



Annalise CXR 2.1

# Administration Guide

English

Annalise CXR

Product Version: 2.1

Date of Issue: 2021-07-13



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## Introduction

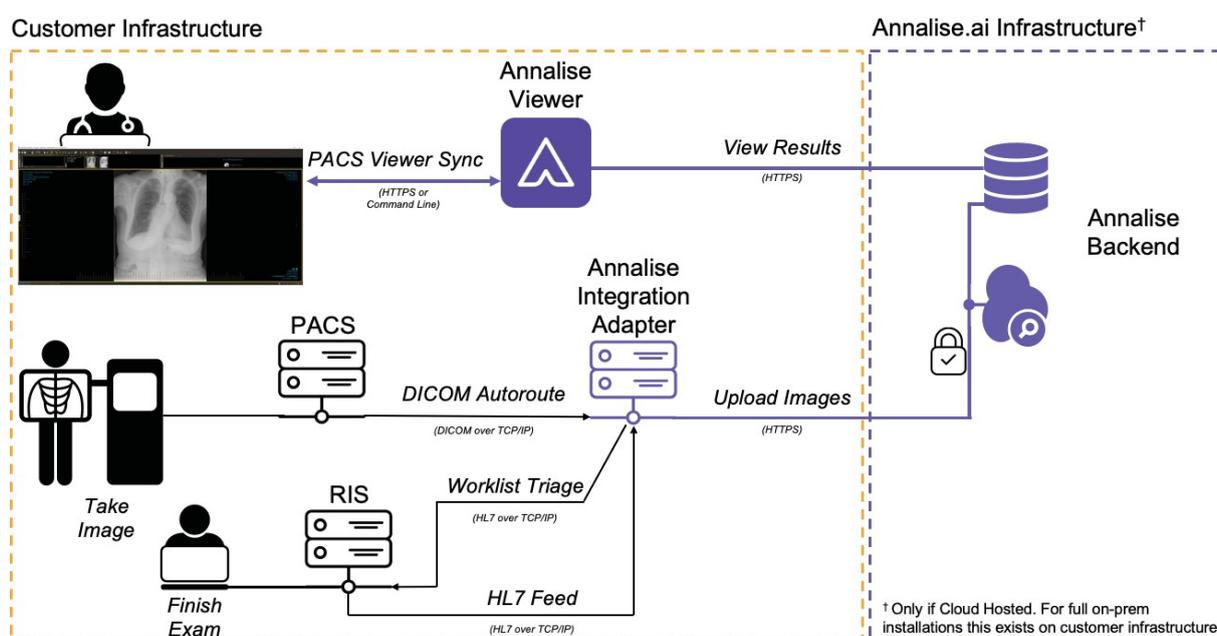
This document provides installation and setup information for the Annalise product.

This document is intended for use by IT administrators and support staff; it is not intended for use by clinical users. For the clinical use of this product, please refer to the User Guide.

## Annalise System Overview

The Annalise System comprises three sub-systems:

1. Annalise Integration Adapter
2. Annalise Backend
3. Annalise Viewer



The PACS receives images and uses auto-routing rules to forward the DICOM images to the Annalise Integration Adapter.

An HL7 feed from the RIS workflow software may be optionally used to confirm when the study is complete and ready for AI processing. The images are subsequently re-packaged into an encrypted and secure payload and sent to the Annalise Backend for immediate processing.

**Assist feature:** When a Clinician loads the study in the PACS Viewer, the PACS Viewer synchronises with the Annalise Viewer to provide the study detail. The Annalise Viewer retrieves the pre-computed AI results from the Annalise Backend and displays to the clinician.

**Worklist Triage feature:** Studies from the RIS are automatically processed by the AI and where appropriate a given study's priority will be updated in the RIS.

## Supported Modalities and Studies

The following sections describe the supported capabilities.

NOTE: Annalise will release updates to add functionality, improve performance and expand compatibility.

Supported Items	Description
Supported Body Part Imaging	Chest X-ray
Supported DICOM Transfer Syntaxes	JPEG 2000 Image Compression (Lossless Only) - 1.2.840.10008.1.2.4.90 Implicit VR Endian - 1.2.840.10008.1.2 Explicit VR Little Endian - 1.2.840.10008.1.2.1 Explicit VR Big Endian - 1.2.840.10008.1.2.2
Supported DICOM SOP Class	Computed Radiography (CR) - 1.2.840.10008.5.1.4.1.1.1 Digital Radiography (DX) - 1.2.840.10008.5.14.1.1.1.1
Supported View Types	Minimum 1 Frontal (AP/PA) Up to 3 images in total. The AI model will select a combination of the best 3 frontal/lateral images if a study contains more than 3 images.

## Security and Confidentiality

Annalise includes security features to protect unauthorised access and modification of the data including:

- Secure authentication and encryption of sensitive data in transmission between the Annalise Integration Adapter and the Annalise Backend.
- Secure authentication and encryption of sensitive data in transmission between the Annalise Viewer and the Annalise Backend.
- The option for secure authentication and encryption of sensitive data in transmission between the PACS Image Viewer and the Annalise Viewer.
- Encryption of sensitive data stored at the Annalise Backend.

Annalise uses a multi-tenant design where data from different organisation is separated via different organisational accounts. There is no direct access to internal data structures

by organisational users; users can only access information for an organisation with the appropriate credentials.

Annalise only extracts the required information from the DICOMS, and discards sensitive patient information. An association to an individual patient cannot be made by using the metadata stored in the Annalise Backend.

Detailed information about the security and privacy controls is available in the Annalise Security Whitepaper, available on request.

## Configuration

Annalise supports multiple configurations that enable individual organisations to tailor the products to their specific needs.

As part of the deploying and on-boarding process, the Annalise.ai Team manages all product configuration in consultation with the customer.

The following customisations are available:

Configuration Item	Variables/Controls
Findings Visibility	Enable/Disable Individual Findings
Findings Groups	Enable/Disable up to 8 Groups for grouping the display of Findings in the Annalise Viewer
Allocation of Findings to Groups	Allocate each Finding to defined Groups
Finding Order	Select the order in which each Finding will appear in the Annalise Viewer
Finding Sensitivity/Specificity	Adjust the operating point of each Finding to increase/decrease the sensitivity/specificity
Available Languages	Please contact Annalise for the current list of supported languages
Analytics	Annalise Viewer sends tracking data to our privately- hosted server to improve your experience using the Viewer.  A version of Annalise Viewer can be provided without this feature.
Worklist Triage	Worklist Triage can also be turned off for individual findings. Customise the priority level names and create additional priority levels.  * Worklist Triage is an additional licensed option and is not available in all regions.

For configuration changes, please contact Annalise Support.

## Annalise Integration Adapter

### Purpose

The Annalise Integration Adapter interfaces with the PACS and RIS servers to acquire the CXR images and metadata required for AI processing. The Integration Adapter also:

1. Provides a stable interface within the customer's network to the PACS and RIS.
2. De-identifies studies to extract only the required information from the DICOMS and discard sensitive patient information.
3. Acts as a buffer with the Annalise backend in the event of network outages.
4. Worklist Triage related functionality which includes turning the feature on/off, checking existing worklist priorities and ignoring the worklist item if not currently active.

### Integration Adaptor System Requirements

The Annalise Integration Adapter is hosted on the customer's network and has the following minimum system requirements:

- Linux (Ubuntu 20.04 LTS)
- 8 Cores at approximately 2.0 GHz
- 24 GB RAM
- 200 GB Storage
- Internet Connection. A 6 Mbps uplink is recommended to support a volume of 3 studies per minute) (for Cloud deployed products)
- The Annalise Backend hosted in the Cloud requires an outbound connection via port 443.

### Installation and Configuration

Annalise.ai staff will install the Annalise Integration Adapter in collaboration with the customer IT/Infrastructure team.

NOTE: Changes to the Integration Adaptor should only be implemented under the instruction of Annalise.ai.

### Maintenance and Troubleshooting

Annalise.ai staff require access to the host machine for scheduled maintenance, software upgrades and troubleshooting.

## PACS Configuration for interfacing with the Integration Adaptor

### Setup an Application Entity for Annalise Integration Adapter

The Annalise Integration Adaptor must be configured as an Application Entity (AE) in the customer PACS.

Customers must follow the PACS provider's guide to setup the Annalise Integration Adaptor AE with:

- IP address or host name of Integration Adaptor for the customer infrastructure
- Port where the Integration Adaptor listens for DICOM (the default port is 11112)
- AE title of Integration Adaptor (the default title is ANNALISE\_AI)

Following configuration, perform a C-ECHO (ping) to the configured Annalise AE title to confirm the connectivity test is successful.

### Setup Auto-routing Rules

Customers should follow their PACS provider's guide to set-up auto-routing and auto-forwarding rules to the Annalise Integration Adaptor. This should be configured to forward all Chest X-Ray studies from the relevant locations to the configured Annalise AE.

An example configuration is provided below:

- Modality = 'CR' AND StudyDescription contains 'CHEST'
- Modality = 'DX' AND StudyDescription contains 'CHEST'
- Modality = 'CR' AND BodyPart contains 'CHEST'
- Modality = 'DX' AND BodyPart contains 'CHEST'

Utilising the following DICOM tags:

- Modality (0008,0060)
- StudyDescription (0008,1030)
- BodyPart (0018,0015)

## RIS Configuration for interfacing with the Integration Adaptor

### Setup an inbound and outbound HL7 feed for the Annalise Integration Adapter

The Annalise Integration Adaptor is required to receive HL7 V2 ORM^001 messages and send HL7 V2 ORM^001 messages to the RIS server.

Customer must follow the RIS provider's guide to setup the following for the Integration Adapter:

- Outbound feed: IP or host name of the Integration Adapter, default port 2575, that sends HL7 ORM^001 messages filtered for only studies which are chest X-rays to the Integration Adapter. This is used by the Integration Adapter to trigger AI processing. An example of an outbound HL7 feed filter from the RIS may be all ORM^001 messages with:
  - ORC-1='XO' or 'R'
  - ORC-5='SC' or 'IV'
  - OBR-4.5='CHEST'
  - OBR-24='CR'
  
- Inbound feed: IP or host name of the RIS Server, default port 2575, that receives HL7 ORM^001 messages from the Integration Adapter. This is used by the Integration Adapter to send order priority to the RIS server.

### ORM^001 Message Specification for AI Triggering

The following table lists the fields that the Annalise Integration Adapter expects for AI triggering for the ORM^001 message.

Seg	Field	Definition	Required/Optional	Comments
MSH	1	Field Separator	R	Value as  , (ASCII 124), as recommended by HL7.
	2	Encoding Characters	R	Value as ^~\&, (ASCII 94, 126, 92, and 38, respectively), as recommended by HL7
	3	Sending Application	O	Will be used as Receiving Application in MSH of ACK
	4	Sending Facility	O	Will be used as Receiving Facility in MSH of ACK
	5	Receiving Application	O	Will not check even if provided
	6	Receiving Facility	O	Will not check even if provided

	9	Message Type	R	Must be ORM^O01
	10	Message Control ID	O	Will be used as Message Control ID in MSA of ACK
	11	Version ID	R	Must be one of the versions of HL7 V2 including: 2.1, 2.2, 2.3, 2.3.1, 2.4, 2.5, 2.5.1, 2.6, 2.7, 2.8, 2.8.1, 2.8.2. The same version will be used for the ACK message
ORC	1	Order Control	O	Optional field to be combined with ORC5 Order Status to decide the Study Completion status.  Sample order control code: XO
	2	Placer Order Number	O	By default, will pick up Accession Number of the order from this field
	3	Filler Order Number	O	Can be configured to pick up Accession Number of the order from this field
	5	Order Status	R	Should be a status to mark Study Completion, which is configurable in Annalise Integrator Services.  Sample order status code: SC for Scan Complete, IV for Image Verified
OBR	2	Placer Order Number	O	Can be configured to pick up Accession Number of the order from this field
	3	Filler Order Number	O	Can be configured to pick up Accession Number of the order from this field
	4	Universal Service Identifier	O	Can be configured to pick up Body Part from component 5 of this field
	24	Diagnostic Service Section ID	O	Can be configured to pick up Modality from this field

The following table lists the fields that the Annalise Integration Adapter will set when reply ACK message back to the RIS server.

Seg	Field	Definition	Comments
MSH	1	Field Separator	Value as  , (ASCII 124), as recommended by HL7
	2	Encoding Characters	Value as ^~\&, (ASCII 94, 126, 92, and 38, respectively), as recommended by HL7
	3	Sending Application	IntegrationLayer
	5	Receiving Application	The Sending Application from incoming message
	6	Receiving Facility	The Sending Facility from incoming message
	9	Message Type	As ACK^O01 if the incoming message was parsed, and processed properly.  As ACK^ACK if the incoming message is not ORM^O01, invalid ORM^O01, or failed to be processed.
	10	Message Control ID	New generated ID to identify the ACK message
	11	Version ID	Same version as the incoming message
MSA	2	Acknowledgement Code	AA as Application Accept, the incoming message was parsed and processed successfully.  AE as Application Error, error happened while parsing or processing the incoming message  AR as Application Reject, the incoming message is not supported.
	5	Message Control ID	The Message Control ID of the incoming message

## ORM^001 Message Specification for Updating Order Priority in the RIS Worklist

\* Worklist Triage is an additional licensed option and is not available in all regions.

The following table lists the fields that the Annalise Integration Adapter will set when it sends order priority update to the RIS server.

Seg	Field	Definition	Required/Optional	Comments
MSH	1	Field Separator	R	Value as  , (ASCII 124), as recommended by HL7
	2	Encoding Characters	R	Value as ^~\&, (ASCII 94, 126, 92, and 38, respectively), as recommended by HL7
	3	Sending Application	O	Default, will be set as: IntegrationLayer
	9	Message Type	R	Always ORM^001
	10	Message Control ID	O	Will be set with a unique ID
	11	Version ID	R	Default set to 2.3
PID	3	Patient ID	O	Can be configured to be Patient ID
	5	Patient Name	O	Can be configured to be Patient Name
	7	Patient DOB	O	Can be configured to be Patient DOB
	8	Patient Sex	O	Can be configured to be Patient Sex
ORC	2	Placer Order Number	O	Can be configured to be Accession Number of the order
	3	Filler Order Number	O	Can be configured to be Accession Number of the order

OBR	2	Placer Order Number	O	Can be configured to be Accession Number of the order
	3	Filler Order Number	O	Can be configured to be Accession Number of the order
	5	Order Priority	R	Can be configured to be calculated order priority
	27	Order Priority	R	Component 6 of this field can be configured to be calculated order priority

The following table lists the fields of ACK message that the Annalise Integration Adapter expects to get from back from RIS.

Seg	Field	Definition	Comments
MSH	1	Field Separator	Value as  , (ASCII 124), as recommended by HL7
	2	Encoding Characters	Value as ^~\&, (ASCII 94, 126, 92, and 38, respectively), as recommended by HL7
MSA	2	Acknowledgement Code	AA as Application Accept if the update message was parsed and processed successfully.  Annalise Integrator Services consider AA as a successful priority update, otherwise the update is considered as a failure

## Annalise Backend

### Purpose

The Annalise Backend filters images, performs AI processing and stores results.

The Annalise backend is hosted on:

- Annalise.ai's cloud infrastructure for cloud installations, or
- Customer infrastructure for on-prem installations.

On-premises installations of the Annalise Backend are performed by Annalise.ai staff in collaboration with the customer's IT/Infrastructure team.

### On-premises System Requirements

On-premises hosting of the Annalise Backend in the customer's network has the following minimum requirements:

- Linux (Ubuntu 20.04 LTS)
- 16 CPU Cores at ~2.4 GHz, supporting the AVX, FMA, and SSE4.2 instruction sets
- 32GB RAM
- 200GB Storage base plus additional 16GB per 1000 studies

## Installation and Configuration

### Cloud

Security requirements for the Cloud instance of the Annalise Backend require the customer to provide IP ranges for workstations using the Annalise Viewer. Annalise.ai staff add this information to the Annalise Backend IP allow-list.

### On-Premises

On-premises installations of the Annalise Backend are installed by Annalise.ai staff in collaboration with the customer's IT/Infrastructure team.

Changes to the Annalise Backend should only be made under the instruction of Annalise.ai.

IP allow-listing is optional for on-premises installations and is configured on request.

### Maintenance and Troubleshooting

For on-premises installations of the Annalise Backend, Annalise.ai staff request remote access to the host machine for scheduled maintenance, software upgrades and troubleshooting.

## Annalise Viewer

### Purpose

The Annalise Viewer displays the AI findings for supported studies and is intended for use with a PACS Viewer on a workstation.

The Annalise Viewer is installed on each workstation on the customer's network. The Annalise Viewer receives study information from the PACS Viewer, and then retrieves the results for this study from the backend for display to the user.

### Annalise Viewer Requirements

This section details the minimum system requirements for Annalise Viewer.

The Annalise Viewer requires a workstation with:

- 500MB RAM
- 250MB Storage

Supported Operating Systems:

- Windows 10 Pro 64-bit or 32-bit
- Windows 7 64-bit or 32-bit

NOTE: The Annalise Viewer includes features that require the Aero themes in Windows 7. To enable Aero Themes, see Running on Windows 7. For Windows 7 computers that do not support the Aero themes, the Viewer will use a simplified layout that supports the Viewer functionalities and workflows.

Additional requirements:

- Port 8989 must not be in use on the workstation
- Allow outbound connection on port 443 (for the Annalise Backend hosted in the Cloud)
- A PDF Reader is required to view the User Guide.

### Annalise Viewer Integration

The Annalise Viewer is intended for use in conjunction with a PACS Viewer. To synchronise the PACS Viewer and the Annalise Viewer, an interface must be established between either the PACS or the RIS, and the Annalise Viewer.

Depending on the functionality supported by the PACS or RIS, the Annalise Viewer can be configured to:

1. Automatically launch via the PACS or RIS.
2. Automatically display AI findings after loading a study in the PACS Viewer.

3. Display AI findings for a study requested by the PACS Viewer (e.g. a manual synchronise button in the PACS)
4. Stop showing AI findings after closing a study in the PACS Viewer.
5. Quit when requested by the PACS or RIS.

The Annalise Viewer supports requests via an HTTPS API or via a command line interface. Many PACS and RIS support integration with 3rd party applications via one of these interfaces. The commands and syntax are specified in the Annalise Viewer Open API Specifications and are available on request. Configure the system using the PACS / RIS vendor instructions.

NOTE: You must define the installation path for the Annalise Viewer. Annalise.ai recommend using the default path "C:\Program Files\Annalise" when installing the Annalise Viewer.

After configuring the PACS or RIS (and after changes to the configuration), test the Annalise Viewer using the test steps in Verify Installation and Configuration.

## Intelerad Integration

The Annalise Viewer is natively compatible with IntelePACS and InteleViewer solutions.

The minimum software versions are:

- IntelePACS 4-16-1-R89
- InteleViewer 4-18-1-P340

For an IntelePACS integration, contact your Intelerad support team to enable Annalise.

You must select "Annalise.ai" in the "Third-Party" section of the InteleBrowser User Management for the integration to be operational.

## Sectra IDS7 Integration

When integrating the Annalise Viewer with the Sectra IDS7 PACS, the Annalise Viewer Adaptor for Sectra is required to be installed as well as configuring the PACS third party interface.

The Annalise Viewer Adaptor for Sectra is a background application which provides an interface between the Sectra Context Manager and the Annalise Viewer. The service is required to be installed on each workstation in conjunction with the Annalise Viewer.

The adaptor is provided in a windows installer and should be installed for all users on each workstation. Once installed, the adaptor will be automatically launched each time the user logs on to the workstation.

For configuring Sectra IDS7 for use with Annalise, contact your Sectra support team. IDS7 shall be configured utilizing the command line interface as defined in the Annalise Viewer Open API specification to support the following commands:

When starting: Implement STUDY\_OPEN request parameters

When changing patient: leave empty

When the user logs off: Implement APPLICATION\_CLOSE request parameters.

After completing installation and configuration, run the tests defined in Verify Installation and Configuration to ensure correct operation of the product.

## Annalise Viewer Installation

Install Annalise Viewer via the installer file provided by Annalise.ai. Before installing, check the installation file matches the version provided by Annalise.ai.

### Install using the User Interface

Double click the installer and select the installation path as required by the integration with the PACS / RIS (see “Integrating with the PACS Viewer”).

Annalise.ai recommends using the default path “C:\Program Files\Annalise”.

Click next to progress through the installation options.

After installing, test the Annalise Viewer as detailed in Verify Installation and Configuration.

### Remote or Distributed Installation

To install Annalise Viewer using the Windows command line or a deployment tool, change directory to the folder that contains the installer and enter the command:

```
"Annalise Setup 2.x.y.z.exe" /S /allusers
```

NOTE: The installer version number changes each version. Check the filename matches the version provided by Annalise.ai.

After installing, test the Annalise Viewer as detailed in Verify Installation and Configuration.

## PDF Reader

Install a PDF reader on the workstation to view the User Guides.

## Application Configuration

For secure operation, the Annalise Viewer authenticates the Viewer and Backend using organisation-level credentials. Annalise.ai will provide the credentials and the Annalise Backend server URL during the product installation and configuration. This information can be entered manually in the application or set remotely via a distribution tool.

NOTE: To ensure the security and confidentiality of information in the system, securely store the organisation ID and password.

## Manual Configuration

If the Annalise Viewer has not been previously configured, on first launch the application will prompt you to enter the credentials and server URL via the Server Settings page.

1. Enter the credentials and URL
2. Click "Test".
  - a. A "Connected" response indicates the application is ready for testing (see Verify Installation and Configuration.)
  - b. An error message indicates the issue. In this situation, check:
    - i. The organisation ID and password
    - ii. The URL
    - iii. The computer can access the URL (e.g. check the computer has network connectivity and firewall permissions allow access).

## Remote Configuration

For enterprise customers, the organisation credentials and Annalise Backend server URL can be set remotely via the distribution tool:

```
cmdkey /generic:"Annalise/Annalise CredentialsV2" /user:"Annalise
CredentialsV2" /pass:"%7B%22apiUrl%22%3A%22<annalise_endpoint>%22%2C
%22clientId%22%3A%22<client_id>%22%2C%22clientSecret%22%3A%22<client_
secret>%22%7D"
```

NOTE: Replace the angle brackets (<>) and their contents with the credentials provided by Annalise.ai.

After installing, test the Annalise Viewer as detailed in Verify Installation and Configuration.

## Verify Installation and Configuration

To ensure the product is operating correctly, complete the following tests after:

- Each installation
- Changes to the Annalise Viewer configuration, or
- Changes to the PACS/RIS integration.

### Test 1: Automatic Synchronise: Launch Application and Load Study

<b>Test Steps</b>	<p>For PACS/RIS integrations which automatically synchronise with the Annalise Viewer</p> <ol style="list-style-type: none"> <li>1. Quit the Annalise Viewer application (if running).</li> <li>2. Launch the PACS Viewer and open a sample CXR study.</li> </ol>
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<p><b>Expected Result</b></p>	<p>The Annalise Viewer launches and attempts to load the study.</p> <p>If the study has been loaded in the Annalise Backend, the Annalise Viewer may display either:</p> <ul style="list-style-type: none"> <li>a) AI results for the study, if the study has been processed by the Annalise Backend; or</li> <li>b) “No results found”, if the study has not been processed by the Annalise Backend.</li> </ul> <p>For PACS/RIS integrations which only support manual synchronise, go to Test 2.</p>
<p><b>Troubleshooting</b></p>	<ul style="list-style-type: none"> <li>• If the Annalise Viewer does not launch, see Troubleshooting - PACS Viewer Integration</li> <li>• If the Annalise Viewer launches but shows “Missing credentials”, see Troubleshooting - Miscellaneous</li> <li>• If the Annalise Viewer shows an error, see troubleshooting “Error Codes”</li> </ul>

## Test 2: Manual Synchronise: Load Study

<p><b>Test Steps</b></p>	<p>For PACS integrations which have a button in the PACS viewer to synchronise with the Annalise Viewer.</p> <ol style="list-style-type: none"> <li>1. Launch the PACS Viewer and open a sample CXR study.</li> <li>2. Click the “Annalise” button to request AI findings.</li> </ol>
<p><b>Expected Result</b></p>	<p>The Annalise Viewer launches and attempt to load the study.</p> <p>If the study has been loaded in the Annalise Backend, the Annalise Viewer may display either:</p> <ul style="list-style-type: none"> <li>a) AI results for the study, if the study has been processed by the Annalise Backend; or</li> <li>b) “No results found”, if the study has not been processed by the Annalise Backend.</li> </ul>
<p><b>Troubleshooting</b></p>	<ul style="list-style-type: none"> <li>• If the Annalise Viewer does not launch, see troubleshooting “8.1.3 PACS Viewer Integration”</li> <li>• If the Annalise Viewer launches but shows “Missing credentials”, see Troubleshooting - Miscellaneous</li> <li>• If the Annalise Viewer shows an error, see Troubleshooting - Error Codes</li> </ul>

### Test 3: User Guide

<b>Test Steps</b>	<ol style="list-style-type: none"> <li>1. Open the Annalise Viewer Application.</li> <li>2. Click the “?” icon to open the “About” page.</li> <li>3. Click the User Guide hyperlink to open the User Guide.</li> </ol>
<b>Expected Result</b>	<ol style="list-style-type: none"> <li>1. The “About” page contains a hyperlink to the User Guide.</li> <li>2. The User Guide opens in a PDF Reader.</li> <li>3. The User Guide version matches the Annalise Viewer version (as identified in the about page).</li> </ol>
<b>Troubleshooting</b>	<ul style="list-style-type: none"> <li>• If the Annalise Viewer shows “Guides are available at <a href="https://annalise.ai/Guides">annalise.ai/Guides</a>”, see Troubleshooting - Miscellaneous</li> <li>• If the User Guide cannot be opened, ensure a PDF Reader is installed and configured as the default application for files with extension “.pdf”</li> <li>• If the User Guide version does not match the Annalise Viewer version, check the correct version of the Annalise Viewer is installed. Contact <a href="https://annalise.ai">Annalise.ai</a> for assistance if you are unsure.</li> </ul>

## Troubleshooting Guide

### Annalise Viewer

#### Error Codes

Code	Description	Possible Resolution
001 002	Authentication Error: Wrong log-in credentials entered	Check Organisation ID and Password. If problem persists, contact Annalise support.
004	Annalise cannot connect reach Annalise servers	Check Internet/Network connectivity. If there is Internet connectivity and the problem persists, contact Annalise.ai support.
003 009 010 011 012 014 021 022 023	Annalise Service Error	If problem persists, contact Annalise support.
015 026	Error communicating with the PACS/RIS	Restart PACS/RIS and Annalise Viewer. Confirm correct configuration of the communication interface within the PACS/RIS. Please contact your PACS provider for support
016 099	Annalise Viewer local server error	Restart the Annalise Viewer. If problem persists, contact Annalise support.
027	Annalise Viewer – Port unavailable	Port 8989 is in use by another application. Please ensure port is available for use by the Annalise Viewer.

## Viewing AI Findings

Symptom	Root Cause	Steps to Resolve
User sees "No results available" when synchronising	The study has not been routed to the Annalise Integration Adapter.	In your PACS administration page, review the study that the User is not seeing results for and ensure that the autorouting criteria has been met. Review that the image has been sent to the Annalise Integration Adapter through your PACS routing tools.
	The Annalise Integration Adapter has no connectivity to the Annalise backend.	If you have confirmed that the study has been routed to the Annalise Integration Adapter and there are still "No results available", confirm that there is connectivity between the Annalise Integration Adapter and the Annalise Backend.
Patient details are missing or displayed as "-". This includes patient name, gender, age and date of birth.	The Annalise Viewer receives patient details from the PACS or RIS. If the interface is not configured to send all of the patient details to the Annalise Viewer, and the information is not available in the Annalise Backend, then the Annalise Viewer will display "-"	Ensure the PACS / RIS integration has been configured and enabled according to the vendors instructions and the Annalise Viewer Open API Specification. Some PACS / RIS do not support all patient information on the interface.

## PACS/RIS Integration

Symptom	Root Cause	Steps to Resolve
User cannot see "Annalise" button or features in the PACS Viewer	The Annalise feature is not enabled for the logged in PACS / RIS user.	The PACS / RIS Admin needs to enable Annalise for the logged in user.
Annalise Viewer does not auto-launch when PACS Viewer launches	The Annalise Viewer has not been installed in the same path as required by the PACS / RIS configuration.	Ensure that the install location matches the location configured in the PACS / RIS (eg. Annalise.ai recommends C:/Program Files/Annalise/Annalise.exe).
Annalise Viewer does not respond when the user clicks the Annalise button in the PACS Viewer	The Annalise configuration within the PACS / RIS is incorrect.	Ensure the PACS / RIS integration has been configured and enabled according to the vendors instructions.  Ensure the commands are implemented as specified in OPT-SW-021 Annalise Viewer Open API Specification.
	This feature may not be supported by the PACS / RIS	Ensure the PACS / RIS is configured as per the PACS / RIS vendors instructions.
AI findings remain visible after a study is closed in the PACS Viewer.	The Annalise configuration within the PACS / RIS is incorrect.	Ensure the PACS / RIS integration has been configured and enabled according to the PACS / RIS vendors instructions.  Ensure the commands are implemented as specified in OPT-SW-021 Annalise Viewer Open API Specification.
AI findings remain visible after the PACS Viewer is closed or is locked	This feature may not be supported by the PACS / RIS	Ensure the PACS / RIS is configured as per the PACS / RIS vendors instructions.  The Annalise Viewer has a timeout to cease showing AI findings after a period of inactivity. This can be used to prevent patient information from being displayed when the workstation is unattended.

AI findings change unexpectedly	PACS Viewer shortcut key mapped incorrectly.	Ensure any shortcut keys are configured correctly and not shared across multiple applications.
AI Findings cease to display unexpectedly	Viewing multiple studies in different windows.	When moving between studies in multiple windows, the PACS Viewer may send a request to the Annalise Viewer to display the current in-focus window.
	Annalise Viewer timeout is too short.	Change the timeout period in the Annalise Viewer to a longer period.

## Miscellaneous

Symptom	Root Cause	Steps to Resolve
When the Annalise Viewer launches, the user sees "Missing Credentials"	The organization ID, password and server URL have not been configured for the user.	See 7.5 Application Configuration.
When the user tests the Server Settings, they see "Error – failed to reach server"	Incorrect Server URL.	Ensure the URL matches the URL provided by Annalise.ai during the deployment and configuration process.
	Unable to access network.	Check the computer is connected to the network and has permissions to access the Server URL.
When the user tests the Server Settings, they see "Error – invalid credentials"	The Organisation ID or Password is incorrect.	Ensure the ID and password matches those provided by Annalise.ai during the deployment and configuration process

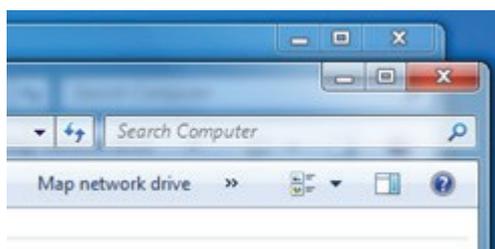
<p>When the user goes to open the User Guide, they see “Guides are available at <a href="https://annalise.ai/Guides">annalise.ai/Guides</a>”</p>	<p>The Annalise Viewer is unable to reach the Annalise Backend.</p>	<p>Ensure the computer is connected to the network, and check the application is able to reach the Annalise Backend by using the Test feature in Settings &gt; Server Settings.</p> <p>If the application is connected to the Backend, then an error may be present in the Backend – please contact Annalise.ai.</p> <p>If the application is unable to reach the Backend, then troubleshoot the network connection as above.</p>
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## Appendix A: Running Annalise Viewer on Windows 7

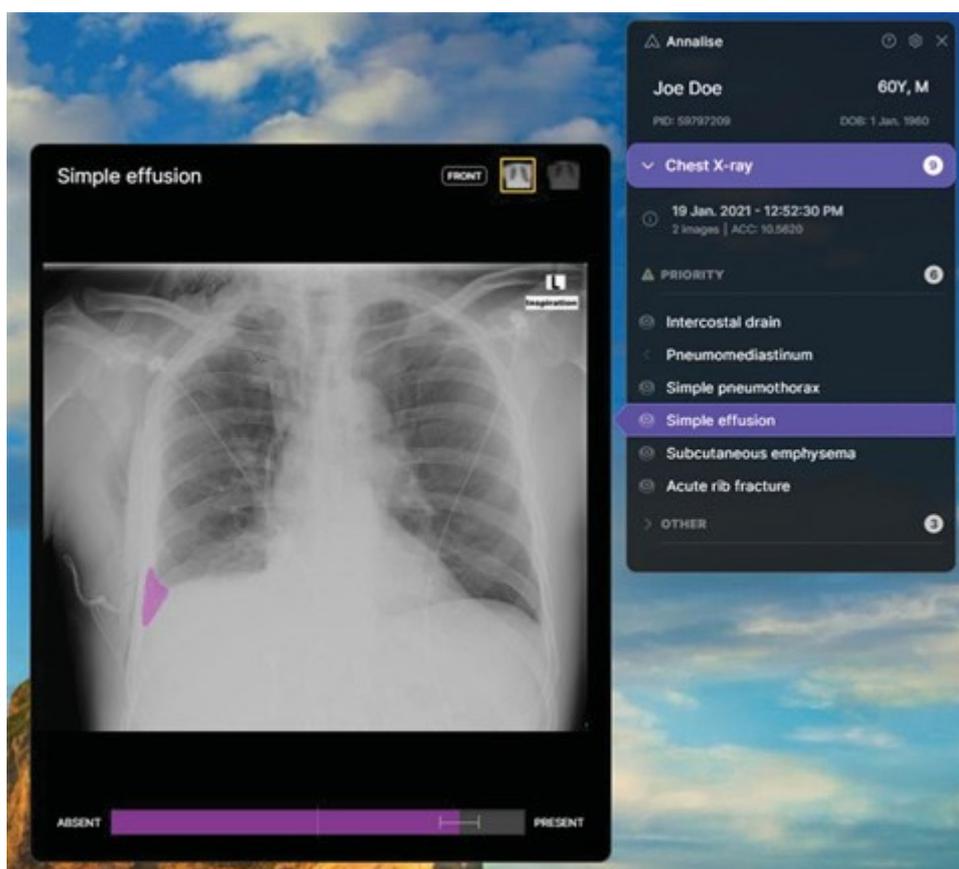
### Windows Aero Overview

For optimum functionality of the Annalise Viewer on Windows 7, Windows Aero must be enabled and operational. When installed on Windows 7 computers that do not support Aero themes, the Annalise Viewer will use a simplified user interface design.

To confirm Windows Aero is operational on Windows 7, open the File Explorer and check for transparency (i.e. able to see through the Windows Toolbar):



The Annalise Viewer should appear correctly as below. Note that the Viewer itself is transparent and items behind it are visible.



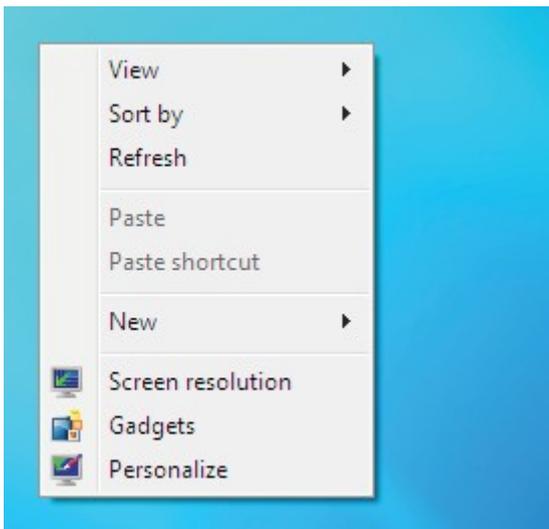
## Troubleshooting Steps

### Step 1: Enabling Aero

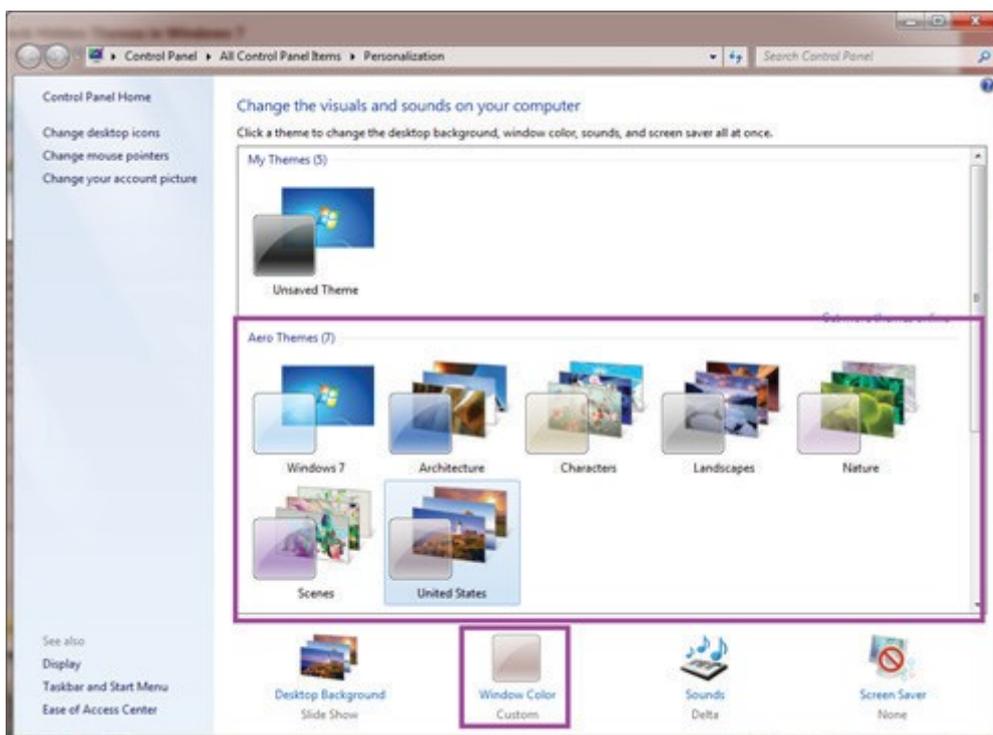
If Aero is not enabled or operational, the following steps can be used to troubleshoot. After completing each step, check if the issue is resolved.

To start, select an Aero Theme.

Right click on the desktop and select "personalise":



Select one of the "Aero Themes" and click "Windows Color":

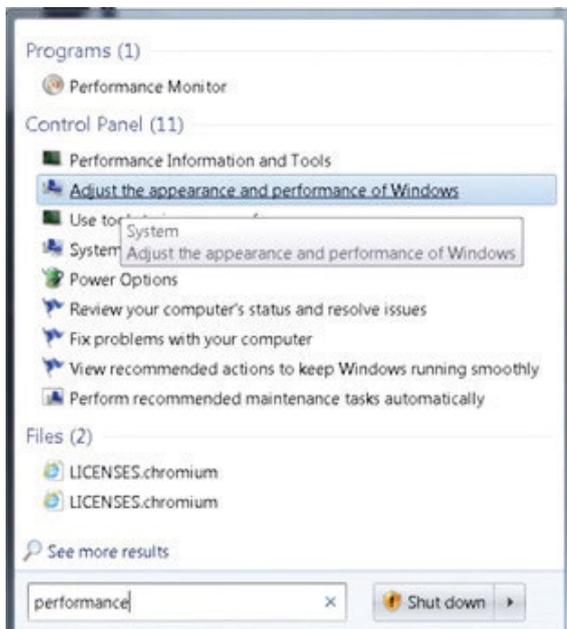


The “Windows Color and Appearance” screen displays. Check “Enable transparency” is selected:



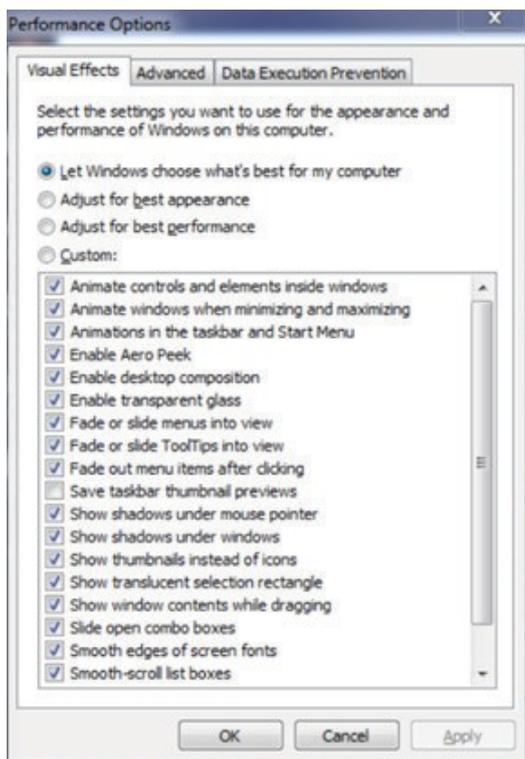
## Step 2: Ensure correct Visual Effects are enabled

Open the “Performance Options” menu by entering “Performance” in the start bar and select “Adjust the appearance and performance of Windows”:



Check the following minimum settings are enabled:

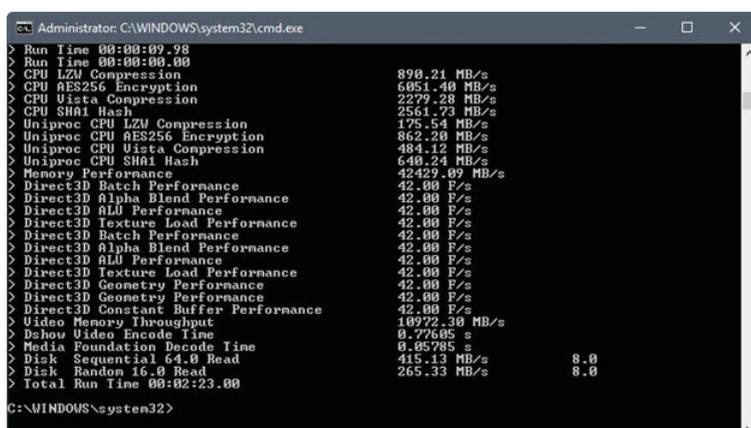
- Enable desktop composition
- Enable transparent glass
- Use visual styles on windows and buttons



### Step 3: Re-calculate the Windows Experience Index

Open a command prompt and right-click to run as administrator (or run as another user with administrator privileges).

In the command prompt enter winsat formal. This will take up to 10 minutes to execute.



Open the Control Panel and select "Performance Information and Tools". Check the Base Score is above 4.0.

The screenshot shows the Windows Performance Information and Tools window. The title bar reads "All Control Panel Items > Performance Information and Tools". The main heading is "Rate and improve your computer's performance". Below this, it states "The Windows Experience Index assesses key system components on a scale of 1.0 to 7.9." A table lists the components and their scores:

Component	What is rated	Subscore	Base score
Processor:	Calculations per second	6.4	4.0 Determined by lowest subscore
Memory (RAM):	Memory operations per second	5.5	
Graphics:	Desktop performance for Windows Aero	4.0	
Gaming graphics:	3D business and gaming graphics performance	5.5	
Primary hard disk:	Disk data transfer rate	5.9	

Below the table, there are links for "What do these numbers mean?", "Tips for improving your computer's performance.", and "View and print detailed performance and system information". At the bottom, it says "Your scores are current" and "Last update: 8/23/2012 8:13:14 AM". There is also a "Re-run the assessment" button.

## Technical Support and Feedback

Email: support@annalise.ai



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OPT-PRM-005