X folder (if there are multiple, use the highest numbered).

3. Find and open the Nuance.PowerScribe360.exe.config file:

Keyoti.RapidSpell.NET4.dll	9/4/2014 11:43 PM	Application extens...	790 KB
log4net.dll	9/4/2014 11:43 PM	Application extens...	264 KB
Nuance.CriticalResults.API.DataContract...	9/4/2014 11:45 PM	Application extens...	72 KB
Nuance.IRadWhere.dll	9/4/2014 11:50 PM	Application extens...	18 KB
Nuance.PowerMic.manifest	9/4/2014 11:43 PM	MANIFEST File	5 KB
Nuance.PowerScribe360.exe	9/4/2014 11:50 PM	Application	4,672 KB
Nuance.PowerScribe360.exe.config	9/4/2014 11:43 PM	CONFIG File	17 KB
Nuance.PowerScribe360.exe.manifest	9/4/2014 11:50 PM	MANIFEST File	41 KB
Nuance.PS360.Data.dll	9/4/2014 11:48 PM	Application extens...	4,348 KB
Nuance.Radiology.DICOM.dll	9/4/2014 11:48 PM	Application extens...	60 KB
Nuance.Radiology.DICOM.ViewModel.A...	9/4/2014 11:46 PM	Application extens...	8 KB
Nuance.Radiology.DICOM.ViewModel.M...	9/4/2014 11:46 PM	Application extens...	10 KB
Nuance.Radiology.DICOM.ViewModel.O...	9/4/2014 11:46 PM	Application extens...	10 KB
Nuance.Radiology.DICOM.ViewModel.Va...	9/4/2014 11:46 PM	Application extens...	11 KB
Nuance.Radiology.DICOM.ViewModel.X...	9/4/2014 11:46 PM	Application extens...	12 KB
Nuance.Radiology.Encryption.dll	9/4/2014 11:48 PM	Application extens...	24 KB
PowermicCtrl.dll	9/4/2014 11:43 PM	Application extens...	656 KB

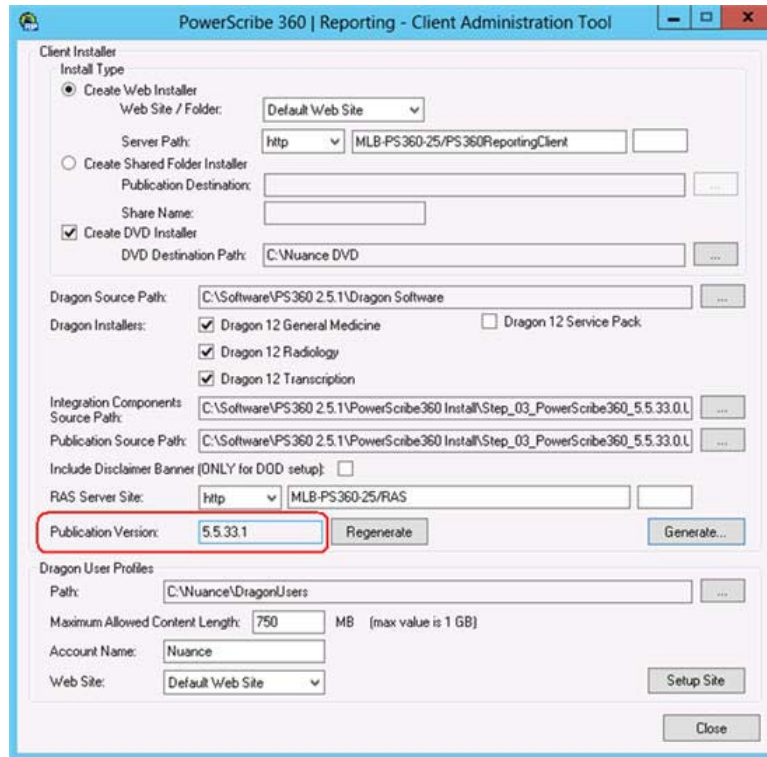
4. Add the following line to the end of the appSettings section:

```
<add key="SendKeys" value="SendInput"/>
```

```
<?xml version="1.0"?>
<configuration>
  <configSections>
    <section name="log4net" type="log4net.Config.Log4NetConfigurationSectionHandler, log4net"/>
  </configSections>
  <appSettings file="user.config">
    <add key="Comissure.HealthSystem" value="0"/>
    <add key="Comissure.AutoUpdate" value="0"/>
    <add key="Comissure.WavePreserve" value="1"/>
    <add key="Comissure.OrderPolling" value="1"/>
    <add key="Comissure.ShellStyle" value="1"/>
    <add key="Comissure.DisableReportAudioBackup" value="0"/>
    <add key="Comissure.AudioBackup.SecondsAfterLastReco" value="5"/>
    <add key="Comissure.AudioBackup.AudioBetweenBackupsMs" value="10000"/>
    <add key="Comissure.GrammarSpeechThreshold" value="-10"/>
    <add key="Comissure.ExplorerRefreshPollingInterval" value="30000"/>
    <add key="Comissure.IncludeLateralityMatches" value="0"/>
    <add key="Comissure.SpeakerLoadTimeoutMs" value="300000"/>
    <add key="Comissure.SpeakerCloseTimeoutMs" value="5000"/>
    <add key="Comissure.InvalidCOMConnectionTimeout"
    <add key="SendKeys" value="SendInput"/>
  </appSettings>
  <system.serviceModel>
    <bindings>
      <netTcpBinding>
        <binding name="Insecure" closeTimeout="00:00:30" openTimeout="00:00:30" receive
          <readerQuotas maxDepth="32" maxStringContentLength="134217728" maxArr
          <security mode="None">
            </security>
        </binding>
        <binding name="Secure" closeTimeout="00:00:30" openTimeout="00:00:30" receive
          <readerQuotas maxDepth="32" maxStringContentLength="134217728" maxArr
          <security mode="Transport">
            <transport clientCredentialType="None" protectionLevel="Encry
            </security>
        </binding>
      </netTcpBinding>
      <netNamedPipeBinding>
```

5. Save the changes and return to the Client Admin.

6. Note the Publication Version.



7. Click **Generate**.

8. On the prompt, click **Yes**.

9. Click **Edit** to confirm the RAS address.

10. Click **OK** and **OK** again to begin republishing the Client.

11. Once complete, click **Regenerate** so that the Publication version is one number higher than it was previously (IE, 5.5.33.1 to 5.5.33.2).



Failure to regenerate the publication version number may cause issues launching the client and existing clients will not be updated with the new settings.

DGNERR_ROAMING_SUCCESS_WARN_VOC_DELTA_FULL Error

When users are experiencing DGNERR_ROAMING_SUCCESS_WARN_VOC_DELTA_FULL errors, it means that they've made multiple vocabulary changes, but those changes have not been permanently applied to their profile yet.

This data is typically applied to the profile via ACO/LMO. However, if the user is not or cannot save speech files, you will see this error.

To resolve:

1. Get on a server or workstation with Dragon installed.
2. If not on the web server, create a mapped drive to the <\\PowerScribe360Server\DragonUsers> directory.
3. In your DragonUsers folder, open the folder matching the user's username, then the current folder and open the topics.ini file.
4. Under the [Topics] row, you will find a string of text, typically US English | Large | PS360 Radiology=US_Engli, but it may vary depending on the site.
5. Highlight and copy that line, all the way to the just before the equals sign, (IE US English | Large | PS360 Radiology)
6. In your start menu, under Programs, find Dragon SDK Client Edition 10.2>Dragon SDK Client Tools and select **VocDelta Merge Tool**.
7. In the CMD window, type mergevocdelta -username="Z:\Username" -topicname="US English | Large | PS360 Radiology" using the appropriate username and topic values.

Client Latency

In some cases, performance or latency issues are caused by profiles. This is possible, but should not be assumed. Confirm this by troubleshooting in a logical manner.

Bloated Profiles

A word of warning: Never disable ACO or LMO and do not disable the standard profile settings. These settings and ACO / LMO allow the system to properly clean up after itself, while improving speech recognition.

On systems that are V1.x and 2.x where the Dragon AND SUS is not updated, profiles could grow too large on the server and prevent the local cache from uploading and being removed from the local workstation.

On these systems you should do the following:

1. Run the profile clean up tool against the users profile on the server. (If you are able to, you should run it against all users to be proactive).
2. Have the user log in, and select **Speech > Save Speech Files**.
3. Re-run the speech profile clean up against the users profile again, to trim it up, and allow SUS to run.
4. If the user is a large Volume reader and speaks most of the reports, you should set the user to run ACO more often, for example every 2 or 3 days. This will allow the user to successfully upload data from other workstations.

Even if the system is version 2.x with an updated Dragon and SUS, if the user dictates more than they use AutoTexts, they could create a large local cache and after one session upload, the server profile is too large to accept more uploads.

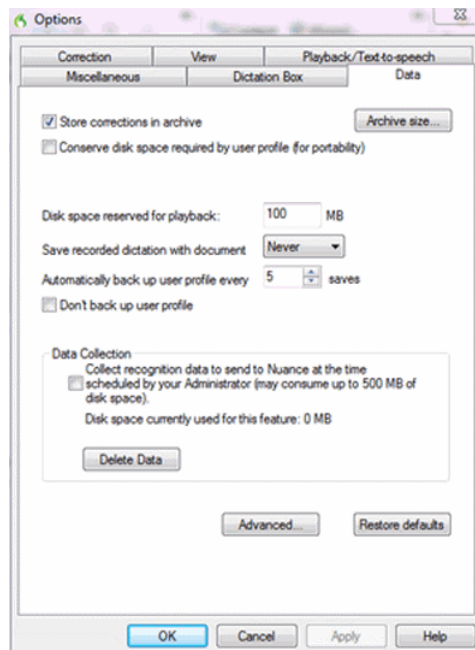
On these systems you should do the following:

1. Run the profile clean up tool against the users profile on the server. (If you are able to, you should run it against all users to be proactive).
 2. Have the user log in, and select **Speech > Save Speech Files**.
 3. Set the user to run ACO every 2 or 3 days.
-

Verify Client Setting

Sometimes Client settings can cause issues. A common one is the user has enabled auto saving of the profile every X report saves. This cause's severe latency as the system is trying to upload the profile to the server while the user is trying to read reports.

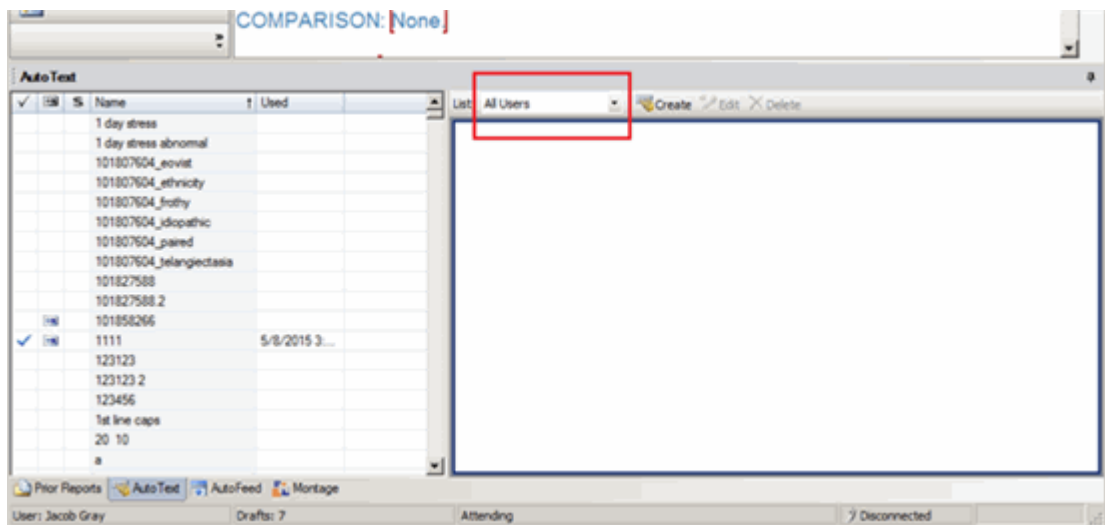
Under the user's options (below) Check the box to indicate "Don't backup user profile". Note the setting above it, where if left unchecked it would save the profile after every 5 reports saved / completed.



Resetting Client UI State

Important notes about resetting the Client state:

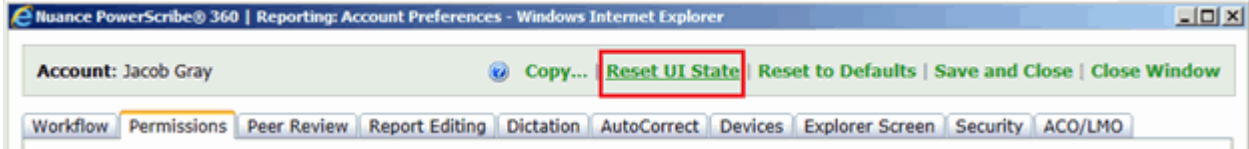
- Resetting the Client state can be done with little to no effect on users and is often easier than coordinating any changes with users.
- Depending on the system and user volume, a single system can have thousands of AutoText templates. The AutoText filter, when set for All Users, can have an effect on how quickly a report opens. Resetting the Client UI state can reset this for the user to the default filter of Relevant AutoTexts.



To reset the Client UI, with the user logged out of the Client:

1. From RadPortal > Setup > Accounts > User > Preferences, select **Reset UI State** at the top of the web page: **Performance Logging**.

Performance logging will provide information needed to identify calls that take too long, if any.

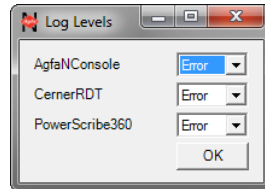


Agfa Integrations Performing Slow

NConsole is the integration component from Agfa, like PACSBridge was in PS5 or VDI for Cerner RIS.

By default, the Agfa installation sets the log levels to Error > Debug > Debug. We found this causes a noticeable delay in PowerScribe 360.

The log levels can be changed by right-clicking on the NConsole icon in the system tray, then select Log Levels.



Logging

If the above actions do not address the issue, you will need to generate and collect logs for development to assist in addressing the issues.

Performance Logging

When the complaint is slow performance or hangs when signing or closing a report, performance logging will provide you and development the information needed to ID what calls are taking too long, if any.

Enabling Performance Logging

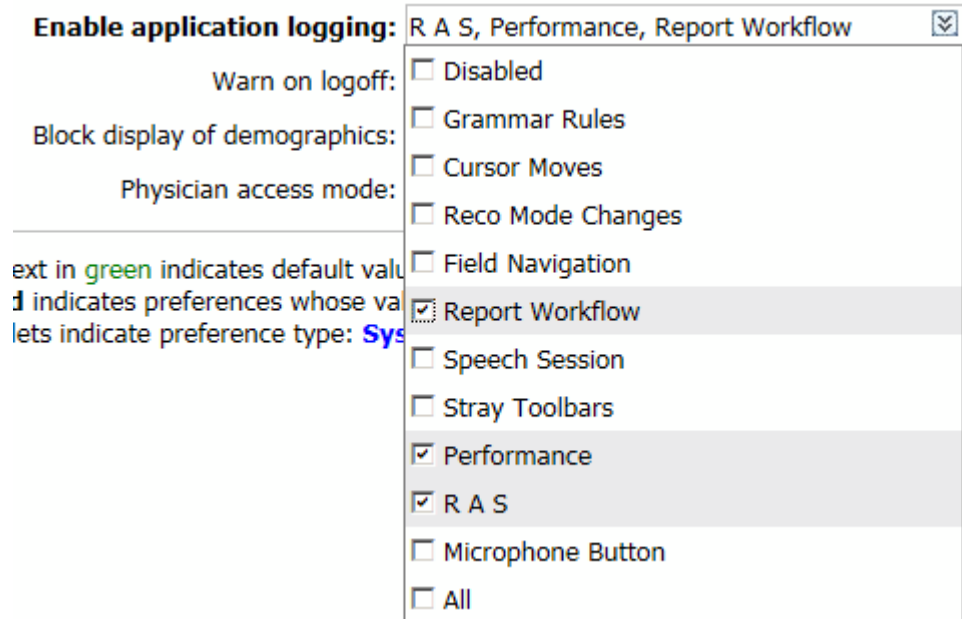
Use the following to enable Performance Logging for systems V3.0.x and higher or V2.5.x and lower:

Performance Logging for V3.0.x and Higher

Application logging can be enabled on a user or system level in RadPortal.

To enable application logging:

1. Log in to the Radport.
2. From Preferences, select **Security**.
3. Uncheck **Disabled** and check **Report Workflow**, **Performance**, and **RAS** logging.





WARNING: This logging can impact performance. Enable the Report Workflow, Performance, and RAS options only. Only enable more at development request

IMPORTANT

Enabling Performance Logging for V2.5.x and Lower

You must log in with administrative privileges to alter the registry of the Client Workstation.



Paths and values are case-sensitive!

1. Create the following folder: C:\Nuance\PowerScribe360\PerfLogs.
2. Create a Windows Registry Script File for Performance Logging:
 - a. Open a new Notepad file on the desktop.
 - b. Copy the following script, including the header into the Notepad file.

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Nuance\PowerScribe360Perf]

"EnablePerformance"="True"

"DaysToKeepPerformanceLogs"="10"

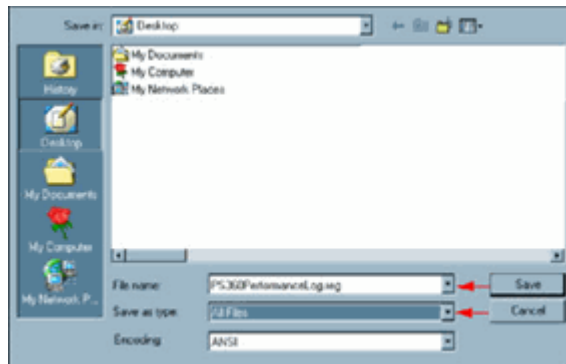
"PerformanceLog"="C:\Nuance\PowerScribe360\PerfLogs"



If enabling on a 64-bit workstation, add the following registry entries:

HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Nuance

- c. From File, select **Save As** and enter **PS360PerformanceLog.reg** as the file name, and select **All Files** as the Save as type.



- d. Click **Save** to save the file on the desktop. A **PS360PerformanceLog** icon displays on the desktop.
3. Double-click the **PS360PerformanceLog** icon on the Desktop.
4. Click Yes when the Registry Editor prompts to add the information to the Registry.

Enabling Additional Client Logging

Additional application logging can be enabled for a user or at the system level.

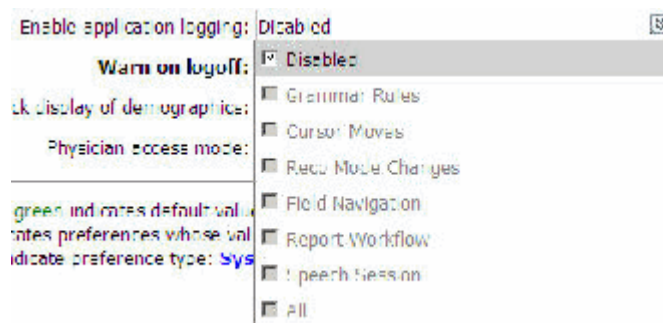
To enable additional Client logging for V2.x and lower:

1. From RadPortal, select Preferences and Security.
2. Uncheck **Disabled** and then select the required logging.



IMPORTANT

WARNING: This logging can impact performance. Enable the Report Workflow option only. Only enable more at development request.



Obtaining Client Logs

With Performance logging enabled, have the user replicate the issue to generate logs.

For the Client version, retrieve the:

- V2.5 and higher logs from Help > Upload Logs menu.
- Lower than V2.5 logs manually from:
 - ◆ Location: C:\Nuance\PowerScribe360\PerfLogs
 - ◆ Filename: PS360PERF + MMddyHHmmss + MachineName + .log
- V1.x through V2.0.x logs manually from:
 - ◆ %temp% folder.
 - ◆ PACS integration logs (Vary depending on integration)
 - ◆ RadWhereCOM Logs
 - ◆ Dragon logs in %appdata%\Nuance\Dragon SDK Client Edition12
 - ◆ Dragon.log
 - ◆ Dragon.bak.log
 - ◆ PowerScribe 360 Performance Logs
 - ◆ Location: C:\Nuance\PowerScribe360\PerfLogs
 - ◆ Filename: PS360PERF + MMddyHHmmss + MachineName + .log.

Interpreting the Logs

To interpret the log files, you must understand the PowerScribe 360 Client Report life cycle. The following illustrates the normal report open and close events that occur:



From the Web Server Communication/Explorer screen, the API or XML integration Event and then the API Integration Event (Report Open) occurs at the start of the report open event.

Opened reports are saved by the API Integration Report Pending Status event or Final Report Status event.

Reviewing Logs

The PowerScribe 360 Client Log Parser is available on the DML to download and use to view the log files.

Run the PowerScribe 360 Client Log Parser and open the folder containing the log files you collected.

Time	Task	TimeTaken	TimeAccounted	TimeUnaccounted	HasRASLog	InvokedFrom	IsDictating	UserName	Role
01/06/2015 13:47:22	QuickSearchByA...	00:00:29.480	00:00:29.511	00:00:00.031	True	A	False	peter okolo	A
01/06/2	Search Accession	00:01:32.641	00:00:10.218	00:00:01.964	True	-	False	heather boo	-
01/06/2	Highlight RAS Logs	00:00:06.994	00:00:06.030	00:00:00.964	True	A	False	peter okolo	A
01/06/2	Highlight App Logs	00:00:05.610	00:00:05.360	00:00:00.250	True	A	False	peter okolo	A
01/06/2	Copy	00:00:14.393	00:00:05.203	00:00:09.190	True	-	-	-	-
01/06/2	Delete	00:01:59.713	00:00:05.030	00:00:00.984	True	-	False	peter okolo	-
01/06/2	Filter to Event Type	00:01:49.403	00:00:04.758	00:00:01.311	True	-	False	tery bachow	-
01/06/2	Clear Filter	00:00:05.085	00:00:04.727	00:00:00.358	True	A	False	heather boo	A
01/06/2		00:00:05.541	00:00:04.496	00:00:01.045	True	A	False	tery bachow	A
01/06/2015 09:24:52	QuickSearchByA...	00:00:04.836	00:00:04.398	00:00:00.438	True	A	False	richard martello	A
01/06/2015 09:24:10	Login	00:00:32.510	00:00:04.071	00:00:00.235	True	-	False	richard martello	-
01/06/2015 17:21:05	Login	00:00:42.775	00:00:04.040	00:00:00.625	True	-	False	n.mueller@ronast	-
01/06/2015 09:14:53	Login	00:01:39.763	00:00:03.993	00:00:02.293	True	-	False	richard martello	-

Performance Logs

Performance logs provide summary data, explaining how long each action took to complete.

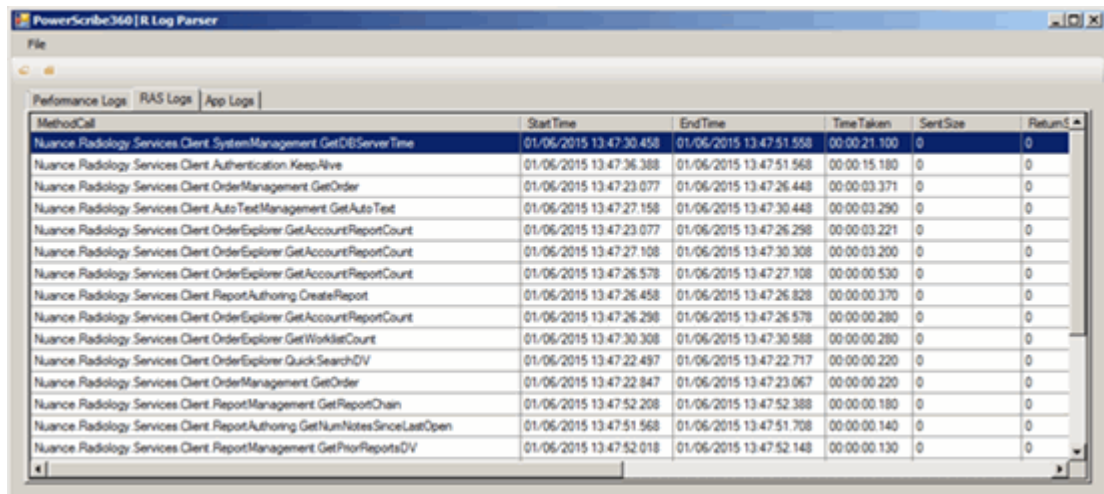
TimeTaken shows how long each action took to complete. This would include communicating with the PowerScribe 360 web server and waiting on user input.

TimeAccounted demonstrates how much time is taken on communicating with the PowerScribe 360 web server:

- If the TimeAccounted vs TimeTaken is high, select the Highlight RAS Logs option.
- If it is low, select the Highlight App Logs section.

RAS Logs

RAS logs are available in V3.0 and higher exclusively. These logs provide details about each call made to the PowerScribe 360 web server, including TimeTaken.



The screenshot shows the 'PowerScribe360 | R Log Parser' application window. It has a menu bar with 'File' and a toolbar with icons for file operations. Below the toolbar are three tabs: 'Performance Logs', 'RAS Logs', and 'App Logs'. The 'RAS Logs' tab is active, displaying a table with the following columns: MethodCall, Start Time, End Time, Time Taken, Sent Size, and Return Code. The table contains 17 rows of log entries, with the first row highlighted in blue. The first row shows a high 'Time Taken' value of 00:00:21.100.

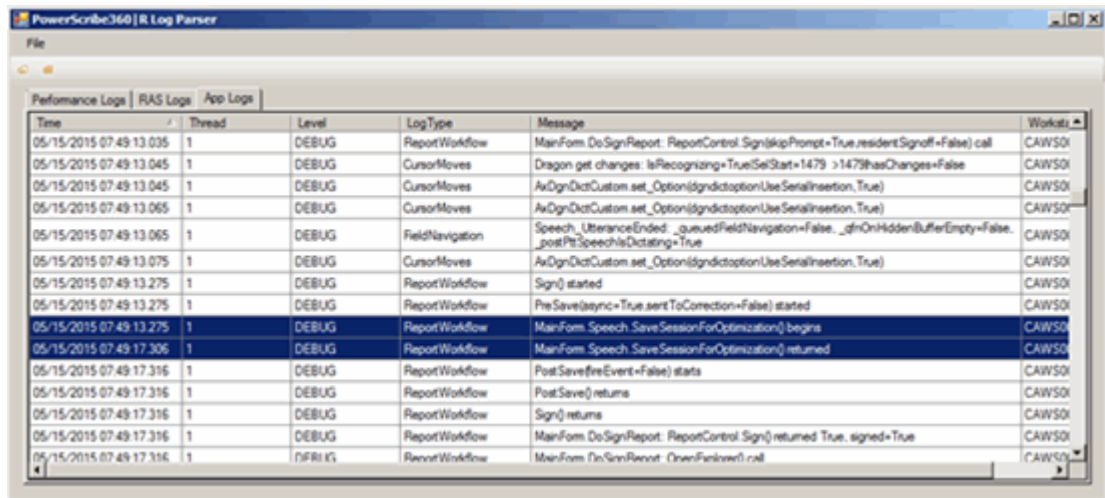
MethodCall	Start Time	End Time	Time Taken	Sent Size	Return Code
Nuance.Radiology.Services.Client.SystemManagement.GetDBServerTime	01/06/2015 13:47:30.458	01/06/2015 13:47:51.568	00:00:21.100	0	0
Nuance.Radiology.Services.Client.Authentication.KeepAlive	01/06/2015 13:47:36.388	01/06/2015 13:47:51.568	00:00:15.180	0	0
Nuance.Radiology.Services.Client.OrderManagement.GetOrder	01/06/2015 13:47:23.077	01/06/2015 13:47:26.448	00:00:03.371	0	0
Nuance.Radiology.Services.Client.AutoTestManagement.GetAutoTest	01/06/2015 13:47:27.158	01/06/2015 13:47:30.448	00:00:03.290	0	0
Nuance.Radiology.Services.Client.OrderExplorer.GetAccountReportCount	01/06/2015 13:47:23.077	01/06/2015 13:47:26.298	00:00:03.221	0	0
Nuance.Radiology.Services.Client.OrderExplorer.GetAccountReportCount	01/06/2015 13:47:27.108	01/06/2015 13:47:30.308	00:00:03.200	0	0
Nuance.Radiology.Services.Client.OrderExplorer.GetAccountReportCount	01/06/2015 13:47:26.578	01/06/2015 13:47:27.108	00:00:00.530	0	0
Nuance.Radiology.Services.Client.ReportAuthoring.CreateReport	01/06/2015 13:47:26.458	01/06/2015 13:47:26.828	00:00:00.370	0	0
Nuance.Radiology.Services.Client.OrderExplorer.GetAccountReportCount	01/06/2015 13:47:26.298	01/06/2015 13:47:26.578	00:00:00.280	0	0
Nuance.Radiology.Services.Client.OrderExplorer.GetWorklistCount	01/06/2015 13:47:30.308	01/06/2015 13:47:30.588	00:00:00.280	0	0
Nuance.Radiology.Services.Client.OrderExplorer.QuickSearchDV	01/06/2015 13:47:22.497	01/06/2015 13:47:22.717	00:00:00.220	0	0
Nuance.Radiology.Services.Client.OrderManagement.GetOrder	01/06/2015 13:47:22.847	01/06/2015 13:47:23.067	00:00:00.220	0	0
Nuance.Radiology.Services.Client.ReportManagement.GetReportChain	01/06/2015 13:47:52.208	01/06/2015 13:47:52.388	00:00:00.180	0	0
Nuance.Radiology.Services.Client.ReportAuthoring.GetNumNotesSinceLastOpen	01/06/2015 13:47:51.568	01/06/2015 13:47:51.708	00:00:00.140	0	0
Nuance.Radiology.Services.Client.ReportManagement.GetPriorReportsDV	01/06/2015 13:47:52.018	01/06/2015 13:47:52.148	00:00:00.130	0	0

If the time taken of a RAS call is high, it means that there was a delay with the Client receiving data back from the web server. Next, identify WHERE that delay is occurring. Some possibilities:

- Network performance
- Proxy server performance
- SQL performance
- Server performance
- Workstation performance

App Logs

Application logs provide details about what is occurring within the application itself.



Time	Thread	Level	LogType	Message	Worksta
05/15/2015 07:49:13.035	1	DEBUG	ReportWorkflow	ManForm_DoSignReport: ReportControl_Sign(skipPrompt=True, residentSignoff=False) call	CAWSDI
05/15/2015 07:49:13.045	1	DEBUG	CursorMoves	Dragon get changes: IsRecognizing=True, SetStart=1479, >1479, hasChanges=False	CAWSDI
05/15/2015 07:49:13.045	1	DEBUG	CursorMoves	AvDgnDictCustom set_Option(IsDictationUseSerialInsertion, True)	CAWSDI
05/15/2015 07:49:13.065	1	DEBUG	CursorMoves	AvDgnDictCustom set_Option(IsDictationUseSerialInsertion, True)	CAWSDI
05/15/2015 07:49:13.065	1	DEBUG	FieldNavigation	Speech_UtteranceEnded: _queuedFieldNavigation=False, _dgnOnHiddenBufferEmpty=False, _postPttSpeechIsDictating=True	CAWSDI
05/15/2015 07:49:13.075	1	DEBUG	CursorMoves	AvDgnDictCustom set_Option(IsDictationUseSerialInsertion, True)	CAWSDI
05/15/2015 07:49:13.275	1	DEBUG	ReportWorkflow	Sign() started	CAWSDI
05/15/2015 07:49:13.275	1	DEBUG	ReportWorkflow	PreSave(async=True, alertToCorrection=False) started	CAWSDI
05/15/2015 07:49:13.275	1	DEBUG	ReportWorkflow	ManForm_Speech_SaveSessionForOptimization() begins	CAWSDI
05/15/2015 07:49:17.306	1	DEBUG	ReportWorkflow	ManForm_Speech_SaveSessionForOptimization() returned	CAWSDI
05/15/2015 07:49:17.316	1	DEBUG	ReportWorkflow	PostSave(fireEvent=False) starts	CAWSDI
05/15/2015 07:49:17.316	1	DEBUG	ReportWorkflow	PostSave() returns	CAWSDI
05/15/2015 07:49:17.316	1	DEBUG	ReportWorkflow	Sign() returns	CAWSDI
05/15/2015 07:49:17.316	1	DEBUG	ReportWorkflow	ManForm_DoSignReport: ReportControl_Sign() returned True, signed=True	CAWSDI
05/15/2015 07:49:17.316	1	DEBUG	ReportWorkflow	ManForm_DoSignReport_Owner(FireEvent) call	CAWSDI

Report Workflow application logs can be very helpful in identifying a variety of issues, including a local profile that has NOT been saved in some time.

For example (see above), the SaveSessionForOptimization method, which is the speech data generated and saved as part of the voice profile for ACO/LMO, takes 4 seconds to complete. This would be 4 seconds added onto the Client signing process.

To ensure this is related to the local profile size on the workstation, and not I/O or A/V, review the Dragon log as well. If the issue is related to profile size, you should see lines like the following:

07:49:17.300 (Optimizer): ACO: Info: (FIFO) Queue size (XXXXXXXXXX bytes) exceeds the requested DRA limit (167772160 bytes) by XXXXX bytes



If the above steps and recommendations have not provided a resolution, you should ensure you have logs and consult with a Product Specialist.

Process Monitor

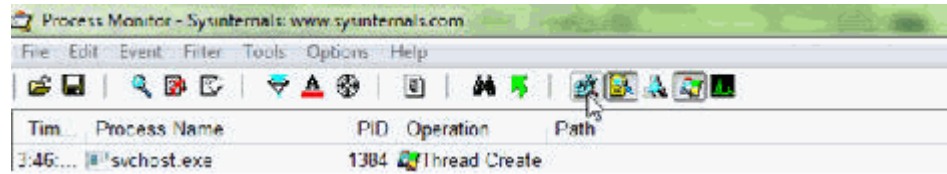
These steps capture the File, Registry, and Process/Thread activity using the Sysinternals Process Monitor to capture latency during dictation, sign on/off, or starting/ending reports.

Running Process Monitor

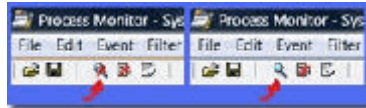
1. Double-click Launch Process Monitor (procmon.exe).
2. Verify the Process Monitor is set to capture data; this should be the default.

To determine if the Process Monitor is collecting data:

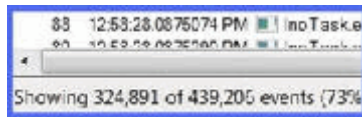
- a. Uncheck registry and network activity icons to filter out extra processes



- b. Toggle the Capture button if it has a **red X**.



- c. Check that events are being captured by viewing status information in the lower left corner of Process Monitor. If the tool is capturing data, the numbers displayed as "Showing 'X' of 'Y' events" will be incrementing upward.

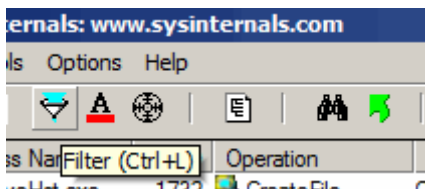


- 3. Stop Process Monitor capture activity by clicking on the **Capture** button to now display with a **red X**.
- 4. From the File menu, select **Save**.
- 5. Leave the Events to Save and Format as the default settings.
- 6. Specify a location to save the output file.

Reading Process Monitor Logs

To begin reading the data, set the filters in Process Monitor.

1. From the toolbar, click **Filter**.



Filters to Add:

Column	Relation	Value	Action
Path	Contains	Dragon	Include
Process Name	is	Nuance.PowerScribe360.exe	Exclude
Process Name	is	dgnuiasvr.exe	Exclude
Process Name	is	dgnuiasvr_x64.exe	Exclude
Process Name	is	natspeak.exe	Exclude
Process Name	is	vcmd.exe	Exclude
Process Name	is	svchost.exe	Exclude
Process Name	is	consent.exe	Exclude

2. With the results now filtered, mouse over the process name to get details on the process, and review the specific path of the file being touched by the process.

All workstations are different, and therefore all results will be different.

3. Specifically note if there are any non-Windows related processes accessing files or folders from the A/V and DLP exclusion list from KB 16484.

IE, McShield.exe (McAfee A/V process) accessing files in the C:\ProgramData\Nuance folder or subfolder or within the C:\Users\\AppData\Roaming\Nuance\Dragon SDK Client EditionX\results folder.

4. If you see non-Windows related processing files or folders from the A/V and DLP exclusion list, A/V exclusions have NOT been set or are not being honored properly.
5. If the issue seems to be XML integration related, in the Filters list above, instead of Path Contains Dragon, change it to Path Contains XMLFilePath (C:\Nuance for instance).

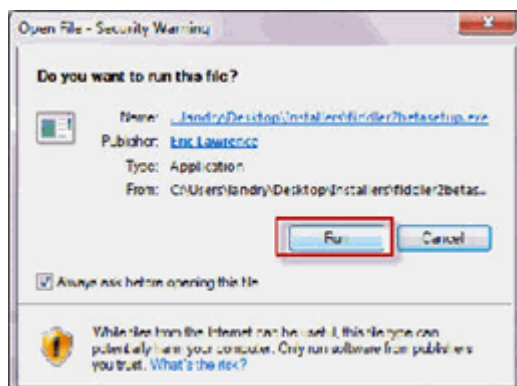
What Process Monitor cannot confirm is whether the natspeak.exe process is being scanned within memory itself.

Fiddler

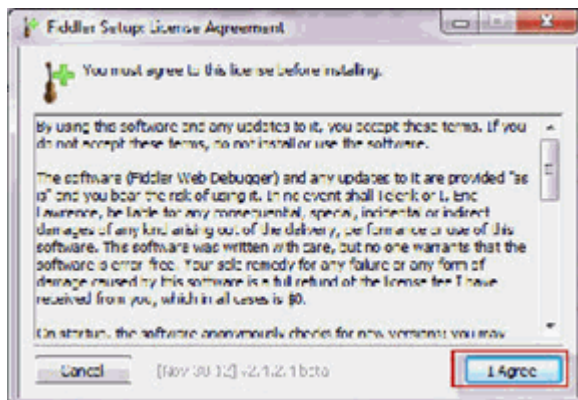
When calls are taking too long for each of the Application servers, analyzing the network communications from the Client to server can help. The Fiddler logs can help you identify if the latency is related to communications to the application server.

If the site is SSL, Fiddler logs will not provide data as the SSL will encrypt everything.

1. Download the Fiddler Installer: [Download the full version of Fiddler](#). For web traffic capture only, download FiddlerCap.
2. Run the Fiddler Installer:
 - a. Select Run from any Security Warning dialog.

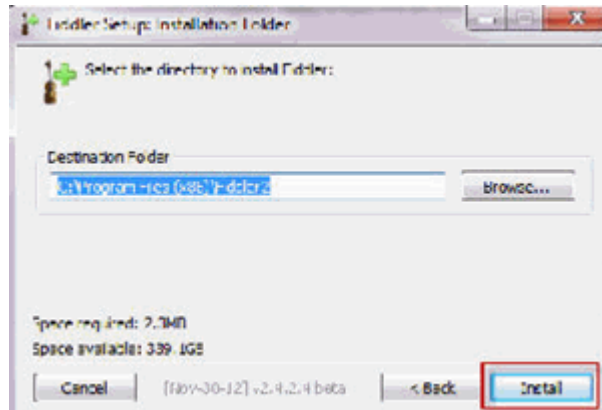


The Fiddler Setup: License Agreement dialog displays.



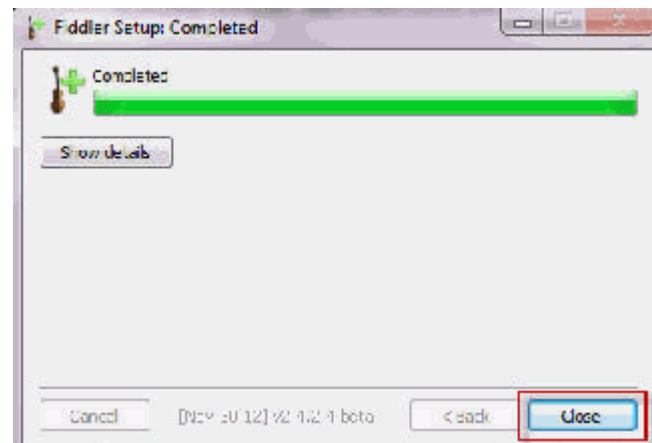
- b. Click I Agree.

The Fiddler Setup: Installation Folder dialog displays.



- c. Click **Install**.

The Fiddler Setup: Completed dialog displays.

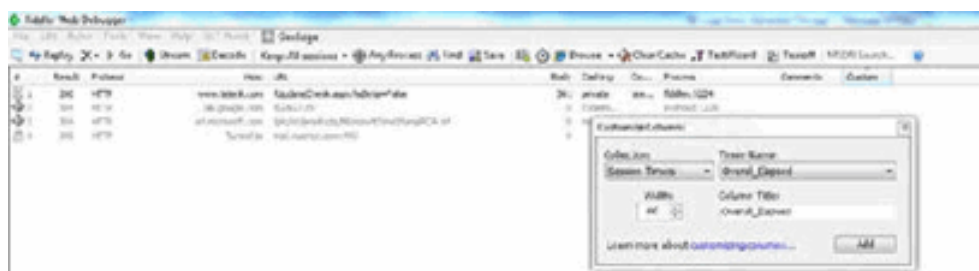


- d. Click **Close**.

Customizing Columns to Adjust Data Captured

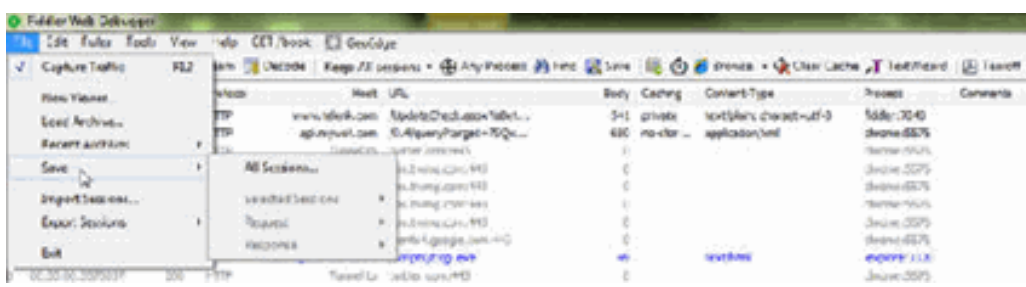
1. From Start, select **Fiddler2**.
2. Right-click in the column heading section, and select **Customize Columns**.
The Customize Columns dialog displays.
3. From Collection list, select **Session Timers**.
4. From Timer Name list, select **Overall_Elapsed**.

5. In the Column Title box, type **Overall_Elapsed**.



Adding columns lets you capture the web service calls and the overall elapsed time.

6. From the File menu, click **Save** and select **All Sessions**.



Reading Fiddler Logs

Review the Overall_Elapsed column once the issue has been replicated. Similar to reviewing the RAS logs above.

If the overall elapsed of a web call is high, it means that there was a delay with the Client receiving data back from the web server. Identify WHERE that delay is occurring. Some possibilities:

- Network performance
- Proxy server performance
- SQL performance
- Server performance
- Workstation performance

2 - Recognition Issues

Recognition issues are not necessarily related to the dictator's profile. To properly address reports of degraded accuracy or inadequate accuracy, follow the recommendations below.



IMPORTANT

Never delete a user's profile to address recognition issues unless instructed to do by a Developer or a Manager.

Best Practices for Speech Recognition

To achieve the best results with PowerScribe® 360 | Reporting speech recognition, use the best practice guidelines shown in resource documents below:

- [PSA027](#) — Best Practices for Speech Recognition V2.0 and Higher
- [P36A038](#) — How to Handle Misrecognitions

For more information about working with the Vocabulary Editor and Auto Formatting Rules, login to iSupport and search for [Solution #14686](#): PowerScribe 360 | Report User Documentation for the latest **System Administrator Guide** and navigate to the chapter on **Provider Training - Intermediate and Advanced** and **Auto Formatting Rules**.

For more information about best practices for speech recognition, login to iSupport and search for [Solution #14686](#): **PowerScribe® 360 | Reporting User Documentation** for the latest **Best Practices Speech Recognition** document.

First Steps

Adjusting Speed vs Accuracy Setting

Before trying to fix mis-recognized words or phrases, make sure the system and client are set for maximum recognition.

Set the Dragon maximum compute speed in the RadPortal, System, Configuration, PowerScribe 360 Client tab to the highest level you can (Usually 70).

Adjust the users Speed v Accuracy setting to the same value you set in the RadPortal.

Once you have done this, dictate a report and validate if your level of recognition has improved.

Validating Dragon Version

Before trying to fix mis-recognized words or phrases, make sure the Dragon version is updated to the versions indicated below. This is due to prior versions having a defect where the microphone Gain was not properly set and maintained.

- V 1.0 to V 1.5.1 - No update for Dragon.
 - V1.5.2 - Update to DNS 10.20.104.301
 - V2.0 to 2.5.1 - Update DNS to 12.52.150.032 or higher
-

Adjusting Microphone Recording Level

The process below is not standard. This should be used for those who have recognition issues even after they have exhausted all standard practices.

Before trying to fix mis-recognized words or phrases, make sure the system is recording your dictated content at an optimal recording level. If you rewind and play back a portion of your dictation and the volume is low or the recording indicator, found on the bottom right of the PowerScribe® 360 | Reporting Client application, is not maintaining green and peaking to red often, then run the **Audio Setup** wizard to improve the recording level.

Perform the following to run the Audio Setup Wizard in an efficient manner:

1. Log in to the PowerScribe® 360 | Reporting client application.
2. On the Menu bar, click **Speech > Audio Setup**.
3. When the Check Microphone dialog appears, read the content and then click **Next**. The **Dragon will adjust your volume** dialog will appear, shown below.
4. Click **Start Volume Check** and **do not say anything**.

5. When you hear the beep or ding, click **Next** to continue to the *Dragon will test the quality of your sound system* dialog, shown below.



6. Click the **Start Quality Check**, and dictate the content found in the text box above it.

The system will "ding" and then show "passed" in the black box. At this point, click **Finish** to save your setting and exit.

Once you have done this, dictate a report and validate if your level of recognition has improved.

Vocabulary Editor

In the PowerScribe® 360 | Reporting Dictation Client, the radiologist can use the Vocabulary Editor to view the full set of words included in the speech vocabulary, trained words, and set various properties. The Vocabulary Editor provides access to the written form and spoken form (if different) of all words in the speech vocabulary.

Adding a Spoken Form to a Word or Phrase

1. From Menu, select **Speech > Vocabulary Editor**.
2. Type the word or phrase into the Written form box.
3. Find the word or phrase in the list, and highlight it.
4. In the Spoken Form box, type a number of short words representing how you speak the word. Here is an example for tomato. Some say "ta mate oh", others say "to mot oh"
5. Click the **Add**.

The word(s) may appear twice in the list. Do not delete any copies.
6. Click **Close** to exit the Vocabulary Editor.



You may also have to train the word as well as adding a spoken for. Be sure to remove all duplicate entries for any word you add a spoken form or train. Leaving multiple entries will negate any improvement.

Reference Aids for Dictator and Admins

Provide the client the two URL's below. These websites provide the dictator and the administrator with proven methods to address common recognition issue not addressed by the steps above.

- **Configuring PowerScribe® 360 | Reporting to Better Enable Radiologists to Improve Speech Recognition Accuracy**

<<https://isupportcontent.nuance.com/healthcare/16500/16518/PS360R-Admin-Procedures-to-Improve-Recognition-20150713.html>>

- **How to Improve Speech Recognition Accuracy and Fix Misrecognized Words and Phrases in PowerScribe® 360 | Reporting**

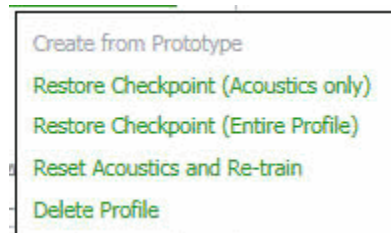
<<https://isupportcontent.nuance.com/healthcare/16500/16518/PS360R-Fixing-Misrecognized-Words.html>>

If all the above has not resolved the recognition complaints, you should escalate this issue to a product specialist for assistance.

Deleting a User's Dragon Profile

Deleting a profile is a last resort when addressing recognition issues.

There are two selections in the Admin Portal to reset a user's profile. There are major differences which need to be considered when resetting a user to re-read training.



The **Rest Acoustics and Retrain** option does not set the user back to the initial starting point. This option sets the acoustic profile back to factory (ACO), but keeps all the information (Trained words, learned pronunciations, etc.) (LMO). Essentially if the user's language model is really poor, and the user is getting very poor recognition, it will be unlikely that the user's recognition will improve greatly. This option should not be used to address very poor recognition of a converted profile. The fact that it still contains the bad information may result in garbage-in, garbage-out.

The **Delete Profile** option will drop the Dragon profile and when the user logs back in, and the user will have to re-train. The difference in this case, is the AutoTexts, auto corrects, and custom words added by the Admin are NOT lost, and are maintained as they are stored in the DB / application, not in Dragon.

If a user has very poor recognition (observed, not just reported), and the profile was converted from Dragon 10 to Dragon 12, it is recommended that you:

1. Log the user out of PowerScribe® 360 | Reporting.
2. On the server, locate the user's profile folder in DragonUsers directory.
3. Zip up the folder and store in a separate location.
4. From the Portal, go to the user's profile and select **Delete Profile**.
5. Log the user in, and then have the user re-read the training screens.

Advanced Dragon Logging

In order to send a recognition issue to development, the Dragon log must have NBest logging enabled. This logging is workstation specific.

To enable NBest logging:

1. Locate the natspeak.ini file at C:\ProgramData\Nuance\Dragon SDK Client Edition10 (Dragon SDK Client Edition 12 if 2.x or higher)
2. Right-click the file and select **Edit**.
3. Add in the lines:
[Tracing]
NBest-Choices=1
4. Save the changes.

3 - ACO/LMO Failures

ACO / LMO Process

Profile management is an important part of making the dictators and the site successful using PowerScribe® 360 | Reporting.

As users dictate throughout the day, for each report, a DRA file generates. DRA files are stored on the user workstation until the user saves their speech files to the server. These DRA files are necessary for Optimization jobs (ACO/LMO) to run successfully.

If a user trained a word today on a workstation and moves to a different workstation before the nightly LMO runs, the trained word(s) do not follow the user. Once the LMO runs, the trained word will be available system wide. Only DRA files that contain 30 seconds of audio and 2 voice corrections will input to the ACO process.

Keyboard edits are currently not included in corrections for adaptation (ACO). Therefore, if a provider or an editor uses the keyboard to edit mis-recognition errors, the mis-recognition errors will not be used for ACO.

Dragon Speech Profiles are stored on the web server at:
X:\Nuance\DragonUsers. This is also a shared folder \\<webserver>\DragonUsers.

There are two methods for the locally saved profile data to get to the server.

1. Users can save their speech data manually, from Speech > Save Speech Files in the Client, or when the user logs off of the Client, depending on preferences.
2. Users must complete the logoff for speech files to upload. If the user leaves their sessions open and lets the inactivity timer log to time-out, the user speech files will not be saved.

Profile sizes can vary. Larger profiles do not necessarily cause latency. PACS systems typically control the logging out of the PowerScribe® 360 | Reporting Client; however, the specific log out method should be verified with the PACS vendor.

When logging out of the Client, the application will perform a check of the size of the profile stored on the server. If the profile is greater than 500 MB, data will NOT be copied from the workstation to the server. During this time, the user will see a dialog, *Saving Speech Files*, for about 10 seconds.

If the application determines the server profile is less than 500 MB, the application will create a new session folder on the server and upload the profile data from the workstation. It will then delete the profile data from the workstation.

If it is noted that a user's profile goes through ACO (ACO analyzes a provider speech/acoustic patterns and applies this analysis to the acoustic model.) as scheduled, but the data keeps building up on the workstation, the site Admin should change the frequency of ACO for that user to be more often. For example, every 2 or 3 days. This will allow ACO to run more often, therefore trimming the profile more often and allowing the user to upload data from the workstations more effectively.



This should not be done for the entire site, but only for dictators who read a great deal of reports per day.



Never delete a profile to “address” profile issues. Deleting a profile should only be performed when instructed to do so by Development or a Manager.

Validate the SUS/Dragon Version

Due to some defects in earlier SUS versions, some profiles may grow too large to process. Before troubleshooting why profiles are not processing, you should validate that the SUS version has been updated to provide optimal processing ability.

In version 1.x through 1.5.x, the Client should be on SUS V 116. If not, you should update the SUS version. If the site is on this version, you should run the DNS Profile Clean-up Utility on a regular basis to keep profiles trimmed. This should only be a stop gap measure until the site can update to V2 or higher.

If the site is at version 2.0 and higher, the SUS should be updated to version 2.5.0.36 or higher. This release has the Profile Clean up utility built in.

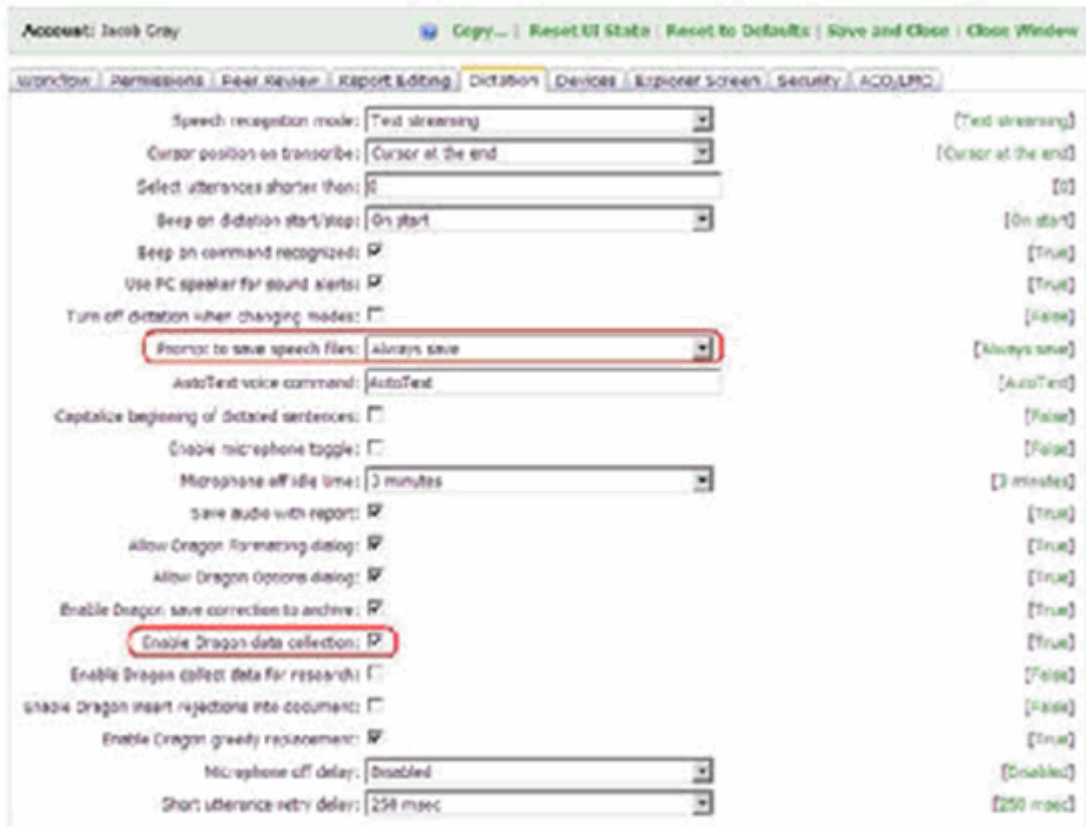
If the site is on V3, you should verify the SUS is version 3.0.0.2.

Validate the User Account Settings

By reviewing the users account, you can validate if ACO and LMO is processing. If ACO/LMO ran within the last 2 weeks, there is generally not an issue with profile processing.

If a user is not processing through ACO or LMO you should:

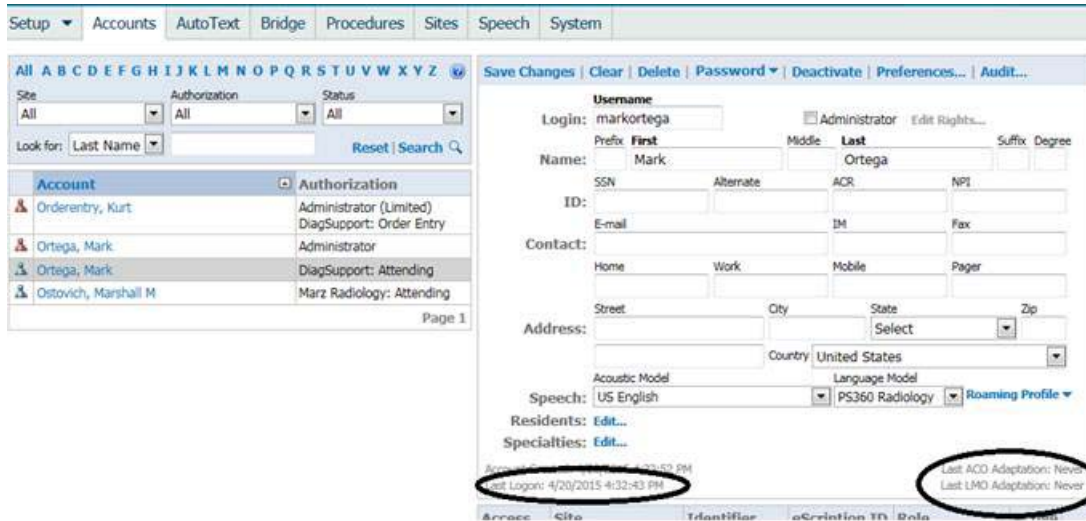
1. Verify the following system and user settings are set to save data and upload the profile data at the end of the session.
2. From the Dictation tab, check these settings:
 - ◆ Prompt to save speech files is set to Always Save.
 - ◆ Enable Dragon data collection is checked.



If the user is complaining about recognition, refer to the section on Recognition Issues.

Verify the User Completed ACO / LMO

Verify that the user is processing through ACO / LMO.



Checking ACO / LMO Logs

ACO / LMO Logs

If the ACO and LMO is not processing, check the logs to determine the cause.

If you see the user has not processed ACO / LMO in the past 2 weeks, but has logged in and used the system in that time period, you should see if the ACO or LMO failed.

You can confirm the functionality from the RadPortal > Logs > ACO/LMO page. The ACO/LMO page displays individual SUS jobs with a recent date.

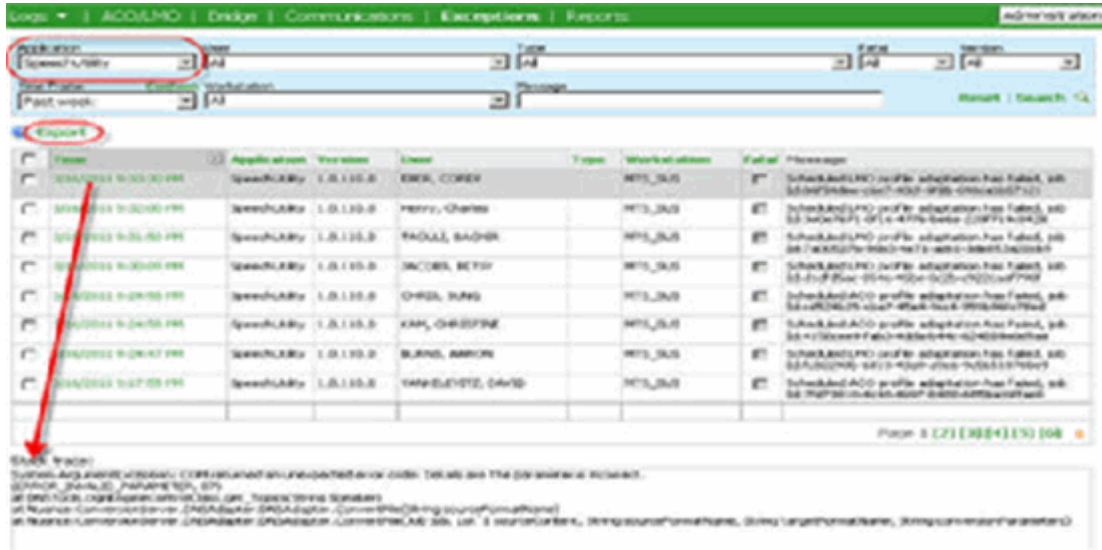
Time	Account	Speaker	Adaptation	Acoustic Model	Language Model	Execution	Audio	Text	Added File	Log
8/21/2015 10:01:48 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:02:54 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:04:30 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:05:48 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:07:06 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:08:24 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:09:42 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	
8/21/2015 10:11:00 AM	AGGARWAL, APET	AGGARWAL, APET	ACC	US English Medical	PS360 Radiology	00:00:04		000000	ak	



Jobs with "Profile folder is not available" in the Additional info field only indicates users are scheduled in ACO/LMO but have not yet trained their voice profile. This message is removed in V3 and up.

Reviewing Exception / Failure Messages

1. If you find a profile that is still failing ACO or LMO, after running the Speech Profile Remediation Utility, review the stack trace to determine the cause.



All exceptions are logged to RadPortal. Jobs may be completing successfully, but finishing with a state of 5 (Not Enough Data), which do NOT show in RadPortal. Exceptions are also logged to the Windows Event Viewer.



If the above steps and recommendations have not provided a resolution, you should ensure you have logs, and consult with a Product Specialist.

SUS Logs

- Exceptions are logged to RadPortal. All jobs that run aren't. Jobs may be completing successfully, but finishing with a state of 5 (Not Enough Data), which do NOT show in RadPortal.
- Location for SUS log files:
 - ♦ Server 2008 and 2012 – C:\Nuance\Logs
 - Spark Core Services
 - * SPARKServicesLog.txt
 - Spark Host Manager Service
 - * HostMgrLog.txt
 - Spark Speech Node Manager

* SUSClientLog.txt

* SUSNodeMgrLog.txt

- Speech Utility Server

* SUSServiceLog.txt

- Log location is specified during the install and can vary. They are usually under the folders in the X:\Nuance directory.
- Exceptions are also logged to the Windows Event Viewer.
- Log File Naming convention for SUClient.log and Dragon.log for individual SUS jobs. These files are located in the C:\Nuance\Jobs\ directory:
 - ◆ 8(30)_nwhite_1_workernode.log.zip
 - 8 – JobID from Job Table in Spark DB
 - 30 – Retry Number (jobs are repeated when there is not enough data)
 - Nwhite – Username
 - 1 – Job Type. Can be 1 for ACO, 2 for LMO

Workernode – Log Type. Will be Dragon or Workernode.

Trimming Bloated Profiles

A word of warning: Never disable ACO or LMO and do not disable the standard profile settings. These settings and ACO / LMO allow the system to properly clean up after itself, while improving speech recognition.

On systems that are V1.x and 2.x where the Dragon AND SUS is not updated, profiles could grow too large on the server and prevent the local cache from uploading and being removed from the local workstation.

On these systems you should do the following:

1. Run the profile clean up tool against the users profile on the server. (If you are able to, you should run it against all users to be proactive).
2. Have the user log in, and select **Speech > Save Speech Files**.
3. Re-run the speech profile clean up against the users profile again, to trim it up, and allow SUS to run.
4. If the user is a large Volume reader and speaks most of the reports, you should set the user to run ACO more often, for example every 2 or 3 days. This will allow the user to successfully upload data from other workstations.

Even if the system is version 2.x with an updated Dragon and SUS, if the user dictates more than they use AutoTexts, they could create a large local cache and after one session upload, the server profile is too large to accept more uploads.

On these systems you should do the following:

1. Run the profile clean up tool against the users profile on the server. (If you are able to, you should run it against all users to be proactive).
2. Have the user log in, and select **Speech > Save Speech Files**. Set the user to run ACO every 2 or 3 days.

4 - PX2008 HL7 Interface Issues

Restart the Service

Your first priority is to get the HL7 stream operating. However, you should not stop there. The cause of the outage should be investigated and a permanent resolution applied. First, restart the RadBridge.

Restarting RadBridge

1. Login to the Web server, and open **Services**.
2. Right-click the **Nuance Web Bridge** service, and select **Stop**.
3. Once the service has stopped, right-click **Nuance Web Bridge** service again, and select **Start**.



IMPORTANT

*To verify that the interface is up and connected, go to the desktop on the interface server, view the Px2008 Monitor and verify that you have either green lights (connected) or yellow lights (listening) on the left side of the window. If the **Px2008 Monitor** is not launched, double click the **PX2008 Monitor** icon. If you do not have green or yellow lights, you may need to **restart the PX2008** to connect.*

Restarting PX2008

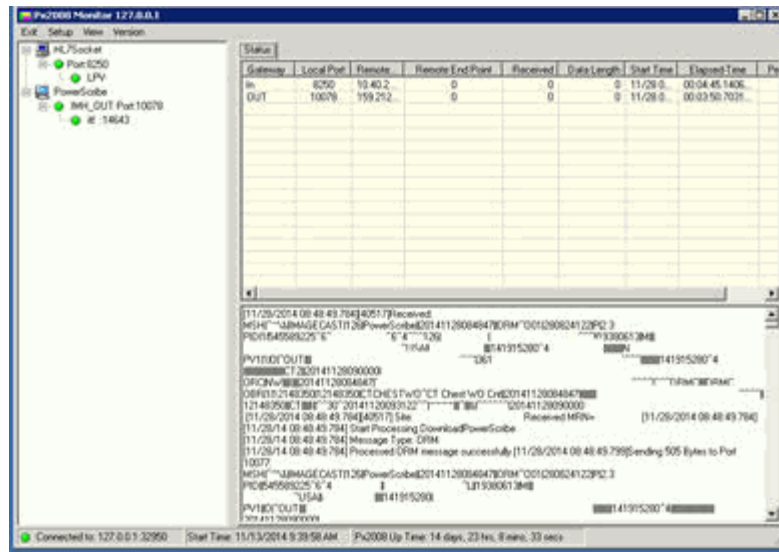
1. Login to the Interface server and open **Services**.
2. Right-click the **PX2008** service, and select **Stop**.

3. Once the service has stopped, right-click **PX2008** service, and select **Start**.



Some of the PX2008 engines flash all red lights when they are updating.

To verify that the interface is up and connected, go to the desktop on the interface server, view the Px2008 Monitor and verify that you have either green lights (connected) or yellow lights (listening) on the left side of the window. If the Px2008 Monitor is not launched, double click the PX2008 Monitor icon. If you do not have green or yellow lights, you may need to restart the PX2008 service to connect.



Verify the PX2008 Version

When troubleshooting PX2008 issues such as port disconnects, it is important to verify the version of PX2008 installed. Versions prior to Px2008_v5.0.5641.24770 had issues with port disconnects. Be sure you inform the client that the users will not be impacted, and the only system impact will be a 15 min interruption of the HL7 stream.

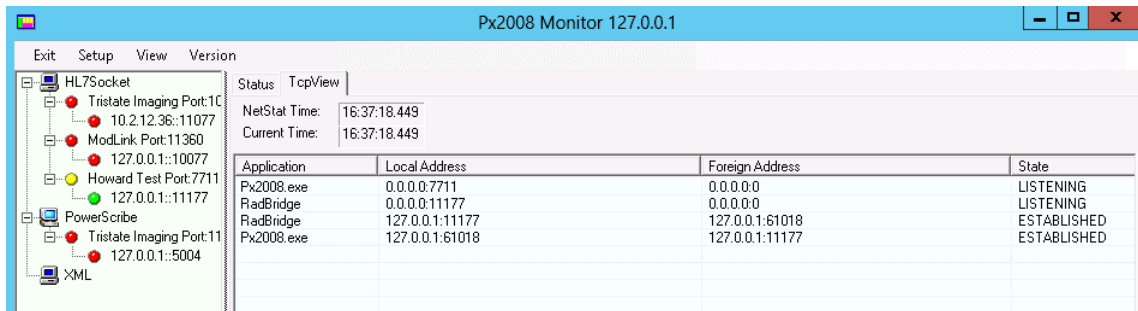
To verify the version, click on the Version menu selection in the PX2008 monitor. If the PX is not at Px2008_v5.0.5641.24770 or higher, you should work with the client to have the PX updated. The instructions to update PX are included in the installation manual, and can be performed by all support engineers.

Determine the Cause of the Failure

Monitoring Traffic To and From PX

In cases where you see repeated connects and disconnects to PX2008, or you are not sure if the RIS or RadBridge are connecting to PX you can monitor traffic and connections

1. Open the PX Monitor application.
2. Select **TcpView**.
3. Observe what servers are communicating with PX and what connections are being made.



Supported ADT Message Types

Sometimes messages are not processed or rejected due to incompatibility

The following is a list of ADT event types that are recognized by the PowerScribe® 360 | Reporting HL7 RadBridge. All others event types are rejected.

ADT Event	Description	ADT Event	Description
A01	Admit	A02	Transfer
A03	Discharge	A04	Register
A05	Pre-Admit	A08	Patient Update
A11	Cancel Admit	A13	Cancel Discharge
A18	Merge Patient	A31	Update Personal Information
A34	Merge Patient ID		

Message Acknowledgements (ACK's)

Acknowledgements are used to confirm the receipt of the message. Acknowledgements are implemented at two levels transport level and application level. The sending system will assume that the message sent by is not received until it receives an ACK from the receiver.

Sending systems open a connection to send messages to the receiving messages, mostly through the interface engine which acts as the broker for communications between different systems in a healthcare setup. If a message is acknowledged on the same connection which is used to send a message, they are termed as transport level acknowledgements.

Transport Level Acknowledgements also indicate that the ownership of the message is passed to the receiving system after it has received an acknowledgment. The transport level acknowledgement also informs the transport and reception error.

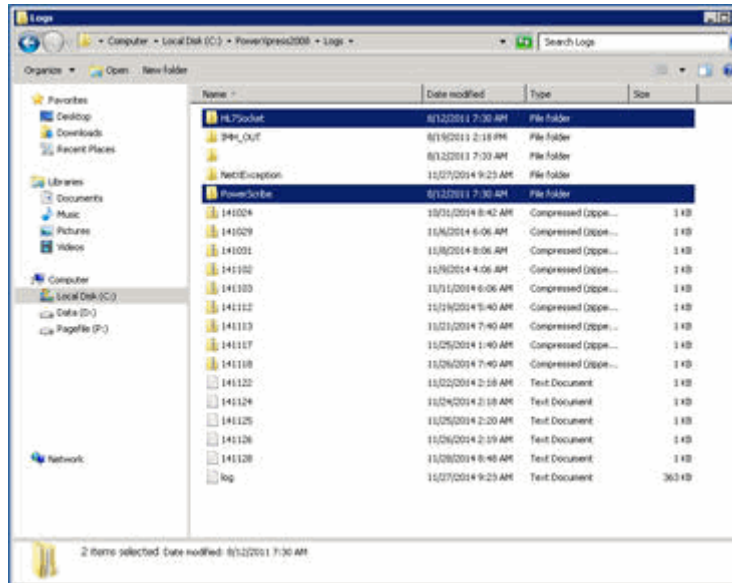
If a message is received and accepted by the receiver then it sends a ACK and performs one of the following:

1. Validates and persists the message successfully, generating the functional response message with a value of AA (Application Accept) in MSA-1-acknowledgment code field.
2. Send an error response, providing error information in functional segments to be included in the response message with a value of AE (Application Error) in MSA-1-acknowledgment code field.

A failure to process (reject) the message for reasons unrelated to its content or format (system down, internal error, etc.). For most such problems, it is likely that the receiving system will be able to accept the same message at a later time. The sending system must decide on an application-specific basis whether the message should be automatically sent again. The response message contains a value of AR (Application Reject) in MSA-1-acknowledgment code.

PX2008 Logs

You can view the actual HL7 messages crossing through PX2008 by looking at the log files. The general path to find these log files is C:\PowerExpress2008\Logs. Keep in mind every customer site might have the logs on a different drive. The HL7Socket folder holds the log files for inbound orders and the PowerScribe folder holds the log files outbound reports.



How to Populate a Custom Field via HL7 Feed (Orders)

The ability to send data to the custom fields is prebuilt into PowerScribe® 360 | Reporting and does not need Nuance Support involvement.

The RIS / HIS team should send the data to PowerScribe 360 in an OBX CE (custom element) segment as part of the order, to populate the custom field.

The format should be as follows:

```
OBX|1|CE|CTLE1^CT LOWER EXT WO CONTRAST||AOI^AREA OF INTEREST|
```

```
OBX|2|CE|CTLE1^CT LOWER EXT WO CONTRAST||ICD9^454
```

If the client's RIS team cannot send CE segments, use the Mapping change process for a billable mapping change.

MPI - Master Patient Identifier

The MPI is a unique identifier that ties together a patient's records, from different facilities, where the patient MRN is different.

To allow PowerScribe 360 to link patients across sites, the RIS should send the MPI in PID 3.

5 - Microphone Issues

PowerMic issues on Windows 7 and 8 workstations can have different causes, but the presentation can be similar.

Initial Settings to Check Or Verify

1. Is the PowerMic a non-scanning microphone and the PowerMic with scanner drivers not installed on the workstation?
 2. Is the PowerMic a scanning microphone and the PowerMic with scanner drivers are installed?
 3. Is the PowerMic firmware updated to the latest version?
 4. Is the PowerMic configured to be the default recording device?
 5. Are the other recording devices disabled, except for the Audio Mixer device?
 6. Are the audio recording Power Management properties disabled for the PowerMic audio device?
-

Download Microphone Drivers

The following microphone drivers are available to download.

- [PM2_Update_1.0.0.11.exe](#)
- [PowerMicDrivers.exe](#)

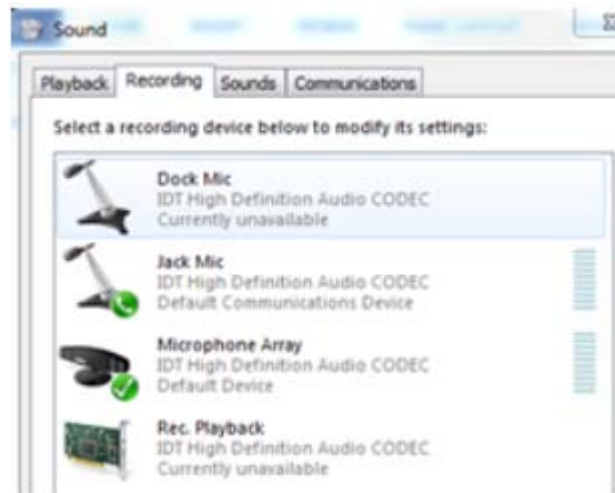
Resolving - No Audio Device Installed

When logging into the PowerScribe 360 Client on a Windows 7 workstation, the following error displays:

"It appears that this computer has no audio recording devices installed. Speech will therefore be disabled."

Resolutions

1. Go to the Control Panel > Sounds and Settings dialog.
2. Ensure the Audio Mixer Device shows under Recording Devices as shown below:



3. If you do not see the device, right-click and select **Show Hidden Devices**.
4. Right-click **Rec Playback**, and select **Enable**.



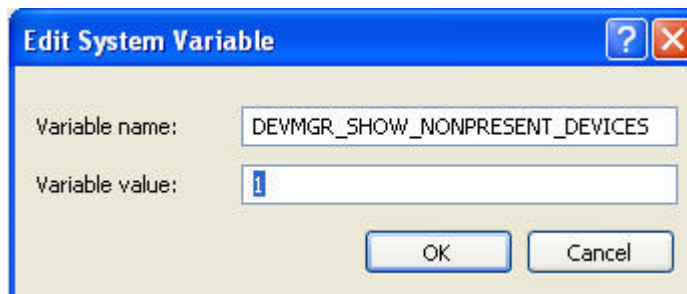
If the device does not show, even if hidden devices are shown, it means the audio drive needs to be upgraded.

Remove Remnant USB Devices

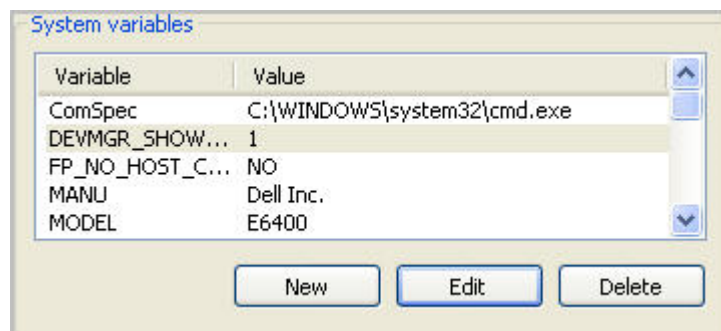
1. Remove the remnant USB device drivers which can remain and interfere with the installation of Nuance input devices such as PowerMic and the USB foot pedal. This process provides a procedure to eliminate drivers for non-present devices on client workstations.

Remnant USB devices can accumulate and interfere with the installation of the PowerMic and PowerMic II USB devices. Below is a procedure to add one system environmental variable, which allows drivers for non-present devices to be displayed in Device Manager. Removal of these non-present devices has proven to be beneficial in resolving issues related to the installation of the PowerMic USB device

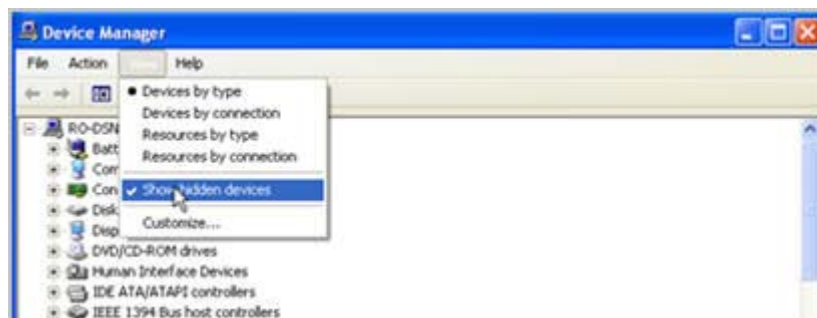
- a. On the workstation, click **Start > Settings > Control Panel > System**.
- b. Click the **Advanced** tab.
- c. Click **Environmental Variables** at the bottom.
- d. In the System variables box at the bottom, click **New**.
- e. Enter the values presented in the Edit System Variable window, shown below:
 - Variable name: **DEVMGR_SHOW_NONPRESENT_DEVICES**
 - Variable value: **1**



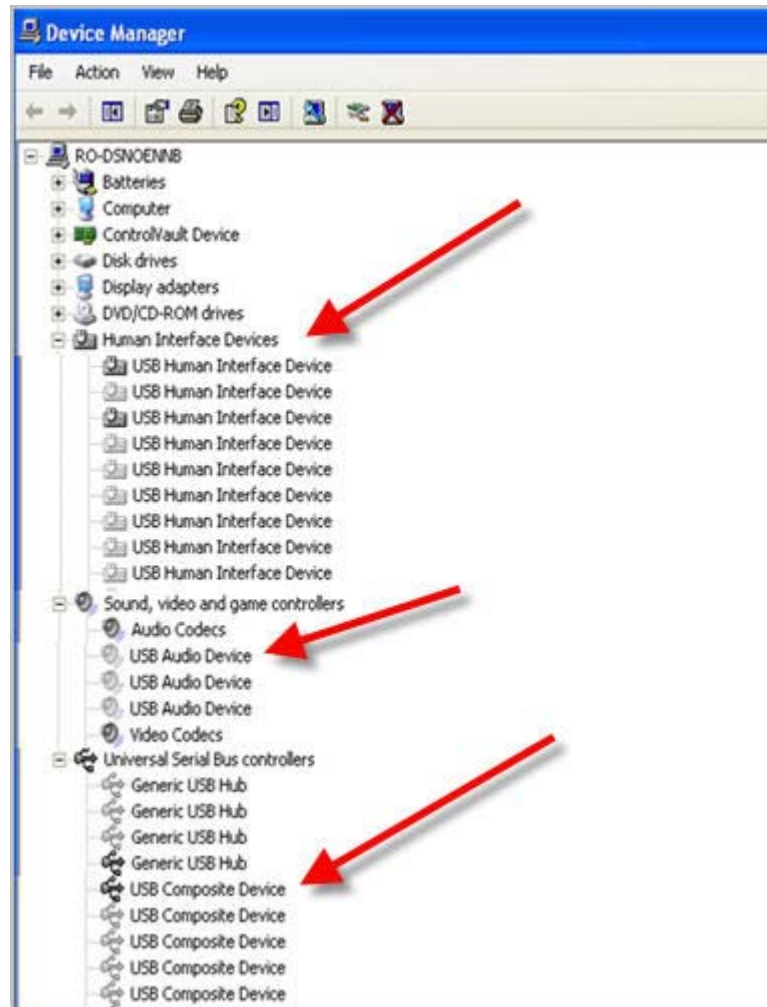
- f. Click **OK** and the new variable should be displayed as shown below.



- g. Click **OK** and **OK** to close.
- h. Unplug the PowerMic.
- i. Open Device Manager and enable **Show hidden devices**.



Notice how many remnant USB device drivers (grayed-out) clutter Device Manager, shown below.



- j. Right-click each non-present driver for the USB Human Interface Device, USB Audio Device and USB Composite Device, and then click the Uninstall menu option.
 - k. Reboot the workstation.
-

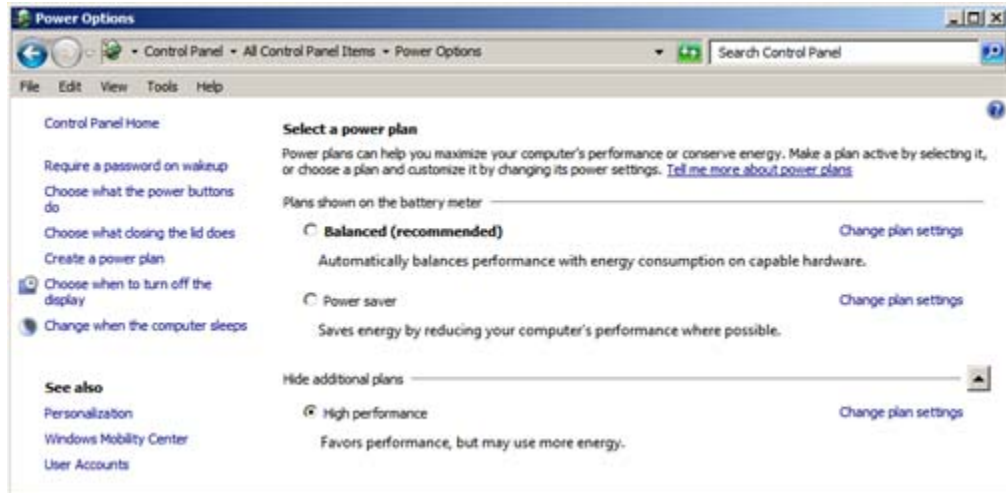
Apply Microsoft Update

1. Apply the USB Hot fix that is available through Microsoft. This hotfix addresses the issue which occurs because the initialization that is performed for the buffer of the audio data is insufficient for when you try to play audio. <http://support.microsoft.com/kb/2721341>
-

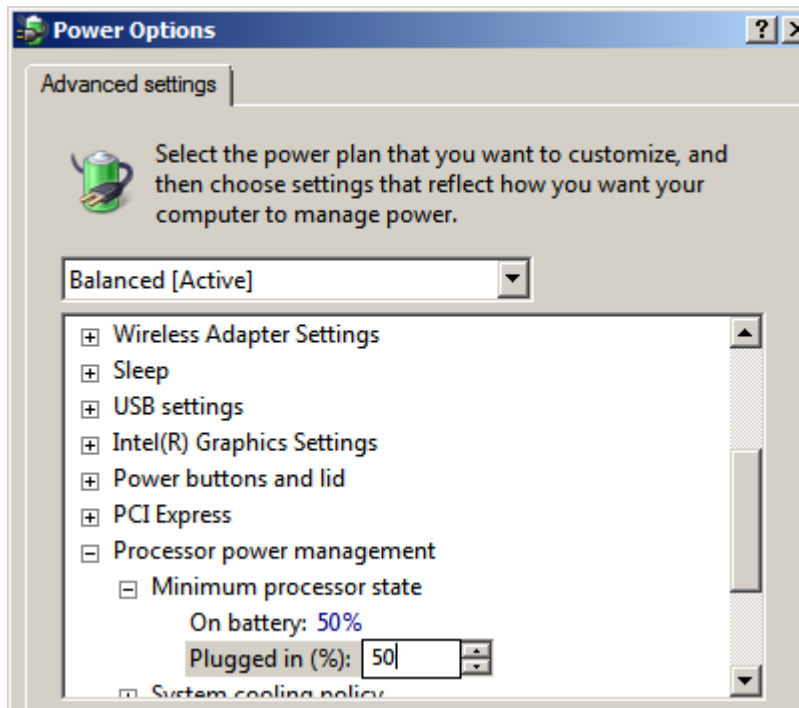
Disable Power Save Options

1. Disabling Power save features in BIOS like Intel Speed Step Technology (aka Runtime Power Management).

2. Switch Windows power plan to high performance (Control Panel / Power Options).



3. Change the minimum processor state of the current power plan to 50% (Control Panel / Power Options / Change plan settings / Change advanced power settings).



Add a USB PCI Card

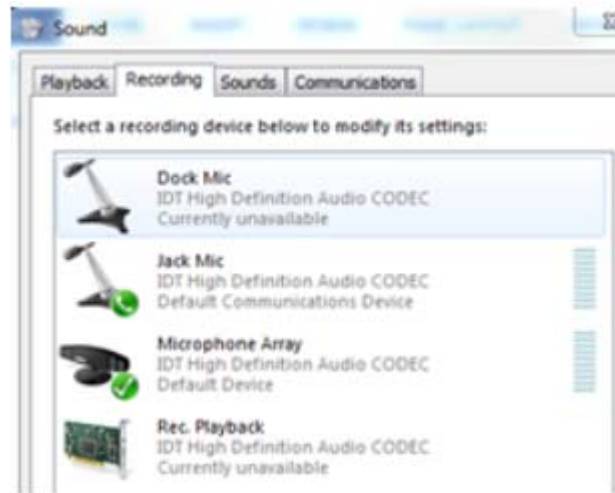
4. Insert a USB PIC card into the workstation and plug only the microphone into this card / device. Cards that have been used successfully are:
 - a. Insignia USB 3.0 PCIe Host Card NS-PCCUP53/NS-PCCUP53-C.
 - b. Transcend Model PDU3 USB 3.0 PCI Express.

Resolving - Cannot Find Sound System

The user receives an error message on the workstation when logging into PowerScribe® 360 | Reporting:



1. Go to the Control Panel > Sounds and Settings dialog.
2. Ensure the Audio Mixer Device shows under Recording Devices as shown below:



3. If you do not see the device, right-click and select **Show Hidden Devices**.
4. Right-click **Rec Playback**, and select **Enable**.



If the device does not show, even if hidden devices are shown, it means the audio drive needs to be upgraded.

DLLs failed to register properly: HIDDEV.dll and/or USBMGR.dll.

1. Re-register the DLLs using the provided script.

2. Download and extract regfix.zip.

<http://supportcontent.nuance.com/healthcare/documents/manuals/889672/regfix.zip>

3. Run regfix.bat.

Resolving - Microphone Disconnects While Dictating

While dictating, the user receives an error message on the workstation:



This is generally due to, the connection to the audio device being lost due to a Windows driver crash. The assumption is, that the Intel chip set drivers; respectively, USB controller drivers fail. The issue seems to only occurs, when the CPU is idle and the CPU frequency drops below 1 GHz. This Issue occurs with several audio devices from different vendors (Nuance PowerMic, Philips SpeechMike, etc.), but only on the Windows 7 Operating System.

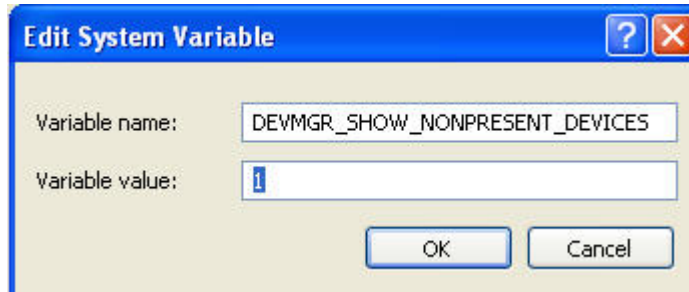
Remove Remnant USB Devices

1. Remove the remnant USB device drivers which can remain and interfere with the installation of Nuance input devices such as PowerMic and the USB foot pedal. This process provides a procedure to eliminate drivers for non-present devices on client workstations.

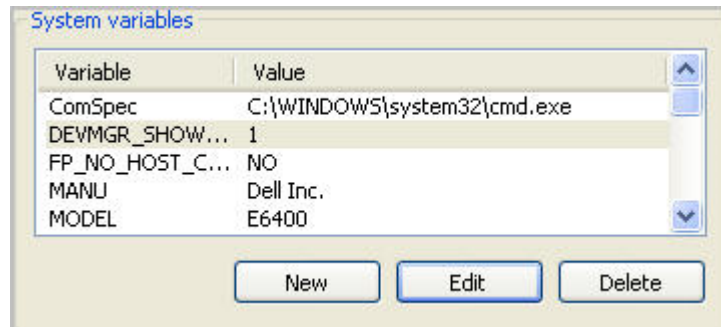
Remnant USB devices can accumulate and interfere with the installation of the PowerMic and PowerMic II USB devices. Below is a procedure to add one system environmental variable, which allows drivers for non-present devices to be displayed in Device Manager. Removal of these non-present devices has proven to be beneficial in resolving issues related to the installation of the PowerMic USB device

- a. On the workstation, click **Start > Settings > Control Panel > System**.
- b. Click the **Advanced** tab.
- c. Click **Environmental Variables** at the bottom.
- d. In the System variables box at the bottom, click **New**.

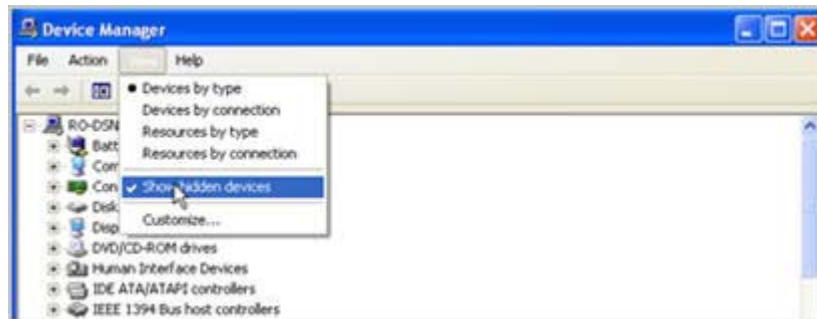
- e. Enter the values presented in the Edit System Variable window, shown below:
 - Variable name: **DEVMGR_SHOW_NONPRESENT_DEVICES**
 - Variable value: **1**



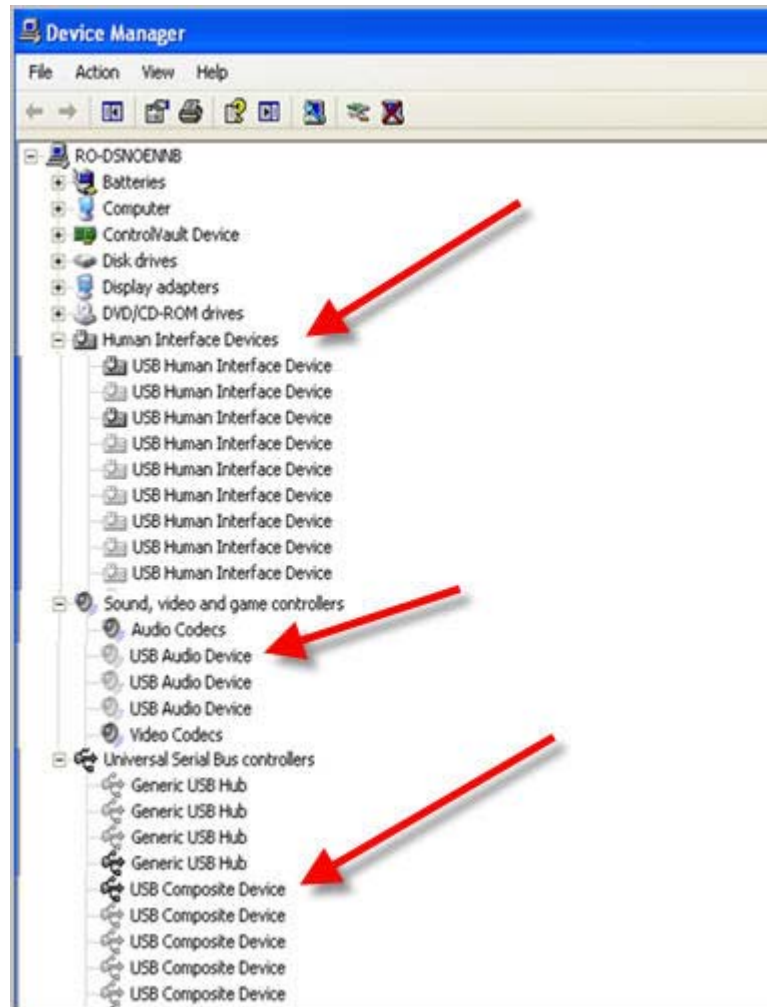
- f. Click **OK** and the new variable should be displayed as shown below.



- g. Click **OK** and **OK** to close.
- h. Unplug the PowerMic.
- i. Open Device Manager and enable **Show hidden devices**.



Notice how many remnant USB device drivers (grayed-out) clutter Device Manager, shown below.



- j. Right-click each non-present driver for the USB Human Interface Device, USB Audio Device and USB Composite Device, and then click the Uninstall menu option.
- k. Reboot the workstation.

Add a PCI USB Card

1. Insert a USB PIC card into the workstation and plug only the microphone into this card / device. Cards that have been used successfully are:
 - a. Insignia USB 3.0 PCIe Host Card NS-PCCUP53/NS-PCCUP53-C.
 - b. Transcend Model PDU3 USB 3.0 PCI Express

Resolving - Microphone Button Latency

Disable Audio Playback Enhancements

When pressing the record button on the microphone, the recording does not start for a few seconds.

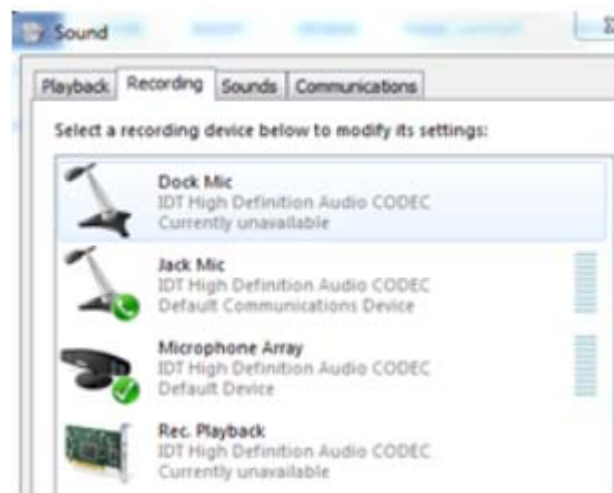
Is the audio playback Enhancements properties disabled for all audio devices? (MS resolution for the issue where the audiodg.exe process spikes CPU usage to 80% or more for short periods.)

In Windows 7 or 8, when running audio or video player software, CPU usage will reach above 80% instantly. This phenomenon is caused by the "audiodg.exe" process. Sometimes, high CPU usage by this process might lead to a fake crash. Follow these steps to fix the issue:

1. On the taskbar, right-click the **Speakers** icon, and then select **Playback devices**.
2. From the Playback tab, right-click **Speakers**, and select **Properties**.
3. From the Speakers Properties dialog, select the **Enhancements** tab, and check **Disable all enhancements**. Switch Windows power plan to high performance (Control Panel / Power Options).

Enable Audio Mixer Device

1. Go to the Control Panel > Sounds and Settings dialog.
2. Ensure the Audio Mixer Device shows under Recording Devices as shown below:



3. If you do not see the device, right-click and select **Show Hidden Devices**.

4. Right-click **Rec Playback**, and select **Enable**.



If the device does not show, even if hidden devices are shown, it means the audio drive needs to be upgraded.

6 - AutoText Issues

Verify Standard Configuration

Proper Naming

- Assure the AutoText is using proper naming conventions. The AutoText name is the word or phrase you dictate to invoke the format of the report. It should be at least 2 syllables, all lowercase, except for acronyms.
-

Proper Trigger Word

- Verify the trigger word you have set is not the same as any Dragon command, for example "insert" or "paste".
 - Verify that you are using the trigger word you have set. If the proper trigger word is not used the name of the AutoText will end up in the report instead of the contents of the AutoText. You can verify your trigger word by clicking on Tools > Preferences > Dictation Tab. The default choices are PowerScribe, Macro or Dictaphone.
-

Relevancy

- Make sure the AutoText you are trying to invoke has relevancy to the procedure code associated with the report order. If the order has an associated procedure code that does not match the one associated with the AutoText that you are attempting to invoke it will only bring in the AutoText name and not the contents of the AutoText.

Common AutoText Issues

In V2, there was a defect causing the site AutoText to be inserted, if the personal and site AutoText had the same name.

This is resolved in the following patches:

- 2.0.1 patch 1'
- 2.5.1 patch 1
- 2.5.2 patch 1 (Not yet released)

As a temporary workaround, your system admin can rename the site AutoTexts so they do not conflict with the personal AutoTexts, or the dictator can rename their AutoTexts.

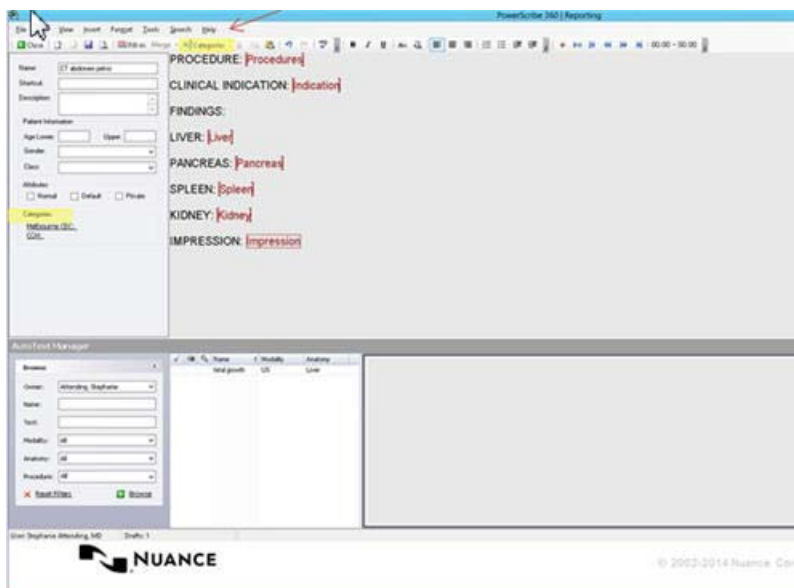
Relevancy

In some instances you may not be able to invoke specific AutoTexts into a report. This is typically due to the relevancy of the associated procedure code of the AutoText not matching that of the procedure code that is tied to the report's order.

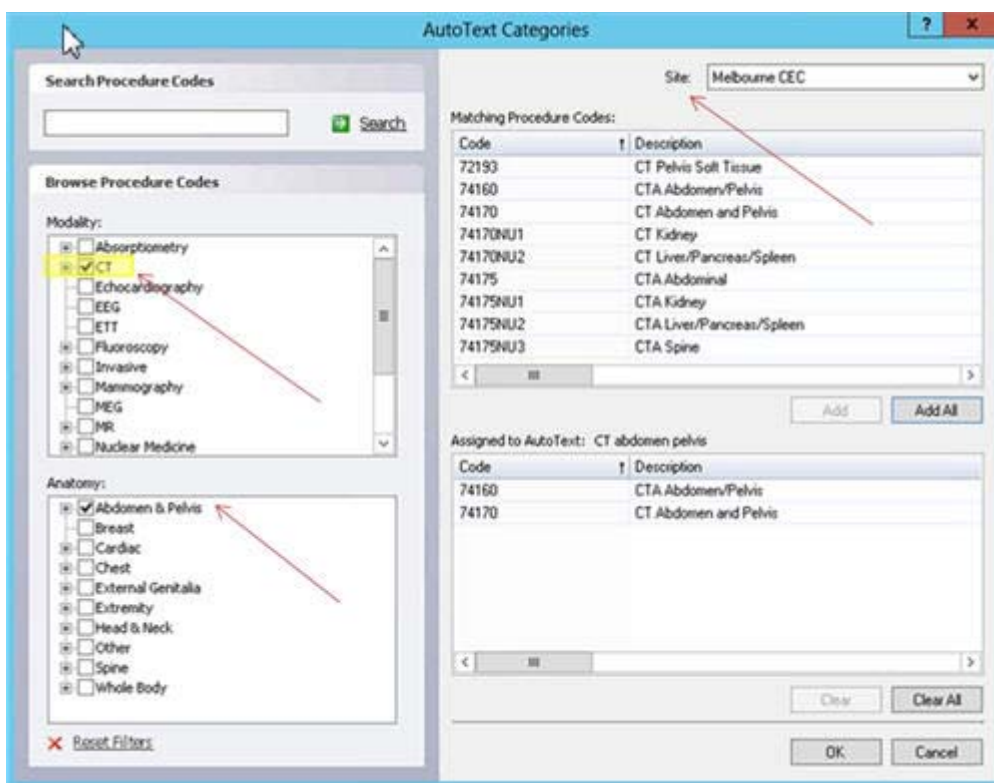
Adding additional Procedure Codes to be associated with an AutoText can be accomplished in the PowerScribe 360 Dictation Client, or in PowerScribe 360 Portal following a similar procedure:

1. In **PowerScribe 360 Dictation Client**, open the **Autotext Editor**.
2. Select **Categories** and click **Site**.
3. Search for a specific Procedure Code number, or select the desired Modality and the Anatomy.
4. In PowerScribe 360 Portal, access: **Setup > AutoText**.
5. Select **AutoText** to add additional Procedure Codes.

- Click **Procedures**, and select the Site and search for a specific Procedure Code number, or select the desired Modality and the Anatomy.



- Select and click Add to associate the Desired Procedure Codes found in the search, to the Autotext.



The Autotext's attributes: Normal, Default, Private and the Patient's information: Age, Gender, or Class (Inpatient, Outpatient, Pre-admit, Emergency), if used in the Autotext, will further restrict the Autotext's relevancy. See the Client and respective Portal view in the following pictures.

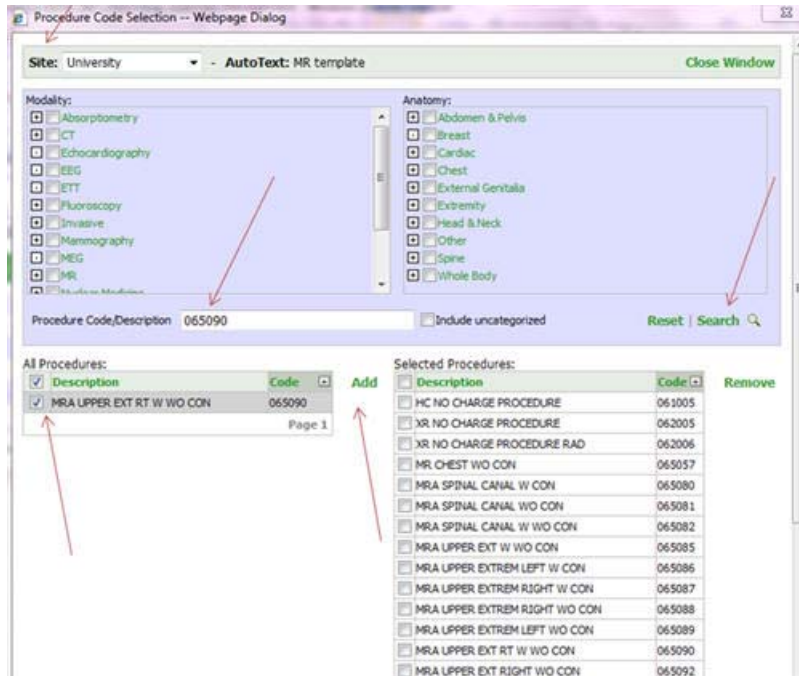
The screenshot displays the Nuance AutoText administration interface. At the top, there is a navigation bar with options: Setup, Accounts, AutoText, Bridge, Sites, Speech, and System. Below this, a table lists Autotext entries with columns for Name, Modality, and Patient Class. A right-hand panel contains configuration options for 'Save Changes | Procedures...', including fields for Name, Text Shortcut, Description, Gender, Patient Class, Lower Age Limit, Upper Age Limit, and checkboxes for Default, Private, and Normal. The Owner is listed as David Snoon.

The screenshot shows a patient report generated from the AutoText system. The report includes a table of procedures, a list of university identifiers, and a structured clinical report with sections for SHHC, Text OE, Text SE, University, Patient Name, Procedures, CLINICAL HISTORY/INDICATION, COMPARISON STUDY, TECHNIQUE, FINDINGS, IMPRESSION, and Report Create Date.

Name	Modality	Patient Class
left knee 4 or more views		
left knee complete		
left shoulder 1 view		
left wrist complete		
Mammo		
HRI Cervical		
MR template	HRA, HRI, HRI - Flow Mapping	Chest, Spine

SHHC
Text OE:
Text SE:
University: 065237, 062005, 062005, 062006, 065017, 065080, 065081, 065082, 065085, 065086, 065087, 065088, 065089, 065090, 065092, 065094, 065096, 065217, 065217, 065217R, 065220, 065223, 065220, 065225, 065228, 065240, 065252, 065252, 065402, 065404, 065407, 065530

Patient Name, Patient HRI, Accession Numbers,
Procedures
CLINICAL HISTORY/INDICATION: Reason For Study
COMPARISON STUDY: None
TECHNIQUE: Technique
FINDINGS:
Findings
IMPRESSION:
Impression
Muneer Eesa, M.D.,
Neuroradiologist
Dictated using Voice Recognition Software
Report Create Date



The Autotext List with the available Autotext in the Dictation Client - Report Editor Window varies based whether the Autotext is Personal, Site, and/or Relevant.

Only relevant AutoTexts can be introduced or called in a report. If the voice-invoked AutoText is not available in the Autotext List Pane for a report, it cannot be introduced in the report, and the AutoText's name will be spelled out in the dictation, instead.

For example, if using "PowerScribe" as the key word to invoke AutoTexts and the name of a non-relevant AutoText for a report is: "CT abdomen": when dictating "PowerScribe CT abdomen" the words "PowerScribe CT abdomen" will show dictated in the report, as opposed to introducing in the report the invoked AutoText called: "CT abdomen".

7 - Assure/Quality Checker Issues

Overview

Assure for PowerScribe® 360 | Reporting checks for the following:

- **Laterality check:** Identifies potential left/right mismatches in the report, for example, the exam was for the left side, but the radiologist said right.
 - **Gender check:** Identifies potential male/female mismatches and references to anatomy that does not match patient gender.
 - **Critical Test Results check:** Identifies and highlights potential references to critical test results dictated in the report.
-

Technology

Assure for PowerScribe® 360 | Reporting utilizes Nuance's CLU (Clinical Language Understanding) technology. During the Assure for PowerScribe® 360 | Reporting workflow, the report text, exam description (for example, "Chest CT"), and patient gender will be passed to the Nuance datacenter where the Nuance CLU engine will parse the text. The results will be passed back to the PowerScribe® 360 | Reporting Client software and presented to the radiologist. This interaction will occur in near real time as to not disrupt the radiologist's workflow.

The Nuance CLU technology only offers this as a hosted service. The Nuance CLU technology cannot be deployed onsite within the customer's datacenter.

The connection to the Nuance datacenter encrypts the data passed back and forth from the PowerScribe® 360 | Reporting system, via SSL. The customer does not need an SSL certificate for Assure. However, https port 443 needs to be open on the firewall to allow PowerScribe® 360 | Reporting to connect to the Nuance datacenter over an SSL connection. If the customer cannot allow https port 443 to be open, then Assure for PowerScribe® 360 | Reporting cannot connect.

Portal Configuration

1. As an administrator, you can configure (enable/disable) the Assure for PowerScribe® 360 | Reporting feature at the System, Site, and Account levels.

To enable the Assure for PowerScribe® 360 | Reporting feature at the System level:

- a. Click Setup > System > Preferences > Permissions.
- b. Select the Allow report consistency check box. By default, the preference is True (enabled).

To enable the Assure for PowerScribe® 360 | Reporting feature at the Site level:

- a. Click Setup > Sites and select the site you want to configure.

- b. Click **Preferences > Permissions** and select the **Allow report consistency check** box.
2. You can also set an initial value for the account-level parameter called **Perform consistency check at signoff** which will automatically run the consistency checker at signature. This parameter can also be changed by each user in the Client software.

To set the initial value for the **Perform consistency checks at signoff** parameter for a user:

 - a. Click **Setup > Accounts** and select the user you want to configure.
 - b. Click **Preferences > Workflow** and select the **Perform consistency check at signoff** check box.
3. Configure **PowerScribe® 360 | Reporting for Assure** the **Service URL** and **License ID** must be entered under the **System Configuration**. This information is provided to the customer by the project manager assigned to the implementation.

The screenshot shows a configuration window with three fields:

- Assure Service URL:** A text input field containing a redacted URL.
- Assure License ID:** A text input field containing a redacted license ID.
- Assure Connection Type:** A dropdown menu with "ExplicitHost" selected.

Verify the Client Configuration

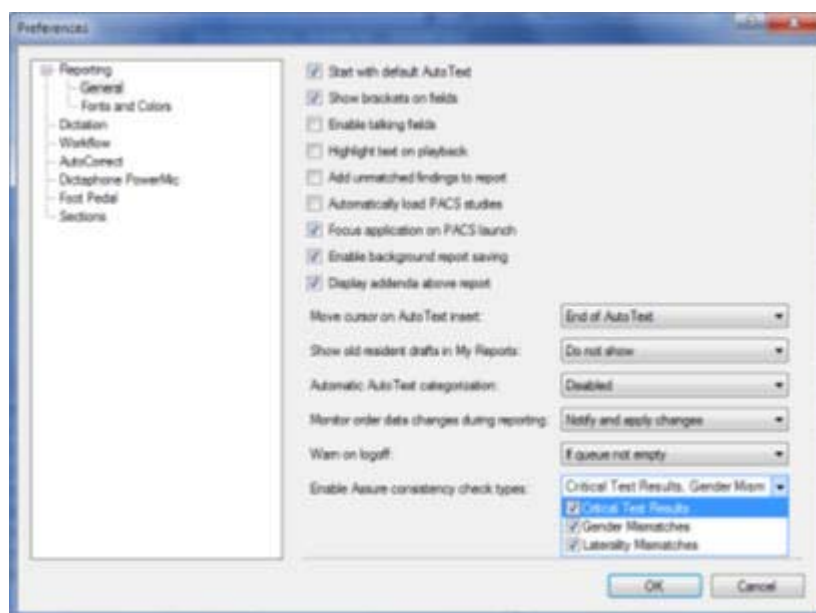
You can configure the following preferences for Assure:

- Choose one or more items on which to run your consistency check. Currently your choices are **Critical Test Results**, **Gender Mismatches**, and **Laterality Mismatches**.
- Configure *Assure for PowerScribe® 360 | Reporting* to run automatically or manually.

To configure which items on which to run consistency checks:

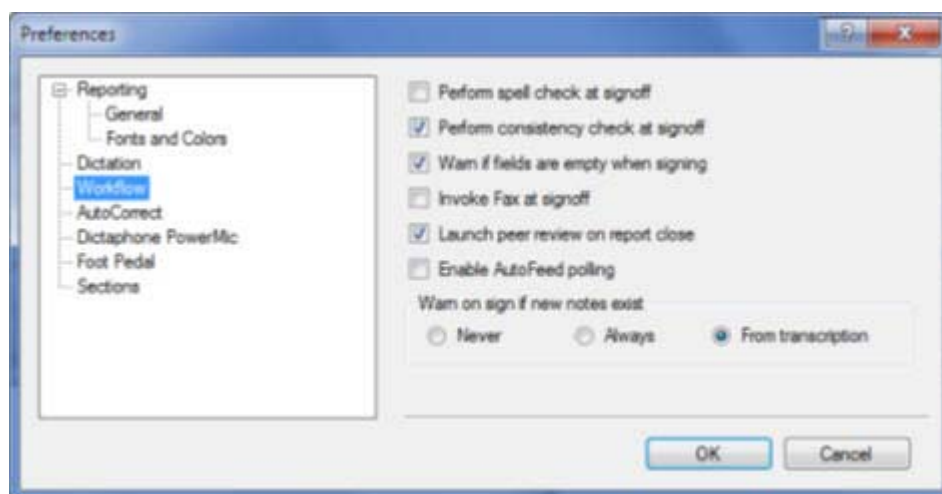
1. Click **Tools > Preferences > General**.
2. Click the drop-down arrow to the right of the **Enable Assure consistency check types** item.

3. Select (or clear) the check boxes based upon your specific requirements.



To configure Assure to run automatically or manually:

1. Click **Tools > Preferences > Workflow**.
2. Uncheck the **Perform consistency check at signoff** box.



For information on the use of the PowerScribe® 360 | Reporting Assure Consistency Checker, see:

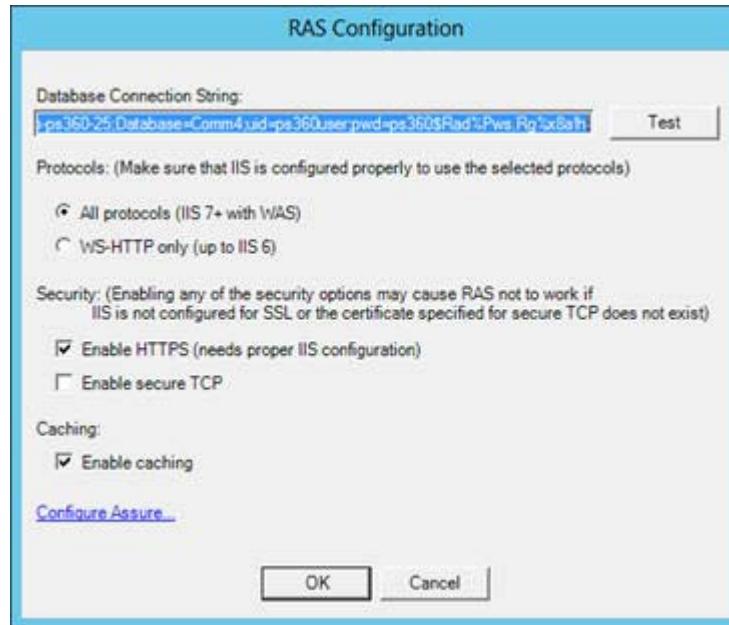
- [P36P015](#) - PowerScribe® 360 | Reporting Clinical Guidance User Guide
- [P36A017](#) - PowerScribe® 360 | Reporting Assure Consistency Checker for Version 1.5
- [P36P001](#) - PowerScribe® 360 | Reporting Assure Consistency Checker for Version 2.x

Troubleshooting

1. Check the Portal to make sure Assure is setup correctly. If settings are correct in the Portal, you can run the Assure tool to help troubleshoot an issue.

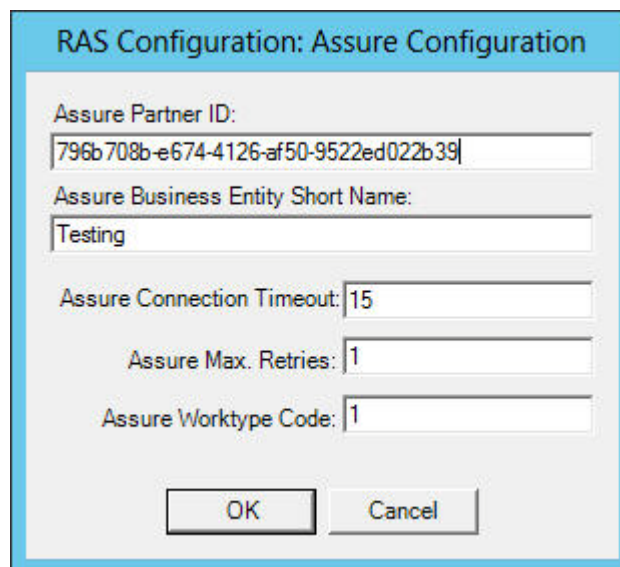
If it is correct, check the CLU license that is installed with the PowerScribe® 360 | Reporting Application.

2. On the Application Server run RASConfigUI.exe in the C:\inetpub\wwwroot\RAS folder .



The screenshot shows the 'RAS Configuration' dialog box. It has a title bar with the text 'RAS Configuration'. Below the title bar, there is a section for 'Database Connection String:' with a text input field containing the string 'ps360-25;Database=Comm4.uid=ps360user;pwd=ps360\$Rad%Pws;Pg%ix8a%h' and a 'Test' button to its right. Below this is a section for 'Protocols: (Make sure that IIS is configured properly to use the selected protocols)' with two radio button options: 'All protocols (IIS 7+ with WAS)' (which is selected) and 'WS-HTTP only (up to IIS 6)'. Below that is a section for 'Security: (Enabling any of the security options may cause RAS not to work if IIS is not configured for SSL or the certificate specified for secure TCP does not exist)' with two checkboxes: 'Enable HTTPS (needs proper IIS configuration)' (which is checked) and 'Enable secure TCP' (which is unchecked). Below that is a section for 'Caching:' with one checked checkbox: 'Enable caching'. At the bottom left, there is a blue hyperlink labeled 'Configure Assure...'. At the bottom center, there are two buttons: 'OK' and 'Cancel'.

3. Click **Configure Assure**, and verify the data entered matches the screen shot below:

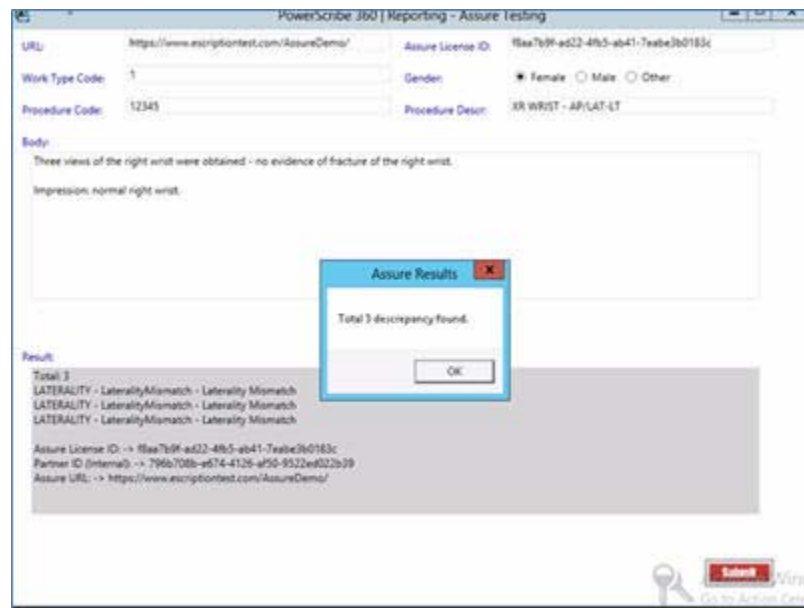


The screenshot shows the 'RAS Configuration: Assure Configuration' dialog box. It has a title bar with the text 'RAS Configuration: Assure Configuration'. Below the title bar, there are five text input fields: 'Assure Partner ID:' with the value '796b708b-e674-4126-af50-9522ed022b39', 'Assure Business Entity Short Name:' with the value 'Testing', 'Assure Connection Timeout:' with the value '15', 'Assure Max. Retries:' with the value '1', and 'Assure Worktype Code:' with the value '1'. At the bottom center, there are two buttons: 'OK' and 'Cancel'.

Testing the Configuration

Assure Test Application

1. Download the **PS360AssureTestAPP.zip** from the Definitive Media Library, 360 Vx Tools folder.
2. Extract the files from the zip to a folder on your workstation.
3. Double-click **AssureTesting.exe**.



4. Leave the default settings in place for the Work Type, URL and License ID. These are specific settings that point to the Development System.
5. The Procedure Code is not scanned when testing the tool but should be populated with a few numbers.
6. The key is to put in a procedure description code relevant to the topic of the dictated text. Such as XR (x-ray) Wrist (body part) and left or Right. Most of the time customers use LT or RT, which comes out as "XR Wrist RT".
7. Choose a gender for your test.
8. Enter some text in the "Body" section.
9. Click **Submit**.
10. If you get a return as shown above, this indicates that the overall CLU system is operating.
11. If you do not get a return on the customer system, test it on your workstation. It is possible the customer's Firewall is blocking traffic.
12. If you were able to get to the Dev. CLU, your next step is to replace the default License ID and URL with the customer's specific data, and repeat the test.

13. If you cannot reach the customer specific CLU gateway, you will need to verify the license and URL is correct. To do this, send an e-mail to CLUServices@nuance.com with the Site name, Account number and info you have in Portal at that time, asking if the data is correct / valid.
 14. If it is not the correct ID and URL, update the customer system and test. If the values are correct, it is possible the customer CLU is down, send an e-mail to CLU Partner Support CLU_Partner_Support@nuance.com asking them to check the customer system. Be sure to provide the license and URL for the customer. Also make sure you cc support management.
-

Common Issues

Assure is Not Returning Accurate Results

If a site opens a ticket indicating that Assure is working but the results returned are inaccurate, you can use the tool to test as you did above. The difference is you need to evaluate:

1. Is the gender being picked up? Maybe unknown is selected?
2. IS the right left identifier being picked up?
3. IS the right / Left being used valid? Maybe they are not using LT / RT or other appropriate selection.

If the returned results are not the expected results, escalate.

Method Call OpenSession Failed with Sys Response

Assure Consistency Check Error in PowerScribe Reporting Dictation Client

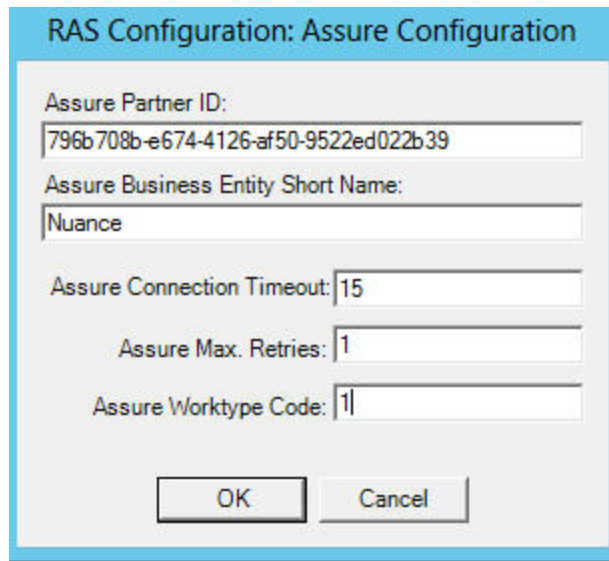
When running the Assure Consistency test, you may receive an error: "method call OpenSession failed with sys response OpenSession(): [AuthenticationError]-Generic application error. Please contact system administrator".

Symptom

To fix the error, follow the steps below.

1. Review the Assure Config file on the web server:
X:\inetpub\wwwroot\RAS\RASConfigUI.exe

2. Click **Config Assure**.



RAS Configuration: Assure Configuration

Assure Partner ID: 796b708b-e674-4126-af50-9522ed022b39

Assure Business Entity Short Name: Nuance

Assure Connection Timeout: 15

Assure Max. Retries: 1

Assure Worktype Code: 1

OK Cancel

Check the RAS Configuration: Assure Configuration. The entries may be currently blank or incorrect.

3. On the RAS Configuration: Assure Configuration dialog, use the following values:
 - ◆ Assure Partner ID: 796b708b-e674-4126-af50-9522ed022b39
 - ◆ Name: Nuance
 - ◆ Assure Connection Timeout: 15
 - ◆ Assure Max Retries: 1
 - ◆ Assure Worktype Code: 1
4. Recycle the following Server IIS Application Pools
 - ◆ DefaultAppPool
 - ◆ PS360AppPool

8 - LDAP Issues

Supported LDAP Authentication Types

PowerScribe® 360 | Reporting can support the following LDAP Authentication Types:

- **Basic** - Indicates that basic authentication should be used on the connection. The value is equal to 1.
- **Digest** - Indicates that the Digest Access Authentication should be used on the connection. The value is equal to 4.
- **Kerberos** - Indicates that Kerberos authentication should be used on the connection. The value is equal to 9.
- **Negotiate** - Indicates that Microsoft Negotiate authentication should be used on the connection. The value is equal to 2.
- **Ntlm** - Indicates that Windows NT Challenge/Response (NTLM) authentication should be used on the connection. The value is equal to 3.
- **Sicily** - Indicates a negotiation mechanism (Sicily) will be used to choose MSN, DPA or NTLM. This should be used for LDAPv2 servers only. The value is equal to 5.

Configuring the LDAP

You can configure the LDAP settings from the PowerScribe 360 portal, System page. The LDAP configuration Path, Domain, Authentication, etc., option settings, are shown below.

Path	Domain	Authentication	Administrator	Password	UserName Pattern	
LDAP: DC=Nuance, DC=com	nuance.com	Basic			sAMAccountName	<input checked="" type="checkbox"/> Active



IMPORTANT

Configuring LDAP binds a connection using the credentials of users logging in from the login page. Although each user has a single username and password, there can be more than one way to represent a user's entry in LDAP and more than one attempt can be made to bind.

Administrator Field

At a high level, LDAP authentication follows one of two paths. The path chosen depends on the absence or presence of a value in the Administrator field

Administrator Field Absent

Configuring the LDAP for the customer without a value in the Administrator field should be tested first. This method will prove to be more efficient and place a smaller load on the LDAP server (a domain controller in the case of Active Directory).

Username Syntax Format Options

Active Directory is flexible and allows up to four different username syntax format options and PowerScribe® 360 | Reporting is designed to try all four syntax format options. The four syntax formats contained in the distinguishedName attribute include:

- Full DN (e.g., CN-username, DC=domain, DC=com)
- CN-username
- DC=domain
- DC=com

If all four Active Directory syntax format options fail, the user cannot be authenticated, and PowerScribe® 360 | Reporting performs authentication attempts to verify the username/password pair against its own database.

If both the Active Directory and PowerScribe® 360 | Reporting authentication methods fail, a user will receive a failed login notification.

Example - Administrator Field Absent

In this example, there is no Administrator account name specified, so this example is of the simple authentication method.

Assumptions

- Created an account in the PowerScribe 360 portal for a user named scott_simon.
- PowerScribe 360 will try to authenticate this username and password pair in the following order

Authentications

- Full DN, in this case that would be “CN=scott_simon, DC=nuance, DC=com”
- User Principal Name, in this case scott_simon@nuance.com
- NT account name, in this case nuance.com\scott_simon
- Plain username, in this case scott_simon

When logging into a PowerScribe 360 server within the Nuance domain, the first attempt to authenticate fails. The directory tree is somewhat more complex within Nuance and there are several levels missing causing the failure.

The second attempt to authenticate succeeds. The User Principal Name is valid and if the proper password is entered, the user is successfully authenticated.



In this example, only the first Authentication method fails; all other Authentication methods succeed since they match the proper account within the Active Directory.

There are already several possible ways that information can be entered into the portal and still have a successful LDAP authentication.

Administrator Field Present

If you can configure the LDAP settings from the PowerScribe 360 portal, System page and the Administrator field is present, PowerScribe 360 performs the following steps to authenticate the users' credentials:

1. Assures there is an Administrator password specified in the portal
2. Authenticates the connection using the Admin credentials provided.



Authentication is performed in order using the four Username Syntax Format Options defined above.

3. Upon successful Admin authentication, PowerScribe 360 executes an LDAP sub-tree search against the 'Path' specified in the configuration, utilizing the UserName Pattern specified as a filter.
4. Results of the search are used to authenticate the user found in the search with the password specified.



Authentication is performed in order using the four Username Syntax Format Options defined above.

Example - Administrator Field Present

In this example, there is an Administrator account name specified.

Assumptions

- The Administrator field value is specified as 'Administrator'
- A user with the username, scott_simon logs in

Authentications

- Authentication is using the specified value to authenticate.



In step 2, if a value of 'Administrator' was specified in the portal for the administrator field, replace the value 'scott_simon' with 'Administrator' to see the different username formats that would be used to authenticate.

- Authentication of the sub-tree search executed starting in the directory tree at DC=nuance, DC=com, searching the entire sub-tree under that entry for the pattern matching sAMAccountName=scott_simon
- Results of the search, compare the required fields values and attempt to authenticate.

If the four username format search/compare authentication attempts fail, PowerScribe 360 authentication attempts to verify the username/password pair.

If both the Active Directory and PowerScribe 360 authentication methods fail, a user will receive a failed login notification.

Tools

There are a couple of tools you can use to help you determine the configuration.

ADEplorer

ADEplorer can be obtained from the sysinternals web site. You can use this tool to:

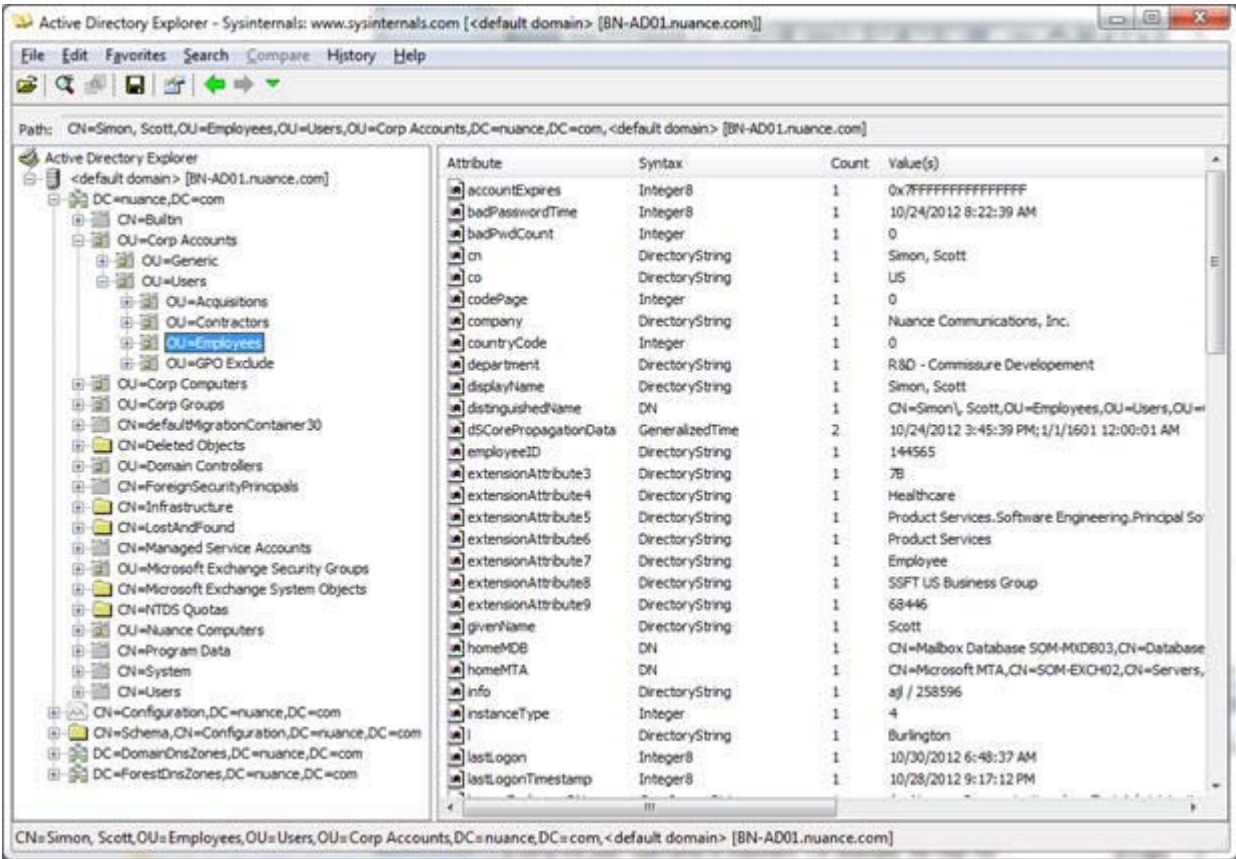
- View the sites Active Directory tree
- Determine how the site is configured
- Identify what needs to be specified in the portal configuration

1. Run the ADEplorer application, the Connect to Active Directory displays.

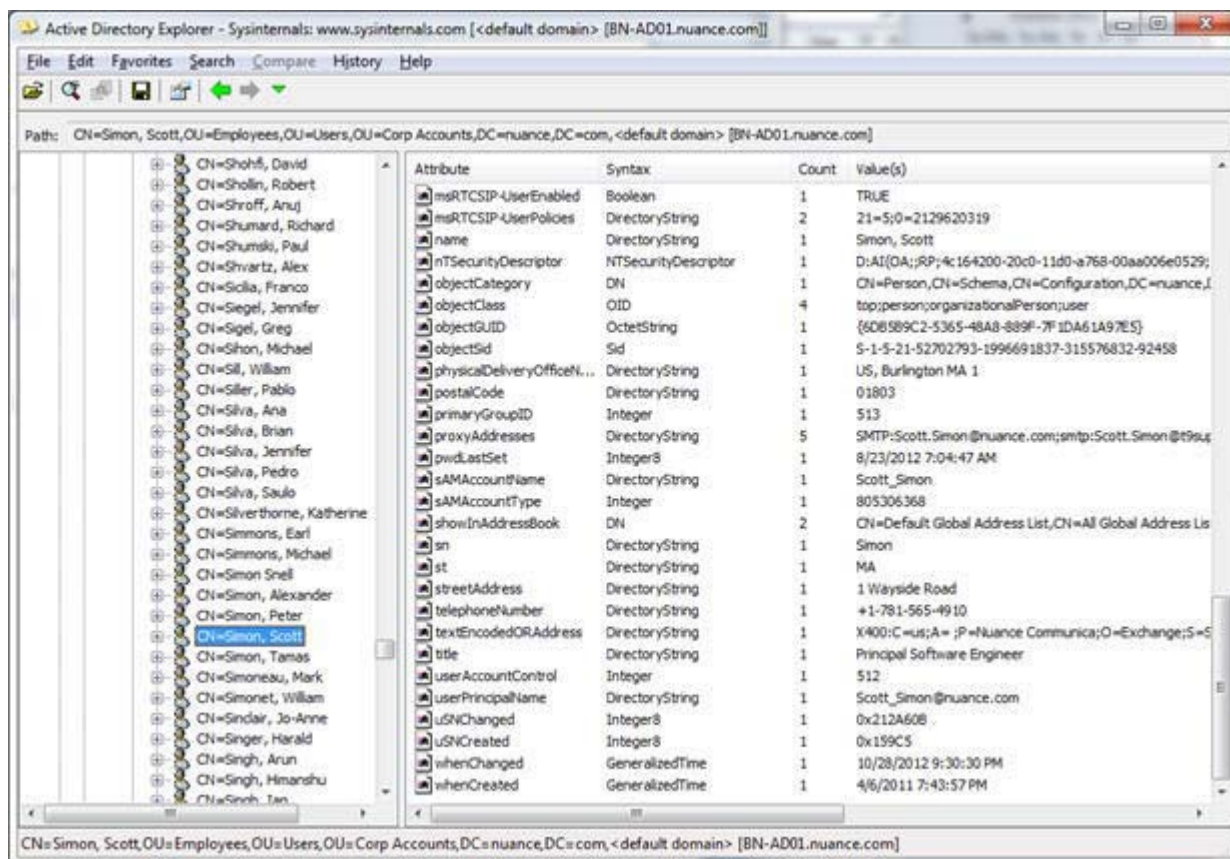


- ♦ If you are logged into a domain account at the customer site when you run ADEplorer, you can click OK without filling in any fields. The application determines the server to connect to and you should be able to browse from any domain account.
- ♦ If the customer does not provide a domain account, rather a local server account for the Powerscribe 360 RAS server, you must enter the valid domain account supplied to you by the customer in Connect to, User and Password fields, then click OK.

With a valid connection established, the Active Directory Explorer window displays with the complete Active Directory tree.



2. Browse the tree to find where users are defined. An example dialog is below:



From this example, the path to use would be:

OU=Employees, OU=Users, OU=Corp Accounts, DC=Nuance, DC=com

When Powerscribe 360 builds the distinguished name for authentication, it adds the string CN=user, in the case, CN=scott_simon, since that is the name of this attempted login example.

This example also shows the sAMAccountName attribute and the userPrincipalName attribute, both of which may be used during authentication.

Wireshark

Wireshark can be downloaded from <http://www.wireshark.org>.

1. Install Wireshark on the RAS server to assist you with LDAP issues.

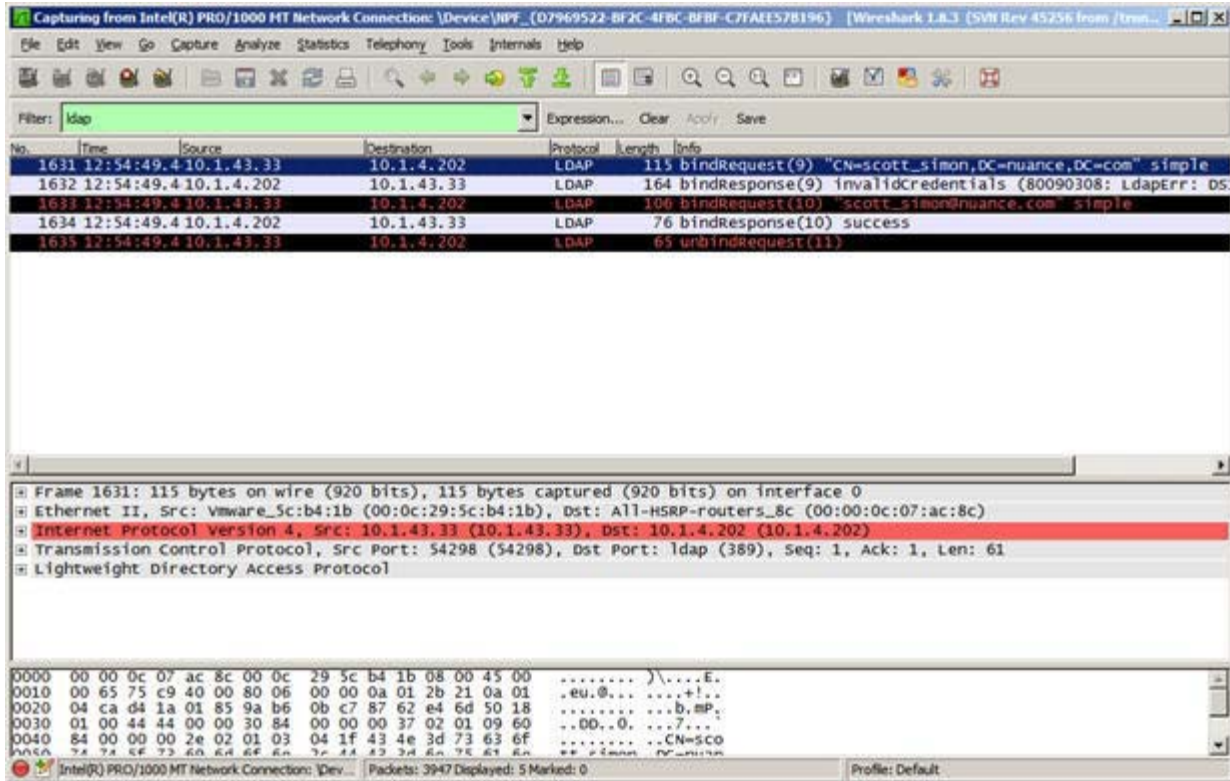


When users enter their credentials on a workstation running the PowerScribe® 360 | Reporting Client, the credentials are passed to the RAS server and authentication with LDAP is performed.

- Run Wireshark and select the interfaces you want to use to collect messages and click Start. During collection, a lot of information is collected quickly.



In the Filter field, you can enter ldap to limit the collection traffic for the LDAP protocol only to appear in the dialog.



Shown above is the data captured from a single PowerScribe 360 login using the first sample shown above. There was no data in the administrator field, the path was set to DC=nuance, DC=com, and the username specified in Powerscribe 360 was scott_simon.

A bind request for the Distinguished name that was created displays first. The next entry is an authentication failure.

- As mentioned above, the bind failed since the distinguished name specified is incomplete and the username is wrong. The CN used in the distinguished name is actually Simon, Scott, not scott_simon.

The next entry is a bind request for scott_simon@nuance.com. Following that is the successful authentication response. This verified the login and thus no more formats needed to be attempted, and the final line is the unbind request matching the successful bind.

You need to be aware of the following important details when using Wireshark:



IMPORTANT

Passwords are passed to the LDAP server in clear text and Wireshark shows all information in the packets. The bottom pane above, just out of view shows the password that was sent to the LDAP server for authentication. This may be useful debugging information; however, security passwords appear in clear text.



IMPORTANT

While collecting packets, even though you filter for ldap packets, all packets are monitored so the memory used by the application can grow very quickly. Monitor packets only for as long as you need to get the information required, then stop monitoring packets and, exit the application.

ADInsight

ADInsight can be obtained from the sysinternals web site. Use this tool only with a RAS server that is not on a 64-bit OS and the other two previously mentioned tools do not provide the answers you need. Although this tool appears to be ideal for debugging LDAP, it has not been maintained for many years and appears to have some compatibility issues.

9 - Critical Results Issues

Required Configuration

Traffic Must Bypass Proxy Server

Ensure that traffic to and from <https://ps360criticalresults.com> is allowed through the firewall and does not go through the proxy server, if you have one.

Setting the URL in RadPortal

1. In the Admin Portal, go to Setup > System > Configuration.
 2. Verify the Service URL to:
<https://ps360criticalresults.com/criticalresultsapi4.0/MessageDataService.asmx>
 3. Verify the Dashboard URL to:
<https://ps360criticalresutls.com/powerscribe360/RadiologistDashboard.aspx?RadID={0}>
 4. Click save and close.
-

Ordering Clinician Setup

The following must occur for the ordering clinician to be available for auto population or selection within Veriphy, and for alerts to subsequently be generated for an ordering clinician:

1. Ordering Clinician needs to be setup in Critical Results.
 2. Ordering Clinician needs to be setup in PowerScribe® 360 | Reporting.
 3. Ordering Clinician needs to have been sent an order through the HL7.
-

Notification Statement

If you wish to have the CR notification statement auto inserted into the dictated report you can enable it by modifying the system or site settings.

In RadPortal, from Setup > System > Preferences > Workflow and add or edit the text from the Critical communication sent statement preference. Click save and close.

Critical Results and PowerScribe 360 | Reporting Account Roles

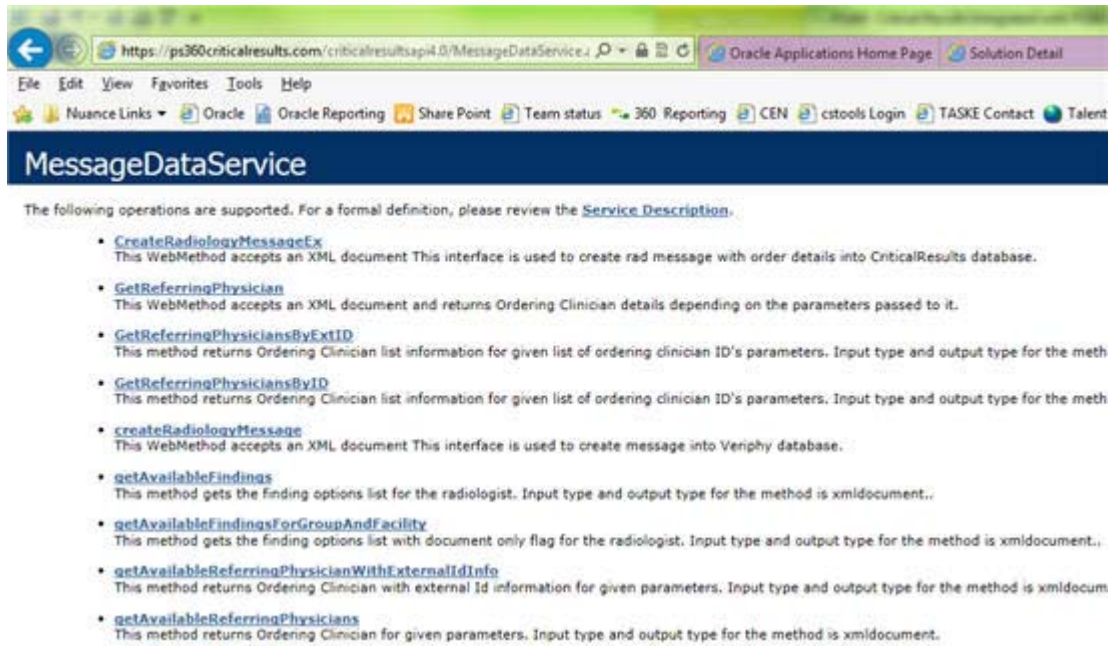
Critical Results Role	Description	PowerScribe 360 Reporting Role
Administrator	Can manage both Radiology and Lab Accounts Cannot create CR messages Adding and Managing users Can view all messages for Radiology and Lab Accounts	NONE
Group Administrator	Administrator for Radiology Account Cannot create CR messages Adding and managing Users for Radiology Account Can view all Messages for Radiology Account	NONE
Specialist	Radiology User Account Can create CR messages using PS360 or CR Desktop Can view only own messages Can do own account provisioning CR ID should match with Attending or Resident Account on PS360	Attending, Resident or Fellow
Lab Administrator	Administrator for Lab Accounts Cannot create CR messages Adding and managing Users for Lab Account Can view all Messages for Lab Account	No relation with PS360
Lab Technician	Technician for Lab Accounts Can create CR Messages for Lab Account Can do own account provisioning	No relation with PS360
Ordering Clinician	Can receive CR messages Can do own account provisioning CR ID should match with Physician ID on PS360 Until PS360 Ver 2.5, Physician Sync is done from System tab on Radportal From PS360 Ver 3.0 onwards Sync is automatically done if OC exists on CR	Physician

Testing Connectivity

1. From both the application server and the workstations that will use CR, open Internet Explorer.
2. Enter this URL:

<https://ps360criticalresults.com/criticalresultsapi4.0/MessageDataService.aspx>

You should see:



The following operations are supported. For a formal definition, please review the [Service Description](#).

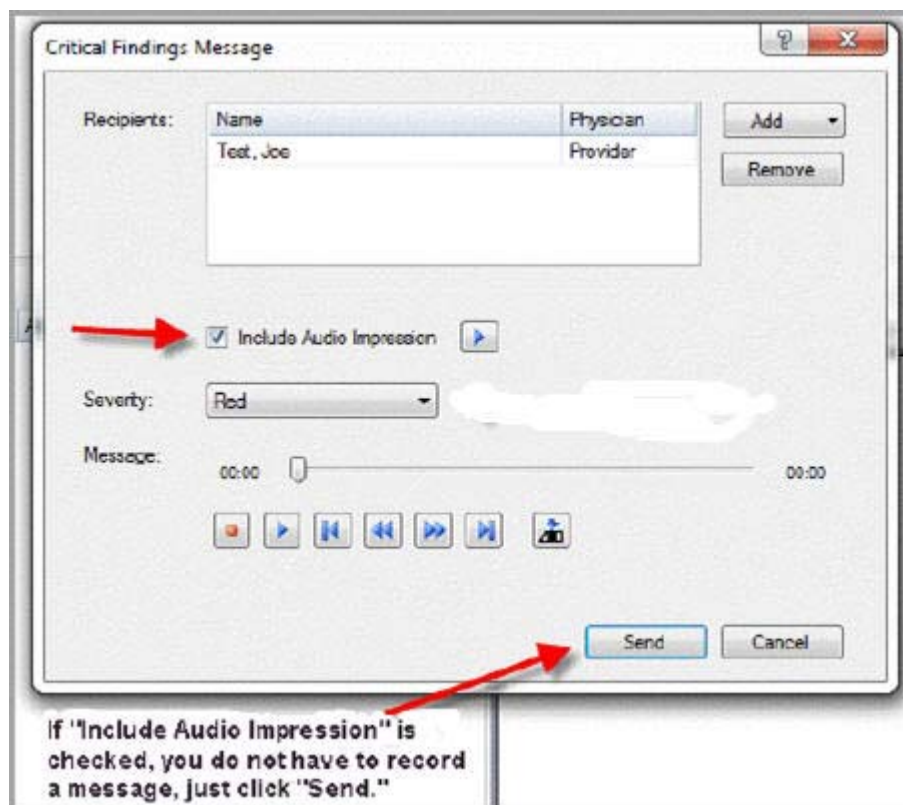
- [CreateRadiologyMessageEx](#)
This WebMethod accepts an XML document This interface is used to create rad message with order details into CriticalResults database.
- [GetReferringPhysician](#)
This WebMethod accepts an XML document and returns Ordering Clinician details depending on the parameters passed to it.
- [GetReferringPhysiciansByExtID](#)
This method returns Ordering Clinician list information for given list of ordering clinician ID's parameters. Input type and output type for the meth
- [GetReferringPhysiciansByID](#)
This method returns Ordering Clinician list information for given list of ordering clinician ID's parameters. Input type and output type for the meth
- [createRadiologyMessage](#)
This WebMethod accepts an XML document This interface is used to create message into Veriphy database.
- [getAvailableFindings](#)
This method gets the finding options list for the radiologist. Input type and output type for the method is xmldocument..
- [getAvailableFindingsForGroupAndFacility](#)
This method gets the finding options list with document only flag for the radiologist. Input type and output type for the method is xmldocument..
- [getAvailableReferringPhysicianWithExternalIdInfo](#)
This method returns Ordering Clinician with external Id information for given parameters. Input type and output type for the method is xmldocum
- [getAvailableReferringPhysicians](#)
This method returns Ordering Clinician for given parameters. Input type and output type for the method is xmldocument.

If you do not, the machine does not have internet access to the Critical Results System or traffic is routing through a proxy server.

Common Issues

Checking Audio Impression Option

The following shows the Include Audio Impression option checked in the Critical Findings Message:



The recorded message is not required when the "Include Audio Impression" option is checked in the Critical Findings Message dialog box.

When a radiologist needs to send a critical findings message and the option to "Include Audio Impression" is enabled in the "Critical Findings Message" dialog box, the radiologist is not required to record a message.

Synch

PowerScribe® 360 | Reporting Versions 1.x to 2.0.1

The synch feature allows the administrator to pull provider information from the CR system into the provider data table for Reporting. This is a ONE WAY update from Critical Results to Reporting.

The SYNCH looks at the provider's hospital ID, matches the last name and then pulls the following information from CR into Reporting.

1. CR provider ID
2. Work Phone
3. Email
4. Fax
5. Street
6. Street2
7. Zip
8. City
9. State

If the field is blank or NULL in CR, it will not update the field in PowerScribe 360 Reporting. So a null value in CR will NOT blank out the data field in Reporting.

An individual SYNCH occurs in the latest version of PowerScribe® 360 | Reporting when the dictator selects a provider for a CR message, and the providers CR Provider ID in Reporting is null. In this case Reporting pulls the users info into the Reporting Provider data table and allows the Dictator to send them a CR message.

.....

PowerScribe® 360 | Reporting Versions 2.5 and Up

Synch is no longer used in PowerScribe® 360 | Reporting Versions 2.5 and above.



The synch button is scheduled to be removed from the application in V3.x in 2015.

In V 2.5.x the user account will synch when a dictator creates a CR message. The Reporting application will query the CR system, match up the providers First, Last and Middle name along with the RIS ID associated to the user in both systems. If it finds a match, the reporting system will be updated and the provider can be selected.

If there is a difference in the name spelling or context, the synch will fail and the dictator will not be able to select that provider.

In V3, if the Critical Results ID:

- Is *not* present in PowerScribe® 360 | Reporting, then it will check firstname and lastname, and update the Critical Result ID.
- Is present in PowerScribe® 360 | Reporting, then it will not check firstname and lastname, and it will update only VocadaDocOnly and VocadaTextOnly, it will *not* update the rest part.

Blank Recording

Symptom

In the Critical Results window, when the Rad taps the Record button (Toggle on, but the red light is NOT on), the Message time slider bar moves and increases as though a recording is taking place, but the recording is blank.

The Rad will not be able to record if the preference in Critical Results is setup incorrectly to Toggle on/Toggle off). This should be set to DEADMAN.



The Rad must click the Pause/Stop button on the Critical Results window to stop the record function.

Setting



Rads workstation settings in PowerScribe 360 Dictate Client > Tools > Preferences > Dictaphone PowerMic defaults to Toggle on/Toggle off is incorrectly set.

Workaround

If the Rads are using Toggle on/Toggle off in PowerScribe® 360 | Reporting, they must be trained to use the Deadman switch to record a Critical Result message.

10 - Mobile Radiologist Issues

Background

The purpose of the mobile bridge is to serve as a translation layer between the eSig provider and the mobile device. The bridge exposes only the methods applicable to support eSig workflows, and those methods are structured in a manner to minimize chatter between the device and the service.

Due to its restricted responsibility, the Bridge is stateless and leverages a “pseudo” shared nothing architecture to achieve scalability needs. This allows the bridge to be deployed on multiple nodes with no reliance on its siblings, fully leveraging load balancers where applicable.

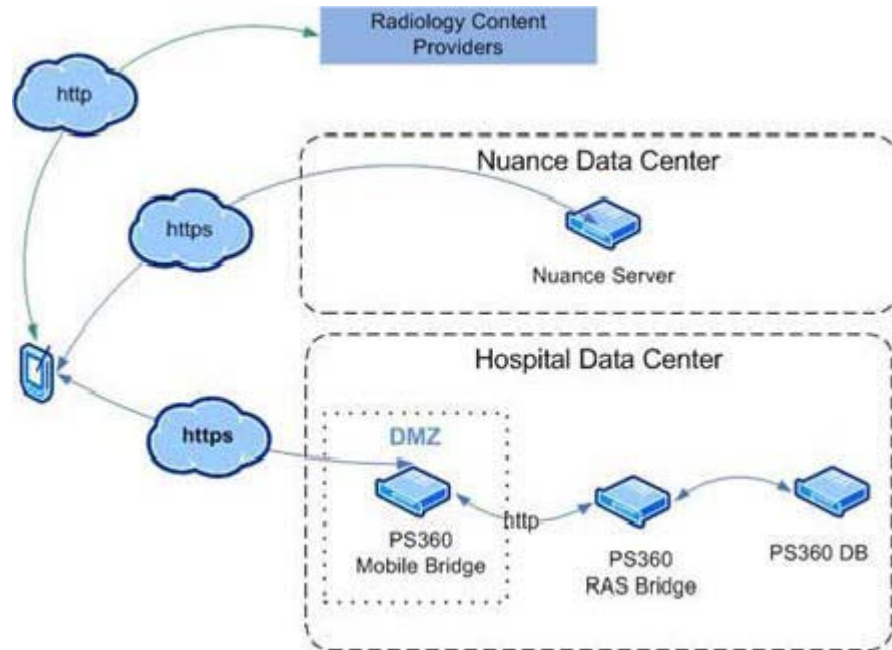
Mobile Bridge Deployment

There are two ways Mobile Bridge can be deployed at the Customer site.

1. Access inside and outside Hospital Network: The mobile application users can access the eSignature feature from their devices from anywhere, inside and outside the hospital Network using the device's mobile communication (3G, 4G, etc. . .).

The mobile bridge is hosted in a separate server in the DMZ environment. This configuration allows the Mobile application to send request to the Mobile Bridge. The communication between the Mobile application and mobile Bridge has to be over a secured channel of SSL (Secured Socket Layer) connection. The SSL creates a secure connection between the Mobile device and the Mobile Bridge Server over which any amount of data can be sent securely.

The communication between Mobile Bridge and RAS Bridge is performed using Hospital Local Network.



2. Access inside Hospital Network: The mobile application users can access the eSignature feature only within the hospital network, available via its Wi-Fi network.

Following architecture depicts how Mobile Bridge is deployed in the hospital network. The mobile bridge is hosted in the same server as RAS Bridge. Since the server is not known outside the boundary of the hospital, the mobile application will not have access from outside the hospital Network. In order for the user to access the application outside the Hospital network, the device should have a successful Hospital VPN connection established.

Mobile Workflow

The following diagram illustrates the user flow through the application.



1. User launches the app and is presented with the landing page, and the option to issue a search or go to their sign queue.
2. If the user issues a search, they are presented with the search results, with content providers displayed on the carousel and the search of the provider in the main area. The user can issue another search, or go to their sign queue.
3. If the user selects to go to their sign queue and has not been authorized for this session, they are presented with the login screen for their credentials.
4. Upon successful authentication, the user is presented with their sign queue.
5. User selects a report from their sign queue and is presented with the detailed report screen. The user can make edits to the report, save, sign, or issue a search.
6. If the user issues a search, they are presented with the search results, with content providers display on the carousel and the search of the provider in the main area. The user can issue another search, or return to the detailed report screen.
7. If the user saves the report, they receive confirmation of their action and are returned back to the detail report page.
8. If the user signs the report, they are requested to confirm the action, they then will receive confirmation of the action, and are returned to their sign queue.

Common Issues

Login

When the user attempts to login to the Mobile Client, they provide a username, password, and site. The Client will then contact the NMS server via HTTP using the provided site to obtain the location of the Mobile Bridge server. The address they go to is below:

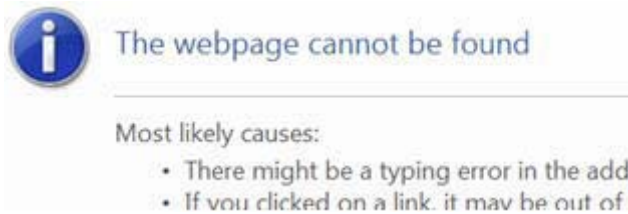
PremiseNMS?institutionCode={SITE}&productGuid=E85446E9&BEA9&?4E9D&9E28&1908B8465E15

- The web address contains port 8051. If the Client is being accessed from a managed network, port 8051 must be open.

This website will always be externally accessible. To confirm the address being returned from NMS, you can enter this address into a web browser, replacing {SITE} with the site identifier the customer is using in the Client. This should be provided by the PM or customer. If successful, you will be presented with a web address (formatting of the results will differ based on browser):

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">https://hd-ps360susp02.█.org</string>
```

- If the web address returns “Webpage cannot be found” or any other HTTP 404 errors, the site identifier needs to be addressed by the NMS team.



- The web address return must NOT have /ps360mobile or anything additional appended to it.

External Mobile Radiology Client

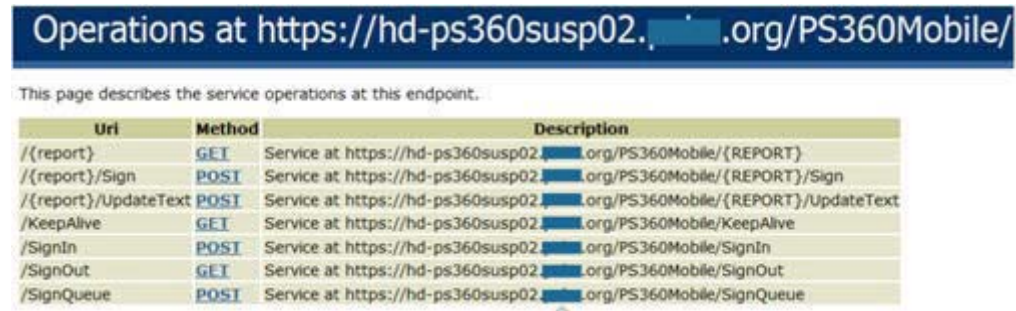
If the customer is planning to use the Mobile Radiology Client, externally, the website returned should be accessible from any web browser.

To confirm external accessibility:

1. Copy the web address from NMS, adding /PS360Mobile/Help to the end of url and paste it in the web browser.



Something similar should display:



If a web page not available (or any HTTP 404 error) error displays, the customer must address the network configuration. Mobile will not work unless this page is accessible.

Internal Mobile Radiology Client

If the customer plans to use the Mobile Radiology Client internally, the web address returned should be the name of the Mobile Bridge server. You can confirm the name is correct by entering the returned value from NMS, plus ps360mobile/help into a web browser on the workstation inside the customer's network:



It should return the same as the external website:

Operations at <http://mlb-ps360/PS360Mobile/>

This page describes the service operations at this endpoint.

Uri	Method	Description
/ {report}	GET	Service at http://mlb-ps360/PS360Mobile/{REPORT}
/ {report}/Sign	POST	Service at http://mlb-ps360/PS360Mobile/{REPORT}/Sign
/ {report}/UpdateText	POST	Service at http://mlb-ps360/PS360Mobile/{REPORT}/UpdateText
/KeepAlive	GET	Service at http://mlb-ps360/PS360Mobile/KeepAlive
/SignIn	POST	Service at http://mlb-ps360/PS360Mobile/SignIn
/SignOut	GET	Service at http://mlb-ps360/PS360Mobile/SignOut
/SignQueue	POST	Service at http://mlb-ps360/PS360Mobile/SignQueue

- If this fails, getting a web page not available (or any HTTP 404 error), confirm that the server name as well as the Mobile Bridge software has been installed on the server.

The user logging in must have the attending, resident, or fellow roles specified when logging in, or the login will throw an error.

They must also have the Enable Mobile Radiologist permission set in RadPortal.

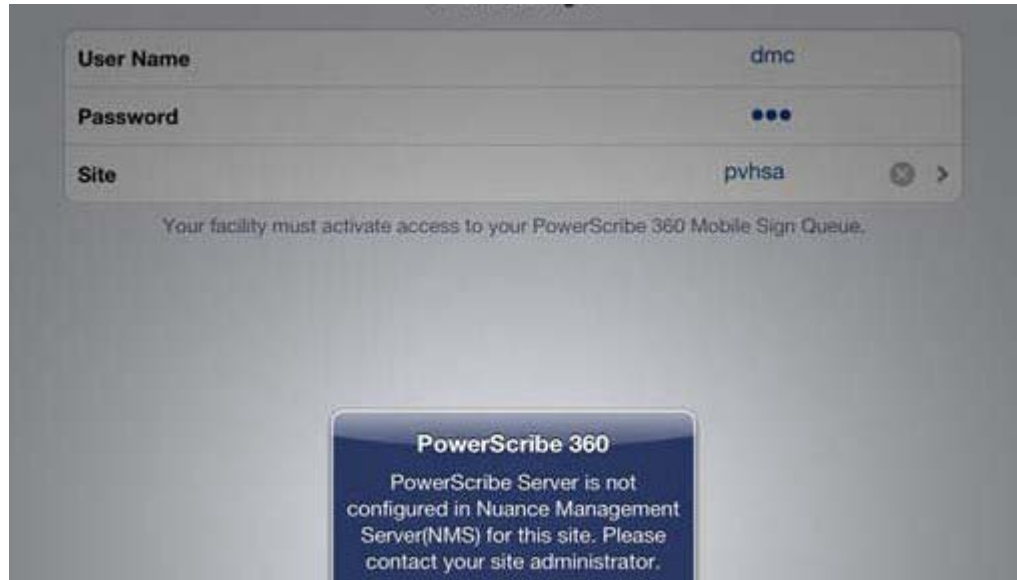
Client Side (Mobile App/Mobile Device)

If all of the above steps are validated, have customer conduct test via Mobile Device. If issues, consider the following:

- Explicit username or password error messages indicate end user may not have valid logon details including Site ID (institution code).



- If the site specified in the mobile device is not registered with NMS, the following error occurs:



If a "generic" error occurs (see screen shot), consider the items below:



1. **Mobile device cannot connect to the address provided by NMS.** See Login section above.
2. **No Internet connection.**
Browse to <http://www.nuance.com> to verify Internet connectivity.
3. **Port 8051 is blocked.**
If this is the case, then browsing to the URL in Step 2 should return Web Page Not Found. Check the site's firewall.
4. **Mobile device does not have access to the address provided by NMS.**
Browse to the help screen URL in the mobile device browser to verify connectivity to the PowerScribe 360 server:
The portion in red should be the URL provided by NMS.
5. **Mobile device can connect but has a problem once connected.**
On the Mobile Bridge Web Server, go to `c:\inetpub\wwwroot\PS360Mobile\logs` to review the log files and determine why there is a problem after establishing a connection.

Speech Disabled

If the customer is unable to dictate in the Mobile Client once logged in, check the Mobile Client Identifier in RadPortal:



The screenshot shows the RadPortal System configuration page. The top navigation bar includes Setup, Accounts, AutoText, Bridge, Sites, Speech, and System. Below the navigation bar, there are several tabs: Configuration..., BI-RADS..., DS Refusal Reasons..., Practice Groups..., and Review Ratings... The main content area has a toolbar with Save Changes, Clear, Delete, Synchronize Vocab, Preferences..., Templates..., Insurance..., and Import Persons... A dropdown menu is set to 'test'. Below the toolbar is a table with the following data:

ID	Access Code	Name	Description	Mobile Client Identifier	Active
1		test		S36b13e4-1056-439d-aa8	<input checked="" type="checkbox"/>

Below the table, there are fields for Customer ID and Security Code.

Capturing Web Traffic

On occasion, you may need to capture web traffic from the Client to see where the issue is occurring.

Fiddler

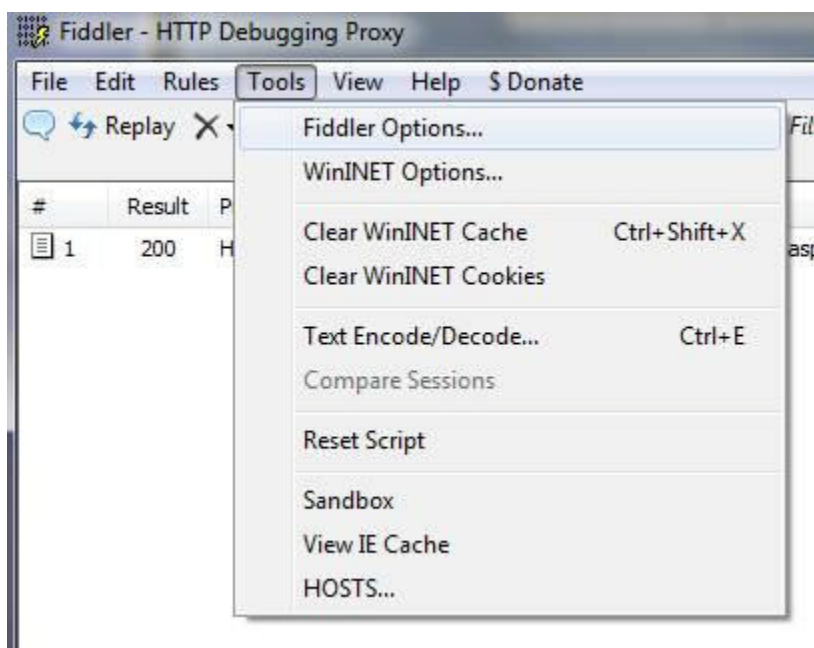
- Windows computer with Fiddler2 Download here:

<http://www.telerik.com/download/fiddler>

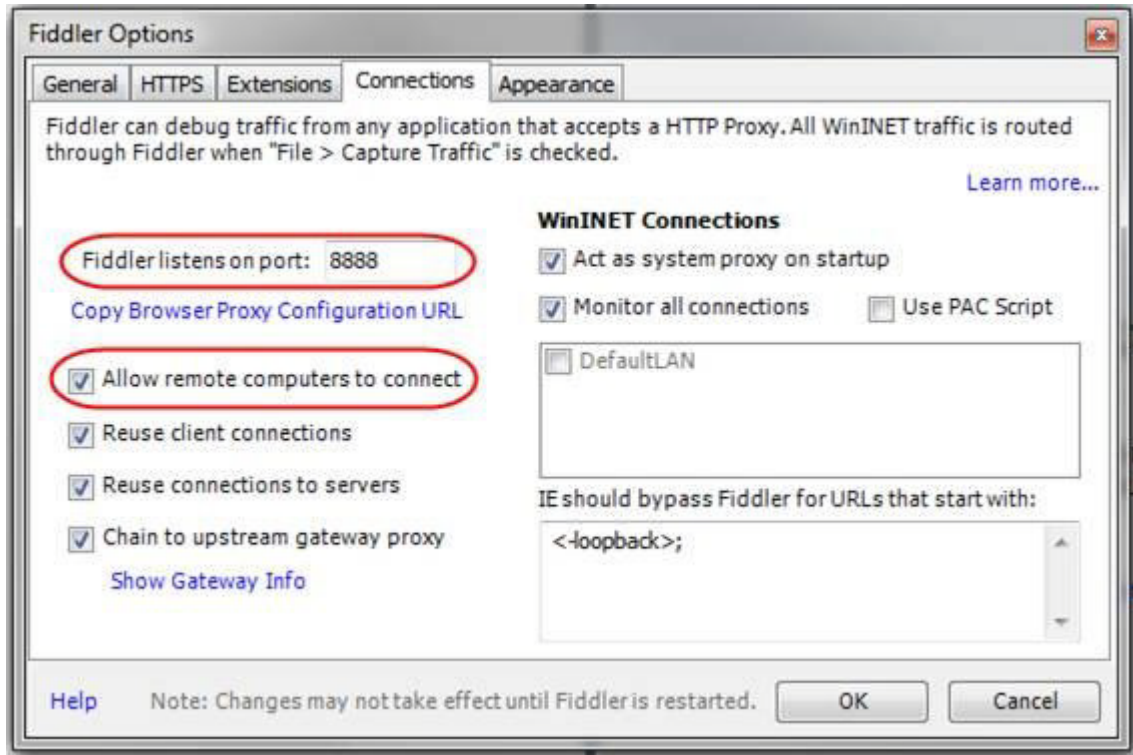
- iPhone/iPad

Enabling Fiddler to capture traffic from the Mobile Client:

- Your mobile device must be on the same network as your workstation
- Launch Fiddler2, and from Tools, select **Fiddler Options**.



- Go to connections, set your Fiddler port to 8888 and select Allow remote computers to connect.



- If the customer will be accessing the Client externally, click the HTTPS tab, and enable **Decrypt HTTPS traffic**, importing the cert automatically when prompted:



- Restart Fiddler.
- Note your computer's IP address

- On your iPhone/iPad, go to Settings>Wifi. Select the Wifi network you are connected to, and press the right facing arrow:



For the HTTP Proxy settings, select Manual:

- Enter the IP address for your computer in the server, a port of 8888, and leave authentication off:



Launch the Client on the device. All web traffic for the Client is now being captured and shown in the Fiddler application. HTTP errors and the like can be very beneficial for troubleshooting where the application is failing.

Manual Revision History

Note: In this table the most recent changes are first by date.

Date	Sec	Page	Change (Paragraph, Sentence, Figure, Table, etc.)	Initials
07/24/15	All	All	Draft Version	SEP