annalise

Annalise Triage

Administration Guide

US

English (US)

Annalise Triage

OPT-PRM-104 v2

This guide is applicable to **Release 3.4** which includes:

- Annalise Viewer version 3.4
- Annalise Backend version 3.4
- Annalise Integration Adapter version 3.4

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MD

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℞ Only

Overview

Introduction

This document provides an overview of the Annalise Triage product, including component requirements, supported capabilities, available customizations and configuration backup and security details.

It also shows you how to install and configure the Annalise Viewer and set up the relevant interfaces between your worklist system and Annalise Triage.

Who

This document is for IT administrators and support staff only. It is not intended to be used by clinical users.

For the clinical use of this product, please refer to the *Annalise Triage User Guide.*

Intended purpose

Annalise Triage is a medical device intended to assist clinicians with the interpretation of radiological imaging studies and provide notification of suspected findings.

Indications for use

Intended context

Annalise Triage is a device designed to be used in the medical care environment to aid in triage and prioritization of studies with features suggestive of the following findings:

Chest X-ray (CXR)	CT brain (CTB)
• pleural effusion[1] • pneumoperitoneum[2] • pneumothorax • tension pneumothorax	• acute subdural/epidural hematoma[3] • acute subarachnoid hemorrhage[3] • intra-axial hemorrhage[3] • intraventricular hemorrhage[3] • mass effect • obstructive hydrocephalus • vasogenic edema

See Additional information on page 7.

The device analyzes studies using an artificial intelligence algorithm to identify findings. It makes study-level output available to an order and imaging management system for worklist prioritization or triage.

The device is not intended to direct attention to specific portions of an image and only provides notification for suspected findings.

Its results are not intended:

- to be used on a standalone basis for clinical decision making
- to rule out specific findings, or otherwise preclude clinical assessment of CXR or CTB studies

Intended modality

Annalise Triage identifies suspected findings in:

Chest X-ray (CXR)	CT brain (CTB)
Digitized (CR) or digital (DX) chest X-ray studies	Non-contrast brain CT studies

Intended user

The device is intended to be used by trained clinicians who, as part of their scope of practice, are qualified to interpret:

Chest X-ray (CXR)	CT brain (CTB)
Chest X-ray studies	Brain CT studies

Intended patient population

The intended population is patients who are 22 years or older.

Additional information

The following additional information relates to the findings listed above:

Finding/s	Additional information
1 Pleural effusion	• specificity may be reduced in the presence of scarring and/or pleural thickening • standalone performance evaluation was performed on a dataset that included supine and erect positioning • use of this device with prone positioning may result in differences in performance
2 Pneumoperitoneum	• standalone performance evaluation was performed on a dataset that included supine and erect positioning where most cases were of unilateral right-sided and bilateral pneumoperitoneum • use of this device with prone positioning and for unilateral left-sided pneumoperitoneum may result in differences in performance
3 Acute subdural/epidural hematoma, acute subarachnoid hemorrhage, intra-axial hemorrhage and intraventricular hemorrhage	• intended to be used together as one device

Indications for use: Bone Health and Fracture Liaison Service programs

Intended context

Annalise Triage is a device designed to be used in the medical care environment to aid in triage and prioritization of studies with features suggestive of the following finding:

Chest X-ray (CXR)
• vertebral compression fracture[1]

See Additional information on page 9

The device analyzes studies using an artificial intelligence algorithm to identify findings. It makes study-level output available to an order and imaging management system for worklist prioritization or triage.

The device is not intended to direct attention to specific portions of an image and only provides notification for suspected findings.

Its results are not intended:

- to be used on a standalone basis for clinical decision making
- to rule out specific findings, or otherwise preclude clinical assessment of CXR studies

Intended modality

Annalise Triage identifies suspected findings in:

Chest X-ray (CXR)
Digitized (CR) or digital (DX) chest X-ray studies

Intended user

The device is intended to be used by trained clinicians who, as part of their scope of practice, are qualified to interpret:

Chest X-ray (CXR)
Chest X-ray studies

Intended patient population

The intended population is patients who are 22 years or older.

Additional information

The following additional information relates to the finding listed above:

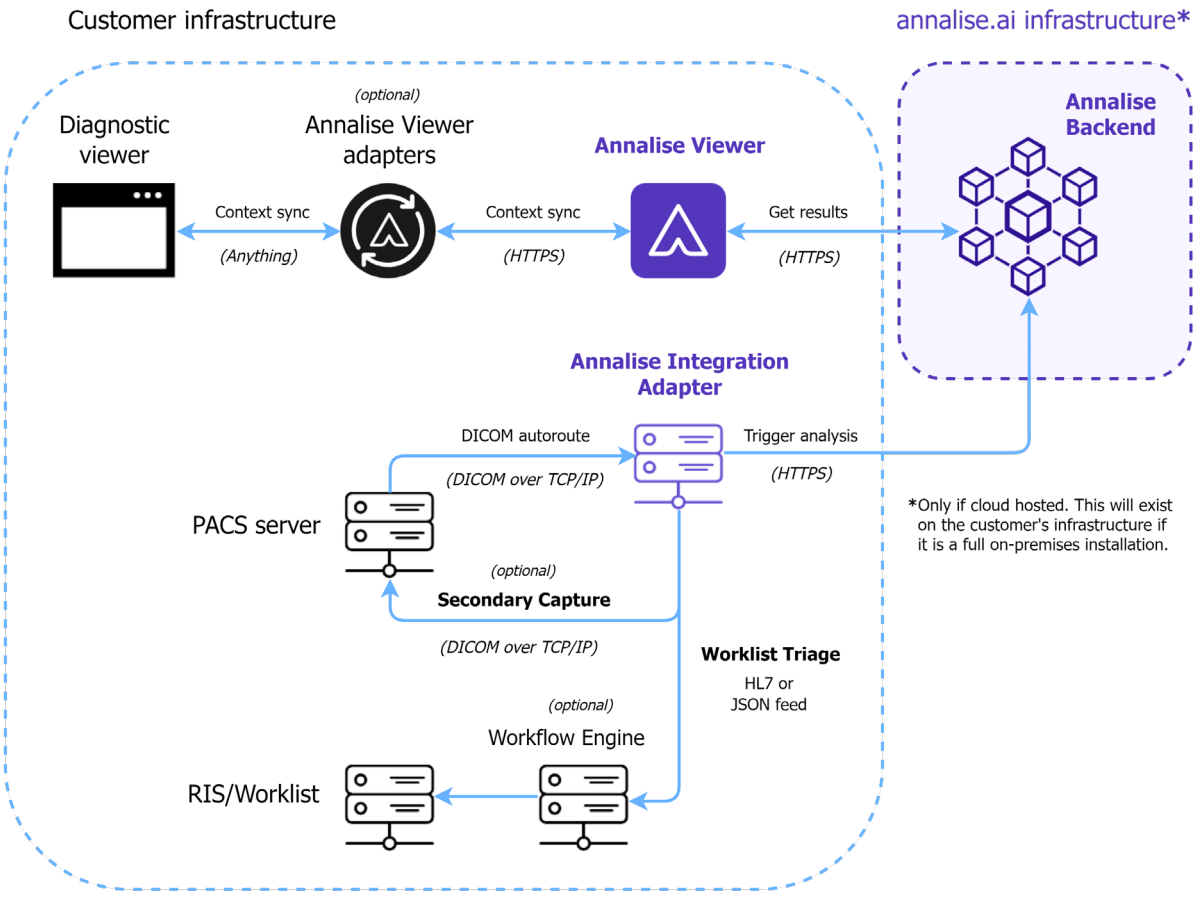
Finding/s	Additional information
1 Vertebral compression fracture	• intended for clinicians in Bone Health and Fracture Liaison service programs • standalone performance evaluation was performed on a dataset that included only erect positioning • use of this device with supine positioning may result in differences in performance

Annalise Triage overview

Annalise Triage

Annalise Triage contains the following three sub-systems:

- Annalise Integration Adapter
- Annalise Backend
- Annalise Viewer



Annalise Integration Adapter

The Annalise Integration Adapter receives images from the PACS server and converts the images and metadata into the appropriate format. It then sends a trigger to the Backend API services to request AI processing.

The Annalise Integration Adapter can be configured to send information to an HL7 server (such as a RIS) to request a change in the study's priority in the worklist.

The Annalise Integration Adapter also:

- provides a stable interface between the PACS and RIS within the customer's network
- encrypts all data moving between the Annalise Integration Adapter and the Annalise Backend
- acts as a buffer with the Annalise Backend in the event of network outages

Annalise Backend

The Annalise Backend filters images, performs AI processing and stores results. It includes both Backend API services and the AI model.

The Backend API is responsible for performing the business logic of Annalise Triage. It manages:

- security for incoming requests from the Annalise Integration Adapter and the Annalise Viewer
- the storage of images and results (including periodic deletion of data as required by the customer)
- requests and responses from the AI Model, Annalise Viewer and Annalise Integration Adapter

The AI model includes AI algorithms (convolutional neural networks) and image pre-processing and post-processing modules. It processes a study's X-ray or CT images and generates suspected radiological findings for that study.

Annalise Viewer

The Annalise Viewer is a desktop application that receives details about a patient's study from the diagnostic viewer then retrieves the study's results from the Annalise Backend.

The Annalise Viewer displays the AI results in its own window, enabling the user to review the study's suspected findings alongside the study's original images.

The Annalise Viewer application is installed on each workstation on the customer's network.

Annalise product compatibility

Annalise Triage Backend Services (version 3.4) is compatible with:

- Annalise Integration Adapter 3.3, 3.4
- Annalise Viewer 3.4

Supported capabilities

The following tables outline the supported DICOM capabilities of Annalise Triage.

These include:

- inputs that can be received by Annalise Triage
- outputs that are available from Annalise Triage

Inputs received by Annalise Triage

Supported inputs	Details
Supported body part imaging	• **CXR**: Chest X-ray • **CTB**: Non-contrast brain CT scan
Supported scan types	**CXR:** • minimum one frontal (AP/PA) required for processing***** • up to three images in total • lateral (LAT) is also supported Note: If a study contains more than three chest X-ray images, the AI model will select a combination of the best three frontal/lateral images. **CTB**: • axial (coronal and sagittal views are generated by the axial view) • slice thickness up to and including 5mm • non-contrast CT brain scans • brain reconstruction kernel (or similar) • up to 1,000 images *****Vertebral compression fracture also requires a lateral view.
Supported DICOM SOP class	**CXR**: • 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 **CTB**: • CT Image Storage – 1.2.840.10008.5.1.4.1.1.2 • Enhanced CT Image Storage – 1.2.840.10008.5.1.4.1.1.2.1 • Legacy Converted Enhanced CT Image Storage – 1.2.840.10008.5.1.4.1.1.2.2

continued

<table>
<tr><th>Supported inputs</th><th>Details</th></tr>
<tr><td>Supported DICOM transfer syntaxes</td><td>The following DICOM transfer syntaxes are supported:
<table>
<tr><th>Image format</th><th>8 bit</th><th>16 bit</th></tr>
<tr><td>JPEG 2000 image (lossy) 1.2.840.10008.1.2.4.91</td><td>CXR</td><td>CXR</td></tr>
<tr><td>JPEG 2000 image (lossless) 1.2.840.10008.1.2.4.90</td><td>CXR</td><td>CXR, CTB</td></tr>
<tr><td>Raw uncompressed image (Implicit VR Endian) 1.2.840.10008.1.2</td><td>CXR</td><td>CXR, CTB</td></tr>
<tr><td>Raw uncompressed image (Explicit VR Little Endian) 1.2.840.10008.1.2.1</td><td>CXR</td><td>CXR, CTB</td></tr>
<tr><td>Raw uncompressed image (Explicit VR Big Endian) 1.2.840.10008.1.2.2</td><td>CXR</td><td>CXR, CTB</td></tr>
<tr><td>JPEG lossless, non-hierarchical (Processes 14) 1.2.840.10008.1.2.4.57</td><td>CXR</td><td>CXR, CTB</td></tr>
<tr><td>JPEG lossless, non-hierarchical, first-order prediction (Processes 14 [Selection Value 1]) 1.2.840.10008.1.2.4.70</td><td>CXR</td><td>CXR, CTB</td></tr>
</table></td></tr>
</table>

Outputs available from Annalise Triage

Supported outputs	Details
Supported modalities	**Annalise Viewer:** • CXR • CTB **Worklist Triage:** • CXR • CTB
Supported output formats	**Annalise Viewer** Desktop application installed on a workstation (used in conjunction with the PACS). **Worklist Triage** Priority message forwarded to reporting worklist software (such as a RIS). Available in the following formats: • JSON • HL7

Available customizations

Annalise Triage supports multiple configurations that enable your organization to tailor the application to your specific needs.

As part of the deployment and on-boarding process, Annalise.ai will manage all product configuration in consultation with your IT/infrastructure team.

The following customizations are available:

Configuration item	Variables/controls
Finding	Enable/disable individual findings.
Finding groups	Configure up to eight finding groups in the device output.
Allocation of findings to groups	Allocate each finding to defined groups. These groups will be visible in the Annalise Viewer or can be configured to display in your worklist software.
Finding order	Select the order in which each finding will appear in the Annalise Viewer. Note: By default, the findings display in order of clinical severity (as determined by Annalise.ai expert radiologists), but this order can be configured to meet your requirements.
Available languages	The viewer supports multiple languages. Note: Additional languages are available on request.
Analytics	Annalise Viewer sends tracking data to our privately hosted server to improve your experience. This feature is optional.
Data retention period	Enable/disable the period for which you want data to be stored in the Annalise Backend.
Worklist Triage	The Worklist Triage feature can be integrated via HL7 or an API. Depending on the columns available in the worklist, a study's AI priority in the worklist can be displayed in either: • **a single 'Priority' column** Annalise Triage will only triage findings with the highest rank. This ensures that it will never decrease a study's existing priority in the worklist. • **a dedicated 'AI priority' column** Annalise Triage can triage findings with all ranks in the dedicated AI priority column. This ensures that any existing priorities are not changed. The triage priority levels can be configured to suit the worklist configuration.

continued

Configuration item	Variables/controls
Workflow Engine	If implemented into your infrastructure, a message containing both the results and associated priority information will be sent from the Annalise Integration Adapter to the Workflow Engine once the study has been analyzed. The priority message may then be forwarded to reporting worklist software (such as a RIS) in the appropriate format.

For further information or configuration requests, contact the Annalise.ai Professional Services Team.

Configuration backup/restoration of the device

Your IT/infrastructure team will be expected to make regular VM (virtual machine) snapshots to back up the product.

Note: Annalise.ai is not responsible for performing or testing backups, nor do they support any other backup mechanism.

Security and confidentiality

Annalise Triage includes security features which protect against unauthorized access and data modification.

These features ensure the secure authentication and encryption of sensitive data when transmitted between:

- the Annalise Integration Adapter and the Annalise Backend
- the Annalise Viewer and the Annalise Backend
- the diagnostic viewer and the Annalise Viewer (available only when using the HTTPS interface)

It also includes the encryption of sensitive data stored in the Annalise Backend.

Multi-tenant backend design

The Annalise device uses a multi-tenant backend design which separates data from different organizations via different organizational accounts.

Users must therefore have the appropriate credentials to access an organization's internal data.

continued

Recommendations

Annalise.ai recommends the following:

1. Always use the latest version of the Annalise Triage product (see *https://annalise.ai/guides/*.)
2. Implement internal monitoring of Annalise products to check for potential security incidents and network unavailability.
3. Immediately report any suspected security incidents to the Annalise.ai Professional Services Team.
4. Do not use any Windows Operating Systems (OS) that are no longer supported by Microsoft or can pose cybersecurity threats. For best protection, ensure all the latest security patches are applied to your Windows OS.

Contact the Annalise.ai Professional Services Team if you require further assistance. See *Support and feedback* on page 36.

Annalise Integration Adapter Requirements

Overview

This section outlines the requirements for the installation of the Annalise Integration Adapter.

For further information, see *Annalise Integration Adapter* on page 11.

System requirements

The following components are required to host the Annalise Integration Adapter on your network:

Component	Requirements	
Operating system	Linux (Ubuntu 20.04 LTS) VM image – provided as VMware EXSi or Azure image by Annalise.ai as part of the installation process.	
Hardware *CXR studies only*		**Recommended**
	CPU cores	8 at ~2.2 GHz
	RAM	24 GB
	Storage	SSD for optimal performance: • Disk 1: 100 GB • Disk 2: 100 GB minimum*
CXR and CTB studies		**Recommended**
	CPU cores	16 at ~2.2 GHz Supports AVX, FMA and SSE4.2 instruction sets
	RAM	32 GB
	Storage	SSD for optimal performance: • Disk 1: 100 GB • Disk 2: 100-900 GB minimum*
Internet connection		**Recommended**
	CXR	6 Mbps uplink (cloud-deployed) *Typically supports 3 CXR studies per minute*
	CTB	25 Mbps uplink (cloud-deployed) *Typically supports 3 CTB studies per minute*
Annalise Backend hosted in the cloud	Requires an outbound internet connection via port 443.	

*Storage requirements depend on the number of studies sent per hour. Contact the Annalise.ai Professional Services Team if you require amendments to your storage specifications.

Annalise Backend Requirements

Overview

The Annalise Backend is hosted on either:

- your network ('on-premises' installation), or
- Annalise.ai's cloud infrastructure.

If you want the Annalise Backend hosted on your network, refer to the system requirements below.

System requirements (on-premises)

The following components are required to host the Annalise Backend on your network ('on-premises').

Component		Requirements
Operating system		Linux (Ubuntu 20.04 LTS) VM image – provided as VMware EXSi image by Annalise.ai as part of the installation process.
Hardware *CXR studies only*		**Recommended**
	CPU cores	16 at ~2.2 GHz Supports AVX, FMA and SSE4.2 instruction sets Supports (at minimum): • 225 CXR studies per hour
	RAM	32 GB
	Storage*	SSD for optimal performance: • Disk 1: 100 GB • Disk 2: 100 GB (plus additional 16GB per 1000 CXR studies)
CXR and CTB studies		**Recommended**
	CPU cores	32 at ~2.2 GHz Supports AVX, FMA and SSE4.2 instruction sets Supports a typical load of: • 225 CXR studies per hour • 52 CTB studies per hour
	RAM	64 GB
	Storage*	SSD for optimal performance: • Disk 1: 100 GB • Disk 2: 130+ GB data drive, plus additional: - 16 GB per 1000 CXR studies - 100 GB per 1000 CTB studies

continued

Component	Requirements	
Hardware *(cont.)* *CXR and CTB studies*		**Minimum**
	CPU cores	16 at ~2.2 GHz Supports AVX, FMA and SSE4.2 instruction sets Supports (at minimum): • 27 CXR studies per hour • 12 CTB studies per hour
	RAM	64 GB
	Storage*	SSD for optimal performance: • Disk 1: 100 GB OS drive • Disk 2: 130+ GB data drive, plus additional: - 16 GB per 1000 CXR studies - 100 GB per 1000 CTB studies

*These numbers are a guide only. The true figures will depend on the series type, the transfer syntax (uncompressed or compressed) and the number of series processed that meet the scan criteria (see *Supported scan types* on page 12.

System configuration (cloud)

The Annalise Backend can be hosted on Annalise.ai's cloud infrastructure.

To use this infrastructure, you will need to provide the outbound internet IP ranges for each workstation that uses the Annalise Viewer.

The Annalise.ai Professional Services Team will add these details to the Annalise Backend IP allow-list.

Annalise Viewer Requirements

Overview

This section outlines the requirements for the installation of the Annalise Viewer.

For further information, see *Annalise Viewer* on page 11.

System requirements

The following components are required to install the Annalise Viewer:

Component	Requirements
Workstation	The following must be installed and run on your workstation: • 1 GB RAM • 500 MB storage
Operating systems	The following operating systems are supported: • Windows 10 (64-bit) • Windows 11 (64-bit)
Other	Check the following: • ensure that port 8989 is not in use on the workstation • if the Annalise Backend is hosted in the cloud, allow outbound HTTPS connection on port 443 to *.annaliseai.io • ensure that the workstation CPU supports the SSE3 instruction set • a PDF reader is required to view the supporting documentation (including the *User Guide*)

Installation and configuration

The Annalise.ai Professional Services Team will work with your IT/infrastructure team to help you install the Annalise Viewer on your required workstations.

Troubleshooting

See *Installation and configuration troubleshooting* on page 32.

Install and configure Annalise Viewer

Overview

This section shows you how to install and configure the Annalise Viewer.

You will need to complete the following on each workstation:

- install the Annalise Viewer
- install a PDF reader
- enable Single Sign-On (SSO) via Azure Active Directory
- configure and test your organization's credentials

Install Annalise Viewer

Follow these steps to install the Annalise Viewer on each relevant workstation.

You can install the Annalise Viewer via either:

- the user interface, or
- Windows command line or deployment tool.

Before installing, check that you are using the installation file provided by Annalise.ai.

Install via user interface

Follow these steps to install the Annalise Viewer via the user interface.

Note: Annalise.ai will provide the installer file.

1. Double-click the installer file and either:
   - select the installation path required for the PACS/RIS integration, or
   - use the default path C:\Program Files\Annalise.

   See *Configure diagnostic viewer interface with Annalise Viewer* on page 26.
2. Click **Next** to progress through the installation options until the *Installation Complete* window displays.
3. Determine whether the organization requires SSO.

If SSO is required	• go to step 4
If SSO is **not** required	• on the *Installation Complete* window, click **Close** • go to step 5

continued

4. On the *Installation Complete* window, click to select **Use SSO login** then enter the following details:

Field	Requirements
Annalise Server URL	The server URL to which the Viewer will connect. This will be provided by Annalise.ai.
App ID	The Application ID created by Azure Active Directory. See *Configure SSO via Azure Active Directory* on page 30.
Tenant ID	The Tenant ID created by Azure Active Directory. See *Configure SSO via Azure Active Directory* on page 30.
OpenId URL	The Open ID URL for your Azure Active Directory (normally *https://login.microsoftonline.com).* Note: There are no trailing slashes after this URL.

5. Once you have finished the installation, check that the Annalise Viewer opens from the shortcut.

   Note: If you have any issues, contact the Annalise.ai Professional Services Team.

Install via Windows command line or deployment tool

Follow these steps to install the Annalise Viewer using the Windows command line or a deployment tool.

1. Change the directory to the folder that contains the installer.
2. Check that the filename matches the version provided by Annalise.ai.
3. Type the following command then replace the angle brackets (<>) and their contents with the credentials provided by Annalise.ai:

   "<Annalise filename 3.x.y.z.exe>" /S /allusers

   Note: The installer version number changes each version.

4. Once you have finished the installation, check that the Annalise Viewer opens from the shortcut.

   Note: If you have any issues, contact the Annalise.ai Professional Services Team.

continued

5. Determine whether the organization requires SSO.

If SSO is required	• go to step 6
If SSO is **not** required	• on the *Installation Complete* window, click **Close** • go to step 8

6. Run SetupSSO.ps1 (provided by Annalise) via Powershell using the following command:

```
./SetupSSO.ps1 -AppId "<appId>" -TenantId "<tenantId>" -
AnnaliseApiUrl "<annaliseApiUrl>" -OpenIdUrl "<openIdUrl>
```

Note: If Powershell is not available, move a .JSON file containing these parameters into *C:|ProgramData|Annalise*. Please contact Annalise.ai to request a pre-made JSON file.

7. Once installation is complete, click to select **Use SSO login** on the *Installation Complete* window then enter the following details:

Field	Requirements
Annalise API URL	The server URL to which the Viewer will connect. This will be provided by Annalise.ai.
App ID	The Application ID created by Azure Active Directory. See *Configure SSO via Azure Active Directory* on page 30.
Tenant ID	The Tenant ID created by Azure Active Directory. See *Configure SSO via Azure Active Directory* on page 30.
OpenId URL	The Open ID URL for your SSO service (normally *https://login.microsoftonline.com).* Note: There are no trailing slashes after this URL.

8. Once you have finished the installation, check that the Annalise Viewer opens from the shortcut.

Note: If you have any issues, contact the Annalise.ai Professional Services Team.

Install PDF reader

To enable users to view supporting documentation (including the *User Guide)*:

- install a PDF reader on each relevant workstation
- ensure that the PDF reader is configured as the default application for files with a '.pdf' extension

Log in via Windows Credentials Manager: Configure and test organization credentials

To ensure system security, Annalise Triage uses organization-level credentials to authenticate both the Annalise Viewer and Annalise Backend.

This applies to log in via Windows Credential Manager only.

The Annalise.ai Professional Services Team will provide both the credentials and the Annalise Backend Server URL during product installation and configuration.

You can either:

- enter these details manually in the application, or
- add this information remotely via a distribution tool.

Note: Ensure that you store the organization ID and password securely.

Manual configuration

If the Annalise Viewer has not been configured for the user, the *Server Settings* screen will display automatically, prompting you to enter the relevant details.

1. On the *Server Settings* page, type the following:
   - **Organization ID**
   - **Organization Password**
   - **Annalise Server URL**
2. Click **Test** to check the settings.

If '*Connected'* displays	The application is ready for testing.
If an error message displays	Check that: • you have entered the correct **Organization ID**, **Organization Password** and **Annalise Server URL** • the computer can access the URL: - check that the computer has network connectivity - check whether firewall permissions allow access Note: If you have any issues, contact the Annalise.ai Professional Services Team.

3. Once you have connected successfully, click **Save**.

Remote configuration

If you are using Annalise Triage, you can configure the organization credentials and Annalise Backend Server URL remotely.

1. Use the following distribution tool.

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

   Note: You will need to run this for each user account.

```
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%2
2<client_ secret>%22%7D"
```

2. After installing, check that the Annalise Viewer opens from the shortcut.

   Note: If you have any issues, contact the Annalise.ai Professional Services Team.

Configure diagnostic viewer

Overview

This section explains how to:

- configure the interface between:
  - your diagnostic viewer and the Annalise Viewer
  - your diagnostic viewer and the Annalise Integration Adapter, and
- integrate the Annalise Viewer with the Sectra Workstation IDS7.

The Annalise.ai Professional Services Team will give you the information required to liaise with your diagnostic viewer vendor to integrate these components.

Note: Annalise Triage is compatible with any diagnostic viewer that conforms with the *Annalise Triage HL7 and DICOM Specification*. Contact the Annalise.ai Professional Services Team if you require a copy of this document.

Configure diagnostic viewer interface with Annalise Viewer

As the Annalise Viewer is intended to be used in conjunction with a diagnostic viewer, an interface must be established between the Annalise Viewer and your diagnostic viewer.

Depending on the functionality supported by your diagnostic viewer, the Annalise Viewer can be configured to:

- automatically launch via the diagnostic viewer
- automatically display AI findings after loading a study in the diagnostic viewer
- display AI findings for a study requested by the diagnostic viewer (i.e. display a manual synchronize button in the diagnostic viewer)
- stop showing AI findings after closing a study in the diagnostic viewer
- quit when requested by the diagnostic viewer

The Annalise Viewer supports requests via an HTTPS API (POST or GET) or via a command line interface.

Many diagnostic viewers support integration with third-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 diagnostic viewer interface with Annalise Integration Adapter

The following details must be set up for the Annalise Integration Adapter to interface with your diagnostic viewer:

- an Application Entity (AE), and
- auto-routing rules.

Set up an Application Entity (AE)

Contact your diagnostic viewer vendor (and/or refer to your diagnostic viewer reference guide) to set up the Annalise Integration Adapter as an AE in your diagnostic viewer.

1. Set up the Annalise Integration Adapter AE with the following:
   - the IP address or host name of the Annalise Integration Adapter for your infrastructure
   - a port where the Annalise Integration Adapter listens for DICOM messages

     The default port is '11112'
   - the AE title of the Annalise Integration Adapter

     The default title is 'ANNALISE-AI'
2. Perform a C-ECHO (ping) to the configured Annalise AE title to confirm that the connectivity test has been successful.

Set up auto-routing rules

Refer to your diagnostic viewer reference guide to set up auto-routing rules to the Annalise Integration Adapter.

Apply your own conventions to these rules. Any rules provided in this document are to be used as a guide only.

1. Configure the rules to forward all studies from the relevant locations to the configured Annalise AE.

   Use the following DICOM tags:
   - Modality (0008,0060)
   - StudyDescription (0008,1030)
   - BodyPart (0018,0015)

continued

For example:

CXR:

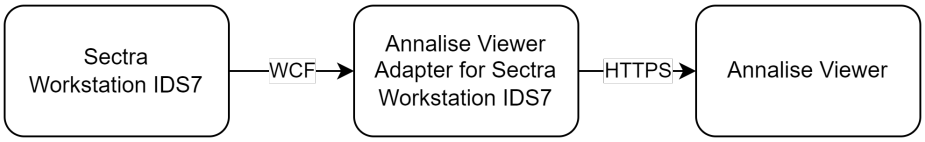
- Modality = 'CR' AND StudyDescription contains 'CHEST'
- Modality = 'DX' AND StudyDescription contains 'CHEST'
- Modality = 'CR' AND BodyPart contains 'CHEST'
- Modality = 'DX' AND BodyPart contains 'CHEST'

CTB:

- Modality = 'CT' AND Study Description contains 'STROKE'
- Modality = 'CT' AND Study Description contains 'BRAIN'
- Modality = 'CT' AND Study Description contains 'HEAD'
- Modality = 'CT' AND Body Part Examined contains 'STROKE'
- Modality = 'CT' AND Body Part Examined contains 'BRAIN'
- Modality = 'CT' AND Body Part Examined contains 'HEAD'

Integrate Annalise Viewer with Sectra Workstation IDS7

The Annalise Viewer Adapter for Sectra Workstation IDS7 (the 'Adapter') is a background application which provides an interface between the Sectra Context Manager and the Annalise Viewer's Open API interface.



To integrate the Annalise Viewer with the Sectra Workstation IDS7, you will need to:

- install the Adapter on each workstation, and
- configure the Sectra IDS7 third-party interface.

continued

Install Adapter

The Annalise.ai Professional Services Team will provide you with the Adapter via a Windows installer. This enables you to perform the installation via a graphical user interface (GUI) or a Windows command line interface (CLI).

Once you have completed the installation, the Adapter will automatically launch each time the user logs on to the workstation.

1. Install the Adapter on each workstation (either per user or system-wide).

   For a silent install, use the following list of CLI commands:

Operation	CLI command
System-wide command	msiexec.exe /i AnnaliseViewerSectraAdapterInstaller.msi WixAppFolder="W ixPerMachineFolder" ALLUSERS=1 /qn
User-level install	msiexec.exe /i AnnaliseViewerSectraAdapterInstaller.msi WixAppFolder="WixPerUserFolder" INSTALLFOLDER="%LocalAppData%\ Apps\Annalise\Sectra Adapter" /qn
Uninstall	msiexec.exe /x AnnaliseViewerSectraAdapterInstaller.msi /q

Configure Sectra Workstation IDS7

To configure the Sectra Workstation IDS7 for use with the Annalise Triage product, contact your Sectra support team.

Use the following configuration:

Operation	CLI command
Desktop sync	"Desktop sync enabled" = True "Single log on enabled" = True
External application startup	"Close external application" = Do not close "Close workstation" = Do not close "Multiply instance" = Use already running instance "Startup File" = Path for Annalise Viewer installation (i.e. Annalise.exe)
Third party application commands	Configure Sectra ID7 to use the command line interface (as defined in the Annalise Viewer Open API specification) to support the commands listed below: • when starting: Implement STUDY_OPEN request parameters • when changing patient: leave empty • when the user logs off: leave empty

Configure SSO via Azure Active Directory

Overview

This section shows you how to configure Azure Active Directory settings to enable single sign-on (SSO) for the Annalise Viewer.

This includes:

- create a new app registration
- configure API permissions
- enable automatic log in to the Annalise Viewer

Create new app registration

Create a new app registration for Annalise Enterprise. This will enable you to allocate users or groups specifically for the Annalise Enterprise application.

Follow these steps to create a new registration.

1. Log into your Azure portal and go to **New registration**.
2. Type a name for the registration (for example, 'Annalise Enterprise').
3. Go to the **Redirect URI** field.

   Select 'Public client/native (mobile & desktop)' then add the following callback URL: *https://localhost:8989/auth/oauth/callback.*
4. Ensure that you provide the generated application and directory (tenant) ID during installation of the Annalise Viewer.

   See *Install and configure Annalise Viewer* on page 21.

Configure API permissions

Follow these steps to configure the API permissions.

1. In Azure Active Directory, go to the *API Permissions* page.
2. Check that the API permissions are set to 'User.Read'.

continued

Enable automatic log in to the Annalise Viewer

You can update conditional access settings to enable automatic log in to the Annalise Viewer.

The automatic login period depends on the session expiry time that you set in Azure Active Directory.

Follow these steps to enable automatic log in to the Annalise Viewer.

1. In Azure Active Directory, go to the *Security* page then navigate to the *Conditional Access Policies* section.
2. Under the *Session* options:
   - click to select **Persistent browser session**
   - in the **Persistent browser session** dropdown, select 'Always persistent'
3. Set the persistent session length to 'Always persistent'.
4. Save your changes.

Installation and configuration troubleshooting

Problems and solutions

If you have issues with the setup, installation or configuration of the Annalise Triage application, refer to the following tables.

If you are unable to resolve the issue, contact the Annalise.ai Professional Services Team.

Troubleshooting: Error codes

The following table lists the error codes that may display and outlines the actions required to resolve these errors.

Code and description	Possible resolution
001 **002** Authentication error: *'Cannot authenticate user'*	Check the Organization ID and Password. If the problem persists, contact the Annalise.ai Professional Support Team.
004 Connection error: '*Cannot reach Annalise.ai servers'*	Check internet/network connectivity. If there is a connection but the problem persists, contact the Annalise.ai Professional Support Team.
003 **009** **010** **011** **012** **014** **021** **022** **023** Annalise service error	If the problem persists, contact the Annalise.ai Professional Support Team.
015 **026** Error communicating with the diagnostic viewer	Follow these steps: 1. Restart both the diagnostic viewer and the Annalise Viewer. 2. Confirm that the configuration of the communication interface within the diagnostic viewer is correct. 3. Contact your diagnostic viewer provider for support.
016 **099** Annalise Viewer local server error	Restart the Annalise Viewer. If the problem persists, contact the Annalise.ai Professional Support Team.
027 Annalise Viewer port is unavailable: '*Port 8989 already in use'*	Port 8989 is currently being used by another application. Ensure that the port is available for the Annalise Viewer.

continued

Troubleshooting: Viewing AI findings

The following table lists potential issues related to viewing the AI findings and the actions required to resolve them.

Symptom	Root cause	Steps to resolve
The following message displays when synchronizing: '*No results available*'	The study has not been routed to the Annalise Integration Adapter.	1. Go to your diagnostic viewer administration page. 2. Check that the auto routing criteria has been met for the relevant study. 3. Check that the image has been sent to the Annalise Integration Adapter through your diagnostic viewer 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 the '*No results available*' message still displays, check that there is connectivity between the Annalise Integration Adapter and the Annalise Backend.
Patient details are missing or a hyphen ('-') displays in place of the details. (Includes patient name, gender, age and date of birth).	The Annalise Viewer receives patient details from the diagnostic viewer. If the interface is not configured to send all patient details to the Annalise Viewer (and the information is not available in the Annalise Backend) a hyphen ('-') displays in place of the details.	Ensure that the diagnostic viewer integration has been configured and enabled according to the vendor's instructions. Note: Some diagnostic viewers do not display all patient details on the interface.

Troubleshooting: Diagnostic viewer integration

The following table lists potential issues related to the diagnostic-viewer integration and the actions required to resolve them.

Symptom	Root cause	Steps to resolve
Can't see the **Annalise** button or Annalise features in the diagnostic viewer	The Annalise feature is not enabled for the user currently logged into the diagnostic viewer.	Contact the diagnostic viewer Admin and request that Annalise be enabled for the user.
Annalise Viewer does not automatically launch when the diagnostic viewer launches	The Annalise Viewer has not been installed on the path required by the diagnostic viewer configuration.	Ensure that the install location matches the location configured in the diagnostic viewer. Annalise.ai recommends: *C:/Program Files/Annalise/Annalise.exe*
Annalise Viewer does not respond when the user clicks the **Annalise** button in the diagnostic viewer	The Annalise configuration in the diagnostic viewer is incorrect.	Ensure that the diagnostic viewer integration has been configured and enabled according to the vendor's instructions. For further help, contact the Annalise.ai Professional Services Team.
	This feature may not be supported by the diagnostic viewer.	Ensure that the diagnostic viewer is configured as per the vendor's instructions.
AI findings still display after a study has been closed in the diagnostic viewer.	The Annalise configuration within the diagnostic viewer is incorrect.	Ensure that the diagnostic viewer integration has been configured and enabled according to the vendor's instructions. For further help, contact the Annalise.ai Professional Services Team.
AI findings still display after the diagnostic viewer has been closed or locked	This feature may not be supported by the diagnostic viewer.	Ensure that the diagnostic viewer is configured as per the vendor's instructions. The Annalise Viewer includes a timeout function which stops showing AI findings after a period of inactivity.
AI findings change unexpectedly	Diagnostic viewer shortcut key is mapped incorrectly.	Ensure that any shortcut keys are configured correctly and not shared across multiple applications.
AI findings cease to display	Viewing multiple studies in different windows.	When moving between studies in multiple windows, the diagnostic viewer may send a request to the Annalise Viewer to display the current in-focus window.
	Annalise Viewer timeout is too short.	Increase the timeout period in the Annalise Viewer.

Troubleshooting: Miscellaneous

The following table lists other potential miscellaneous issues and the actions required to resolve them.

Symptom	Root cause	Steps to resolve
When the Annalise Viewer launches, the following message displays: *'Missing Credentials'*	The **Organization ID**, **Organization Password** and **Annalise Server URL** have not been configured for the user.	See *Log in via Windows Credentials Manager: Configure and test organization credentials* on page 24.
When the user tests the server settings, the following message displays: *'Error – failed to reach server'*	Incorrect server URL.	Check that you have used the URL provided by the Annalise.ai Professional Services Team during the deployment and configuration process.
	Unable to access network.	Check that the computer is connected to the network and has permissions to access the server URL.
	Maintenance in progress.	The application is currently undergoing maintenance. Once maintenance is complete, you will be able to use the application as normal.
When the user tests the server settings, the following message displays: '*Error – invalid credentials'*	The **Organization ID** or **Organization Password** is incorrect.	Ensure that the **Organization ID** and **Organization Password** match those provided by the Annalise.ai Professional Services Team during the deployment and configuration process.
When the user attempts to open the *User Guide*, the following message displays: *'Guides are available at Annalise.ai/Guides'*	The Annalise Viewer is unable to reach the Annalise Backend.	1. Ensure that the computer is connected to the network. 2. Open the *Settings* page then click **Server Settings**. 3. Click **Test** to check whether the application can reach the Annalise Backend. If the application is connected to the Backend, an error may be present in the Backend. If so, contact the Annalise.ai Professional Services Team.

Support and feedback

Refer to the following table for support and feedback details:

Support type	Details
Professional services, technical support, product feedback and complaints	Email *support@annalise.ai* Any serious incidents related to Annalise Triage should be reported to Annalise.ai and the competent authority or regulatory authority in which the user and/or patient is established.
Product user, performance and administration guides	Check our website: *annalise.ai/guides*

Symbol glossary

Definitions of symbols that may appear on the Annalise device or in the related documentation are listed below.

Symbol	Information
	Manufacturer
	Prescription only
	Indicates a warning or caution
	Read the instructions for use
	Medical device

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