CathexisVision 2020.1 Quick Start Guide

Contents

Introduction

This quick guide provides basic instructions and information to setup **CathexisVision**.[1] The objective of this document is to get the software up and running as quickly as possible. For more detailed information (such as configuring video analytics, Failover, etc), please consult the Setup Manual or contact support at support@cat.co.za.

Please note that in order to use this document and software, the assumption is that the installer has a basic understanding of the operating system, and is able to do simple administrative tasks (for example, adding disks, adding printers, or setting IP addresses).

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[1] While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit, nor implied. Specifications are subject to change without notice.

1 Requirements/Restrictions

Please download **CathexisVision** Software (www.cathexisvideo.com) to continue with this document.
 Note: there is a **minimum requirement of 4 Gigabytes of RAM** to run this software.

1.1. Supported Systems

Listed below are the supported/not supported operating systems. Supported systems apply to all contents of CathexisVision software install, including:

1. CathexisVision software.
2. Map Editor.
3. Archive Viewer.

1.1.1 *Not Supported*

The following systems are **not supported**:

- Windows XP and earlier.
- Windows Vista.
- Windows Server 2008.
- Linux Fedora 16 (only supported in CathexisVision 2018 and later).
- NetBSD.

1.1.2 *Supported Linux Systems*

- Ubuntu 12.04 LTS Desktop (32-bit).
- Ubuntu 16.04 LTS Desktop (64-bit).

1.1.3 *Supported Windows Systems*

- Microsoft® Windows® 7 SP1.
- Microsoft® Windows® 8 .
- Microsoft® Windows® 8.1.
- Microsoft® Windows® 10 .
- Microsoft® Windows® Server 2008 R2 SP1.
- Microsoft® Windows® Server 2012.
- Microsoft® Windows® Server 2012 R2.
- Microsoft® Windows® Server 2016.

Note: CathexisVision 2020 is the last release to support Windows 32-bit installs.

1.2. Windows Update Requirements

The Universal C Runtime Update is required for certain systems. From CathexisVision 2017 onwards, updated Windows runtime libraries are used. This means that the Windows 10 Universal C Runtime update must be run on systems prior to Windows 10 (see list below).

Note: From CathexisVision 2018.3 onwards, Windows Vista and Windows Server 2008 are no longer supported, thus the update no longer applies to those systems. Windows Server 2008 R2 is still supported.

This update requirement applies to:
- Windows Server 2012 R2.
- Windows 8.1.
- Windows RT 8.1.
- Windows Server 2012.
- Windows 8.
- Windows RT.
- Windows Server 2008 R2 Service Pack 1 (SP1).
- Windows 7 SP1.

Windows XP and earlier is not supported.

Windows updates can be run, or the specific update KB2999226 may be run. The Windows 10 Universal C Runtime update can be downloaded from: https://support.microsoft.com/en-us/kb/2999226.

Running the KB2999226 update has prerequisites, and the following software may need to be installed:
- Windows 7 Service Pack 1 (download from http://windows.microsoft.com/installwindows7sp1).
- Windows Server 2008 Service Pack 2 (download from https://support.microsoft.com/en-us/kb/968849).
- Windows Server 2008 R2 Service Pack 1 (download fromhttp://go.microsoft.com/fwlink/?LinkID=199583).
- Windows RT 8.1, Windows 8.1, and Windows Server 2012 R2 update
  - KB2919442 (download from https://support.microsoft.com/en-us/kb/2919442).
  - then KB2919355 (download from https://support.microsoft.com/en-us/kb/291935).

1.3.   Hardware Requirements

The **CathexisVision** software architecture is designed to utilise the various hardware system components with maximum efficiency. When choosing the right server hardware, there are many system issues to be taken into consideration. Some examples are:
- Camera resolution.
- Camera bitrates for recording.
- Camera Frame rates and resolution for "live" viewing.
- Whether using the IP camera or the Cathexis software to perform Video analytics.
- Whether viewing cameras "live" from the same server on which the user is recording.
- Whether "multicast" video is being streamed from the camera.
- Storage methodology (on-board, Network Storage etc.)

1.3.1 *Hardware Selection Guidelines*

The table below provides guidelines to assist in choosing hardware for the application. The figures in the table were generated using the CathexisVision Design Tool www.cathexisvision.com

Note that the following parameters were used to determine these guidelines:
1. These are conservative figures for recording servers only.
2. Live viewing is not included in these numbers.
3. 3MP cameras with a 3MP/24fps recording stream.
4. CIF/12fps analytics stream running Smart VMD.
5. External storage on a 1/10 Gbps network.

 Note: These guidelines are not exhaustive. For assistance with design, contact a distributor or a **Cathexis** regional office. Alternatively, navigate to cathexisvideo.com and use the Design Tool.

Processor	RAM (GB)	Server Storage throughput Mbps	No. of 3MP cameras per server
i7-7700k 4.20GHz	16	600	152
Xeon E3-1290 V2 3.70GHz	16	500	122
Xeon E5-1680 V4 3.40GHz	32	700	187
Xeon E5-2640 V2 2.40GHz	32	650	164
Xeon E5-2695 V3 2.30GHz	32	900	223
Xeon E5-2699 V3 2.30GHZ	32	1000	253

1.4. Anti-Virus Exclusions

If running an anti-virus with active or real-time protection scanning enabled, certain CathexisVision folders need to be excluded from anti-virus scanning in order for CathexisVision to run correctly.

The folders which need to be excluded are:

- CathexisVision **Server** installation folder.
- CathexisVision **Client** installation folder.
- Any folders, drivers, and volumes where the **database**/s reside.

Note: All folders and paths referred to below are default installation folders – if the default folder option was not selected during installation, then locate and exclude installation folder/s from anti-virus scanning.

The sections below indicate the default installation folders and paths, which need to be excluded from scanning.

1.4.1 *Folders to Exclude from Anti-Virus scanning in CathexisVision*

For sites running CathexisVision 2016 and/or 2017, please exclude the following from anti-virus scanning:

	Folders to Exclude	
CathexisVision Server	32-bit	c:\program files (x86)\CathexisVision Server.
	64-bit	c:\program files\CathexisVision Server.
CathexisVision Client	32-bit	c:\program files\CathexisVision Client.
Database folders/drives/volumes	Please locate and exclude.	

1.4.2 *Complete List of Folders to Exclude*

If the system uses a **global anti-virus** (meaning anti-virus protection is applied globally and not to individual units) and the different units in the site may have different installation folders, or if the **installation is prior to CathexisVision 2015**, then simply exclude **all** the default installation folders to avoid hassle.

Note: All folders and paths referred to below are default installation folders – if the default folder option was not selected during installation, then locate and exclude installation folder/s from anti-virus scanning.

	Folders to Exclude
CathexisVision Server	c:\program files\Cathexis CathexisVision Suite NVR.
	c:\program files (x86)\Cathexis CathexisVision Suite NVR.
	c:\program files\CathexisVision Server.
	c:\program files (x86)\CathexisVision Server.
CathexisVision Client	c:\dvs.
	c:\program files\Cathexis CathexisVision Suite WRV.
	c:\program files (x86)\Cathexis CathexisVision Suite WRV.
	c:\program files\CathexisVision Client.
	c:\program files (x86)\CathexisVision Client.
Database folders/drives/volumes	Please locate and exclude.

1.4.3 *Third-Party Anti-Virus Real Time Scanning on CathexisVision Clients*

On a CathexisVision Client unit, the CathexisVision Server folder needs to be manually excluded from scanning by Windows Defender or other third-party anti-virus real time scanning components.

1.5. Routing/Port Requirements

The following information regards the router ports that need to be opened on the network firewall/router/anti-virus. These ports are important in allowing several **Cathexis** services to run correctly. Please ensure that these ports are also open on the anti-virus (if running one).

1.5.1 *Ports to Open*

Operational Ports	Protocol	Application	Description
80	TCP	Default CatMobile Access	Port required to allow CatMobile client connection to server.

30010-30100	TCP	CathexisVision Software	Required ports for access to the CathexisVision software and associated configuration, live and recorded view, etc.
30014	TCP	API (CathexisVision 2016 and previous versions)*	Required port to allow API connection to server when using software CathexisVision 2016 and previous versions. **Note:** Video also needs to be streamed from the server using TCP port 30010.
33104	TCP	API (CathexisVision 2017 and later versions)*	Required port to allow API connection to server, when using software versions CathexisVision 2017 and later. **Note:** Video also needs to be streamed from the server using RTSP on TCP port 554.
* For the full list of API ports, please consult the API help guide or contact support@cat.co.za			

Maintenance Ports	Protocol	Application	Description
22	TCP	Secure Shell (SSH) - Linux	Port required to enable remote access to Linux server using Secure Shell network protocol.
3389	TCP	Remote Desktop – Windows	Port required to enable remote access to Windows server using Remote Desktop application.
NA	NA	TeamViewer Access	Application for allowing remote access to a Windows server. No port required.

1.5.2 *Remote Support*

Please download and install one of the following programs relevant to the operating system to ensure remote support is available.

Linux: Secure Shell (SSH - TCP port 22).
Windows: Teamviewer, or Remote Desktop.

2 Installation

Double-click the installer file to open the **Installation Wizard**.
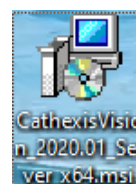
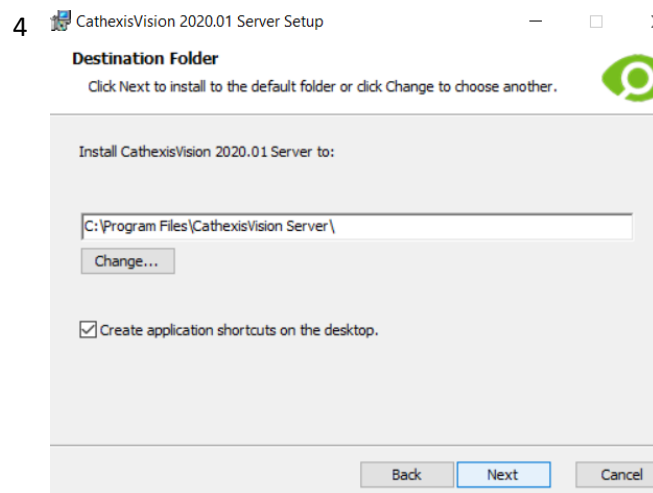

2.1. Follow the installation Wizard
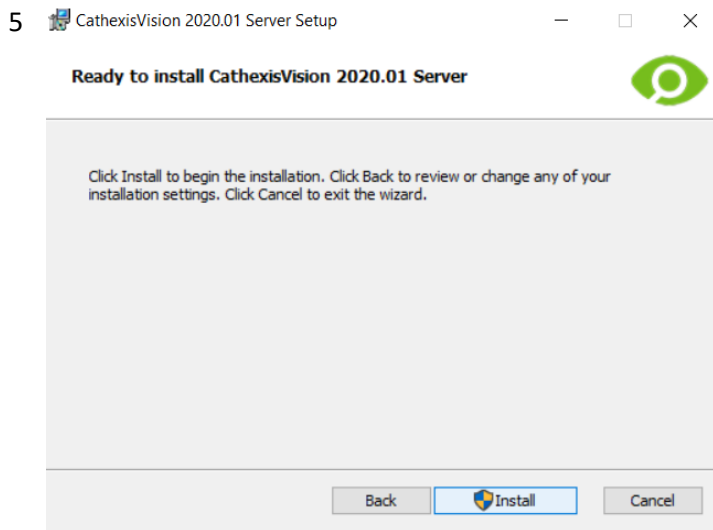
1

Click **Next**.

2
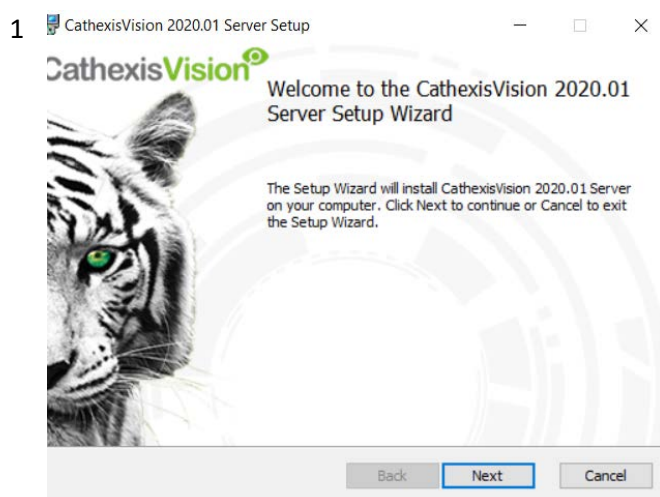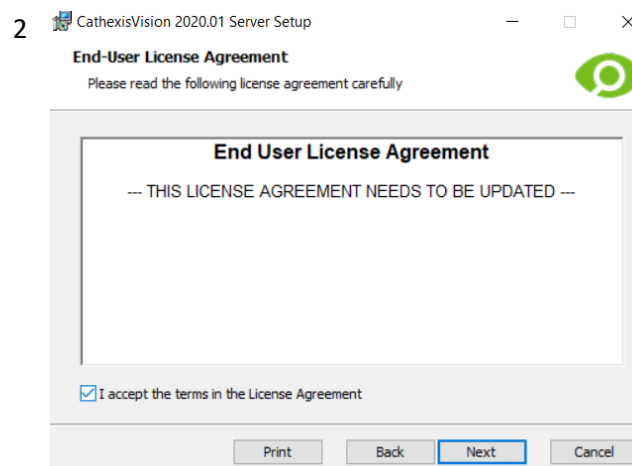
Accept the End User License Agreement.

3
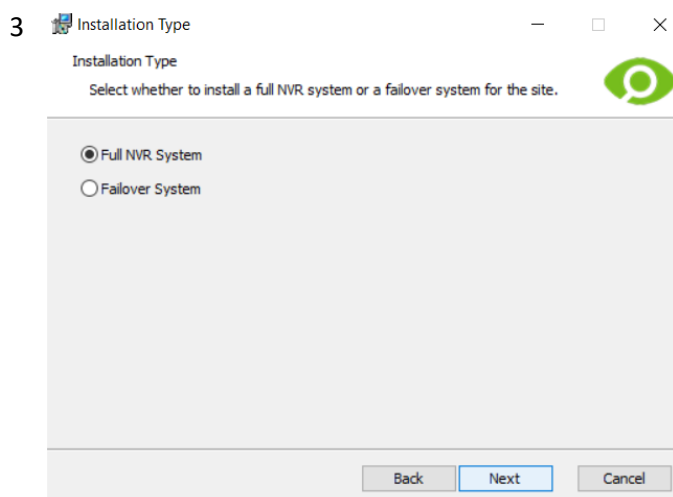
The user will be prompted to choose between a **Full NVR System** and a **Failover System** installation.

4

Choose the installation folder (this is best left as it is.)

5

Ready to install CathexisVision 2020.01 Server

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

Back   Install   Cancel

Click **Install**, and when the installation is complete, click **Finish**.

2.1.1 *Failover Installation*

After a successful Failover installation,[2] attempting to initiate **CathexisVision** (by double clicking on the **CathexisVision** icon) will open the following dialogue box:
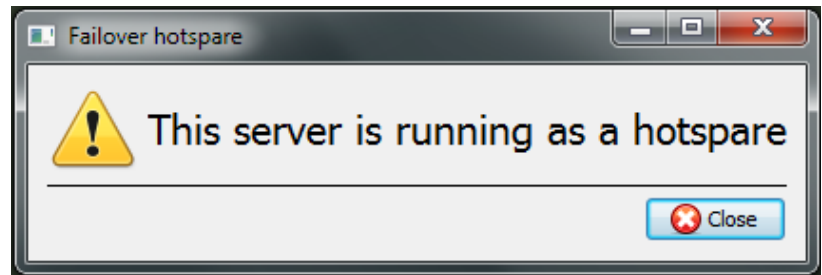
2.2. Cathexis Windows Performance Wizard

The Cathexis Windows Performance Wizard optimises several Windows system settings for use of the CathexisVision Software on a Microsoft Windows Server. It is run after a successful installation and may be run anytime thereafter to change the settings.
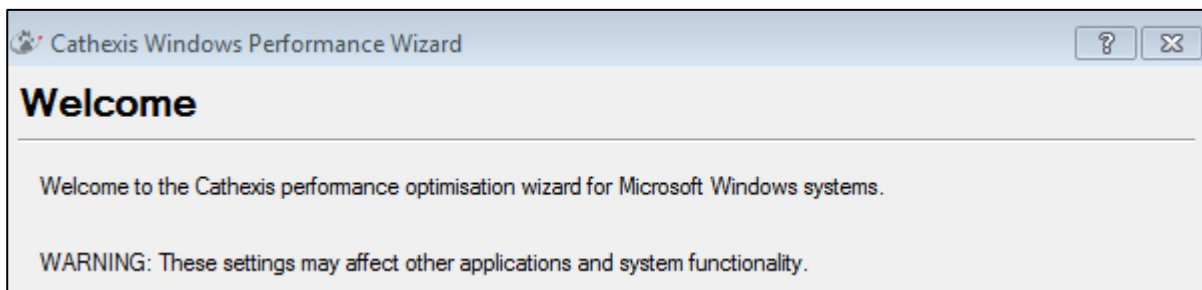
The installer shows the current state of each setting. It presents the following options:

Setting	Explanation	Action
Disable DOS 8.3 filenames on NTFS partitions	This is a required setting for using the database engine.	Required
Disable the Last Access Timestamp on NTFS partitions	Provides a small performance gain when accessing large volumes of files.	Recommended
Enable the High-Performance power management scheme	Adjusts power settings to allow the best performance of the system.	Recommended
Disable the Windows Defender service	Not required, but provides a small performance gain over a secured system.	Optional
Disable the Windows Search Indexing service	Provides a significant performance gain by preventing background indexing of the file system.	Recommended
Disable the Windows Desktop Manager Service	Disables the Aero desktop and appearance enhancements to reduce graphics system load.	Optional
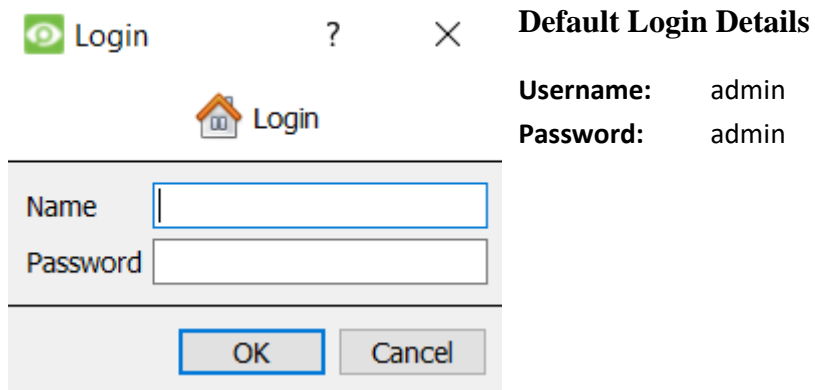
[2] There is detailed information about Failover in the **Setup** section of the **CathexisVision** manual.

2.3.   Start CathexisVision

This is the user interface where the recording parameters are configured. It allows the user to view live video and review recorded video.

2.4.   Log in

Default Login Details

Username: admin
Password: admin

3 Licensing

The mode of licensing will depend on whether the license task is being performed on the local unit (the unit being worked on), or a remote unit (this being a viewing unit on which a copy of the software is installed). This section provides a guide for each situation.

For details on the licensing structure of CathexisVision, please consult the Software Product Description and License Document, or contact support@cat.co.za.

3.1. Trial License

Once CathexisVision is installed, a trial license is automatically applied to the system. To license the system further, consult the relevant licensing sub-section.
Features of the trial license include:

- Two permanent IP camera licenses.
- Maximum recording review time of two days.
- Standard CathexisVision basic analytics.

Trial licenses that unlock additional features may be requested from support@cat.co.za.

3.1.1 *Recording Review Time*

With a trial license applied, only two days (48-hours) of recordings may be reviewed at a time. The camera will continue to record to database (provided there is space, the cameras have the requisite bitrates, etc.), but review of the recordings will be restricted to two days (48-hours) from the point of review. Apply the relevant licenses to unlock the database and review all recordings for as far back as the database has recorded.

3.2. Licensing from a Local Unit

The following instructions describe the process for licensing the unit that is **currently** being **worked on**. For licensing a **remote unit**, see the next section (**Licensing from a Remote Unit**).

3.2.1 *Internet Connection: Product Key*

With access to the internet, and a product key supplied from a vendor, enter the product key. The system will connect to the online licensing system and complete the process.

3.2.2 *No Internet Connection: Pack File*

If the unit the user is performing the licensing from, does not have internet, upload a **.pack** file. A pack file is a file that contains all the licensing information for a unit.

To get a **.pack** file from support@cat.co.za, there are two steps. First, save a **.rqst** (request) file, from the unit being licensed, and email this to support, along with the information relevant to the licenses being added to this unit. Support will then respond with a **.pack** file, containing the licenses, which can then be uploaded to that unit.

3.2.2.1 *License Request File*

A **.rqst** file must be retrieved from the unit being licensed.
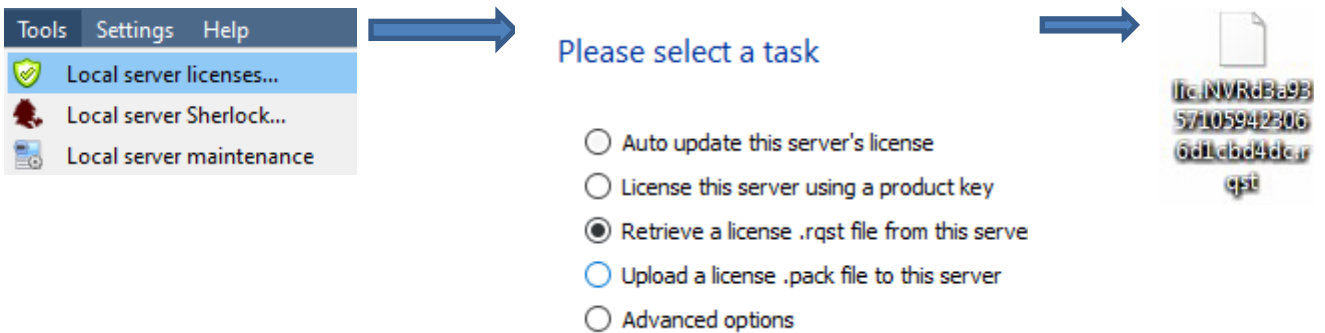
Email this **.rqst** file to support, along with the information relevant to the licenses being added to this unit.

3.2.2.2 *Upload .pack File*

Your site should now be licensed. For further assistance, contact support@cat.co.za.

3.3.   Licensing from a Remote Unit

When licencing from a remote unit (i.e. licensing a unit that is not the one being worked on), the procedure is different. This is because when clicking **Tools → Licensing**, the unit currently logged in on will be the one that is licensed.

3.3.1 *Open Configure Servers*

To open **Configure Servers,** of the site logged into, follow this path from the menu bar: **Site → Open Tab → Setup**.

Once in the setup tab, click on the **Configure Servers** icon .
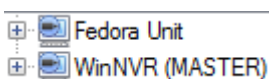
 Once Configure Servers is open, right click on the individual unit to license and select **Licensing** from the drop-down menu.

After this, the licensing procedure is the same as if **Tools — Licensing** had been selected in the GUI of the local machine.

The options seen here on the left will appear.
Auto-update if this unit has already been licensed, or use a **Product Key** if one was provided.
To request a license, follow the procedure detailed in 4.2.2 No Internet Connection section.

Note: Save the **.rqst** files, and upload **.pack** files, to storage media attached to the unit the licensing is being done **from**, not the one being licensed. Always retain the **.rqst** file & the **.pack** file for future licensing support.

4 The Setup Tab

CathexisVision may run on one individual recording server, or on many interlinked servers. Cameras, and integrated devices, are added to individual servers. For this reason, many of the setups are done on a server-by-server basis. Server-based setups occur in the **Configure Servers** section of the **Setup Tab**.

4.1. Open the Setup Tab

There are two general ways of navigating to the **Setup Tab**:

1. **File → Open Site → Site_Name**
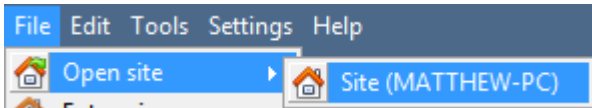
2. **Site → Open Tab → Setup**

4.2. General Setup

From the general setup, set the site name, default access levels, site contacts, network speed, and operator archiving profiles.

Once these changes are made, click for them to take effect.

5 Cameras

This section of the manual will detail methods for adding cameras, followed by an examination of the **Camera Editing** options, and some extra information on the right-click menu.

5.1. Adding Cameras

There are two ways to add a camera in **CathexisVision**.
1. The camera **Addition Wizard**. (This also provides the option to add databases, schedules, and events to the system.)
2. The **Copy/Paste** Function.

For either method, enter the **Cameras Panel**, which is located under **Configure Servers**.

File → Your_Site_Name → Open Tab → Setup → Configure Servers **→ Expand the appropriate Server →** **Cameras** .

5.1.1 Addition Wizard

The camera addition wizard guides the user through all steps needed to add a camera, as well as allowing for the creation of databases, schedules, and events along the way. There are two phases in the **Addition Wizard**:
1. The addition of the camera.
2. Setting up the system to record from that camera (either via a Video Motion Detection (VMD) event, or via a scheduled recording).

To start the camera addition wizard, click on the New button at the bottom of the cameras panel. This will begin the wizard. The following guides the user through each step in the wizard.

Camera connection
Specify the connection details for the camera

Driver	Axis
IP address	185.0 .0 .0
Video input	1
Port	Default
Login	
Password	
Encryption	None

Driver: Select the relevant driver for the camera.
IP Address: Set the IP address of the camera being added.
Scan: will scan the network for cameras that have been set up to make themselves available. Click on a camera and it will automatically set its driver and IP address.
Camera name: the descriptive name given to the camera.
Video Input: use if connecting to an encoder that has multiple analogue inputs (if not, leave it on 1).
Port: has a default setting, but to connect through a specific port, set it to the port of choice.
**Login and password:** the cameras' current login details.

5.1.2 *Connection*

The first step in the Wizard is the Camera Connection step. Here, set up all the connection details of the camera.

5.1.2.1 *Note on Scanning:*

1. Some Cameras do not support automatic location requests, and will not be found using **Scan.**
2. Universal Plug and Play (**UPnP**) will have to be enabled on the cameras that do support location requests.

5.1.3 *General Settings*
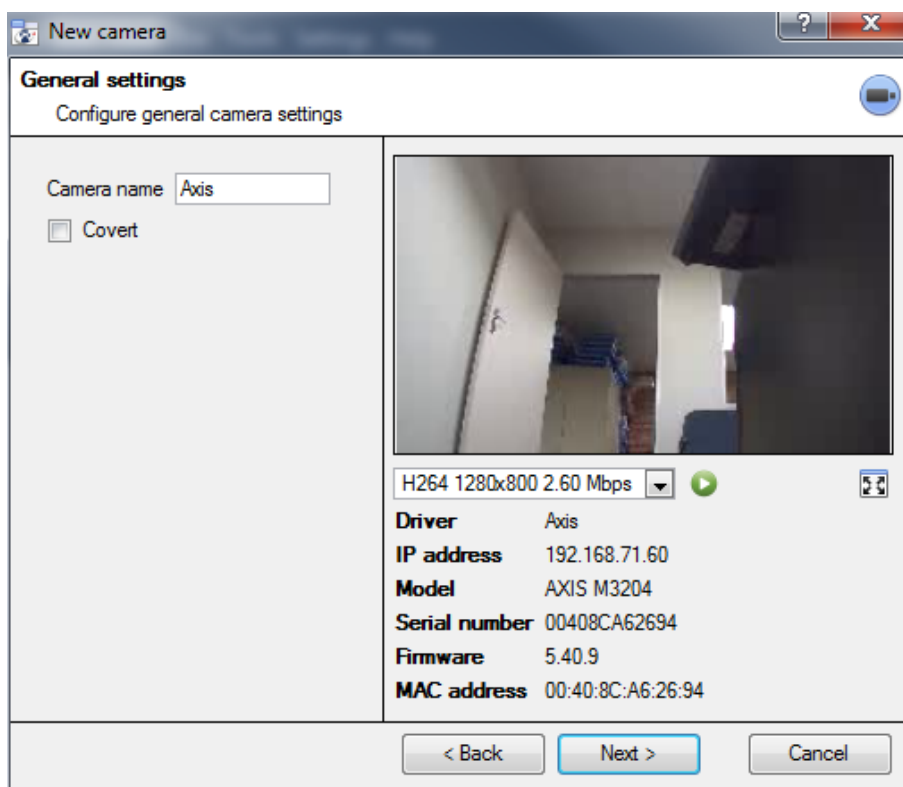

See the table below for a description of this window.

Note: The image in the preview will not reflect the actual quality of the feed, as it is transcoded when viewed in the camera addition wizard.

Name	Give the camera a descriptive name. So as to make it easily identifiable in a list.	
Covert	CathexisVision provides the option to create a covert camera. There is a difference between a camera being covert, and a user not having access to it.	
	Covert	**Access Level Defined**
	Will only be present in the Resources List of an Administrator, or an access level that has been granted access to this camera	Will still appear in the Resources List of lower login levels, but they will not be able to view the feed.
Device Information	This will be a list of all the relevant information, pertaining to the device itself. View it underneath the image preview.	
Live Preview	H264_CAT 1280x800 3.20 Mbps ▾ / Paused / H264_CAT 1280x800 3.20 Mbps	This image is a frame grab from the video feed chosen. To play the live preview, click on: ▶ .

		To enlarge the image, click: ⊡.

5.1.4 *Add/Edit Video Feeds*

To add/edit a video feed, click on one of the available feeds in the list, and click on the **Edit** button. This will bring up a feed dialogue with the available video feeds, and the options that pertain to them. The two most common IP feeds are JPEG and H.264.
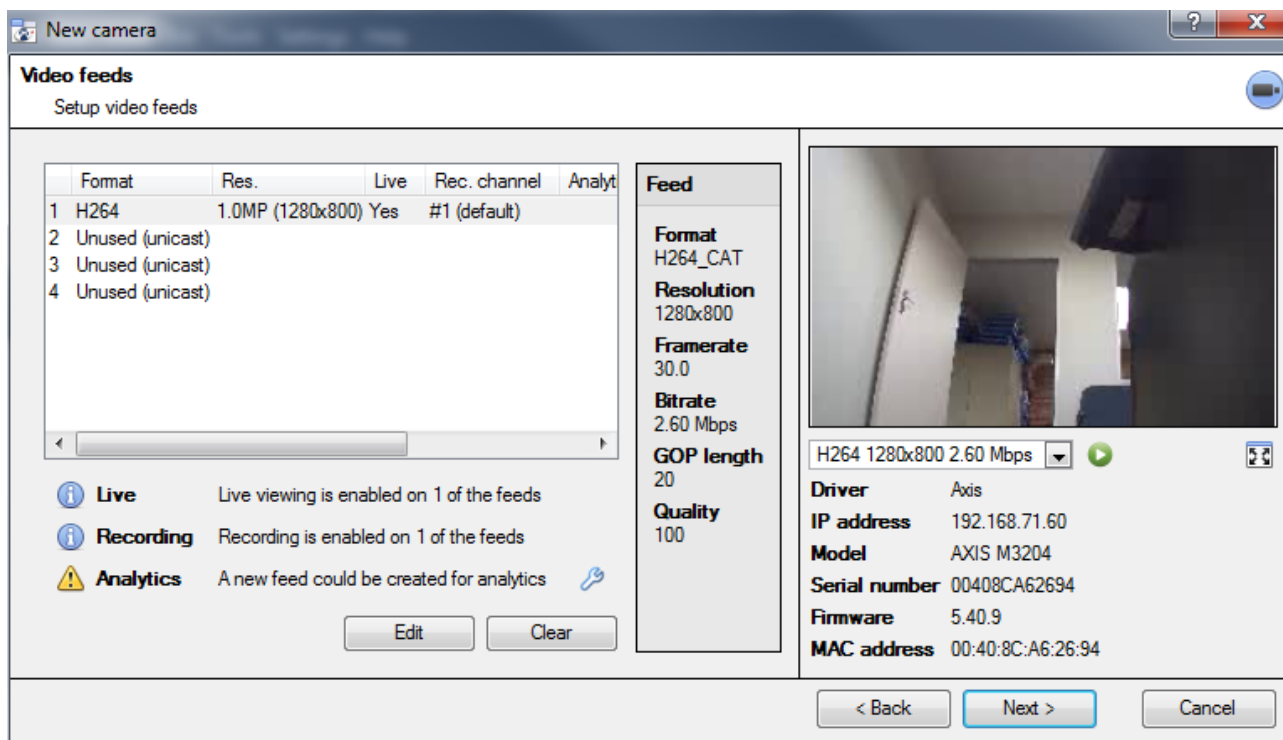
5.1.4.1 *JPEG*
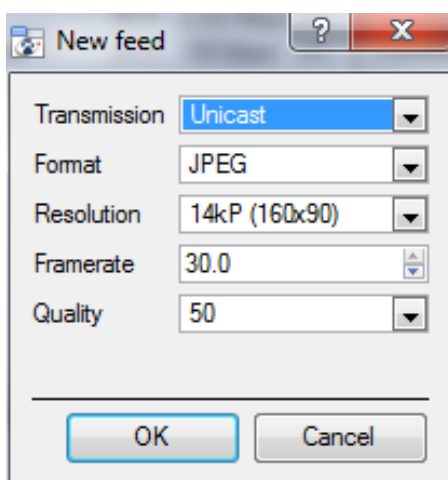
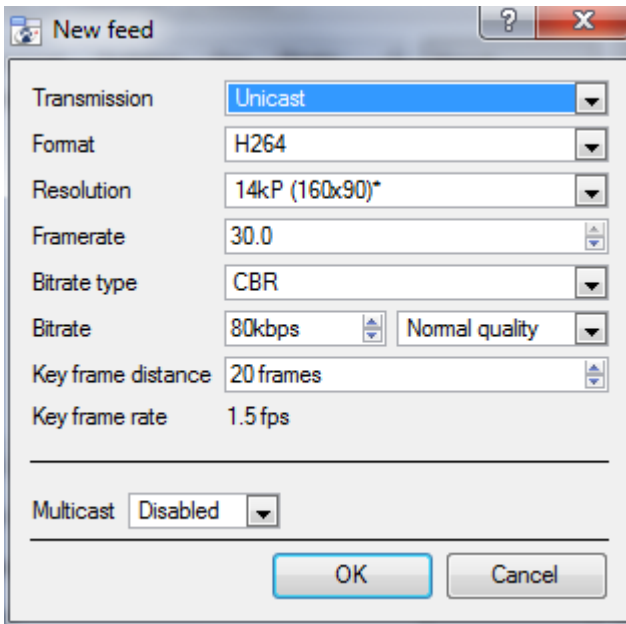**Transmission** will show the transmission type.
Format is the compression format used by this stream. Click the drop-down menu to choose the one desired.
Resolution is the number of pixels in the image.
Framerate is the number of frames recorded per second.
Quality defines how lossy the compression of the image is. At 100 the image will have the best quality; at 50 it will have the lowest.

5.1.4.2 *H264*

Transmission will show the transmission type.
Format is the compression format used by this stream. Click the drop-down menu to choose the one desired.
Resolution is the number of pixels in the image.
Framerate is the number of frames recorded per second.
Bitrate Type is the way the bitrate is handled. A constant bitrate will be more predictable, but will lose more information the more the image changes. Variable bit-rate is less predictable, but will have better images when the picture has more motion.
Bitrate is the amount of information, in bits, that the feed will send per second. (**Quality** defines how lossy the compression of the image is.)
Key Frame Distance is the number of frames between each I-Frame (Key Frame).

5.1.4.3 *Multicast*

Setup **Multicast** on feeds by selecting the relevant option from the feed dialogue. There are three options; **disabled, auto,** and **manual**. Leave **Multicast** disabled if it is not desired.

5.1.4.3.1 Manual
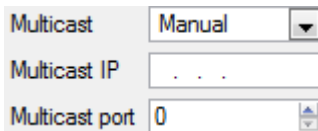
With manual selected, enter the **Multicast IP**, and **Multicast Port**.

Auto
On auto, the **Multicast** address will be automatically assigned. The core settings for this may be found in the **Setup Manual**.

5.1.4.4 *Feed Notifications*
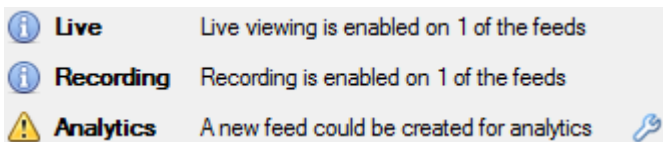
This area displays the status of the feeds created: **Recording**, **Live Viewing**, or **Analytics**.

Note: If clicking on any of the above icons, they will display detailed information regarding the feed/problem.

5.1.4.4.1 Automatic Configuration

If there is an icon at the end of the feed notification, this means that there is a potential problem with the feed setup. Clicking this will automatically fix the problem.

5.1.5 *Right-Click Menu (Live, Recording, and Recording Channel Settings)*

Right-clicking on a feed, after it is set up, will bring up the menu below. These are settings that can only be accomplished after the feed is up and running.
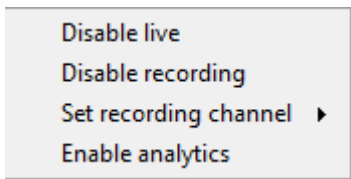
| Disable Live	viewing of the feed.
Disable Recording	of the feed.
Set Recording Channel	Define which channel number will represent this feed.
Enable Analytics	Enable Video Analytics.

5.1.6 *Analytics*

In order to enable analytics on a unit, configure a second feed, right-click on that feed, and click **Enable Analytics**. There are a few rules when it comes to enabling analytics.

1. If an analytics-enabled channel is not set up here, there will not be a prompt to add VMD later in this wizard, nor will it be possible to add VMD, using this feed later.
2. Only Feeds that are QVGA resolution, and lower, will give provide the option to enable analytics.
3. A 🔧 at the end of the ⚠ **Analytics** feed notification, means there is not a feed enabled for analytics. Clicking on 🔧 will automatically enable one.
4. **Note**: If the user chooses to proceed without enabling analytics, a prompt will appear. One can also enable video analytics by this route.
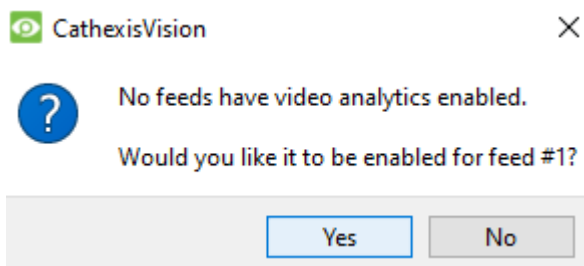
5.1.7 *I/O*

The next step in the addition is the I/O setup. The I/O values represented in the GUI will depend on the I/Os provided by the encoder.
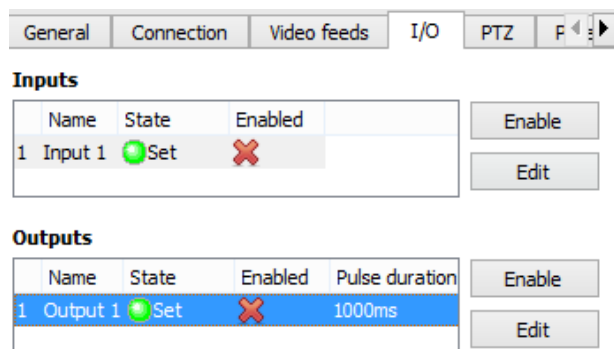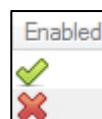
I/O

Inputs are used to trigger an event; **Outputs** are used to give a desired output as a result of a triggered event.
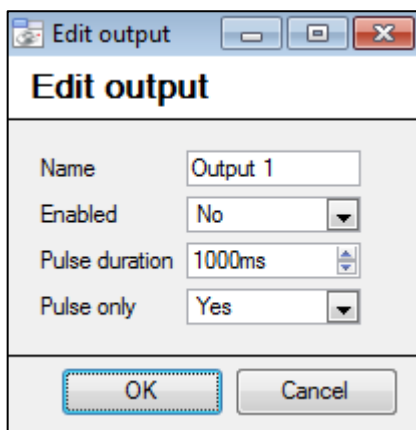
	Name	State	Enabled	
1	Input 1	⬤ Set	✖	

Inputs

	Name	State	Enabled	
1	Input 1	⬤ Set	✖	

Outputs

	Name	State	Enabled	Pulse duration
1	Output 1	⬤ Set	✖	1000ms

Renaming

	Name	State	Enabled
1	Button	⬤ Clear	✖

Double click on the I/O name to rename it.

Enabling

Double click on the red cross, or click the enable button. Once enabled, it may be used to trigger an event.

5.1.7.1.1 Edit an Output

Name
Give the output a descriptive name.

Enabled
Displays whether the output is disabled/enabled.

Pulse duration
Will set the amount of time (in milliseconds) that the output will pulse for, if set to pulse.

Pulse only
If set to Yes, the output will not allow itself to be permanently set.

5.1.7.1.2 Triggers
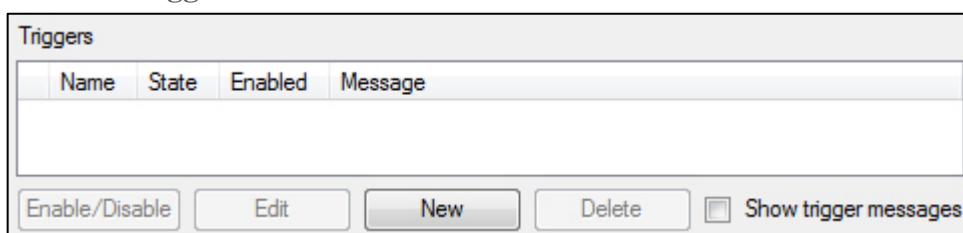
Certain cameras will have their own event triggers, and encoders will often have I/O options .

Note:
- Double clicking on any of the column values of an I/O will toggle the value. E.g. double clicking on a Clear state will change the state to Set). (These options are also available via the Right-Click menu.)
- Give the I/Os descriptive names, otherwise they will not be identifiable.
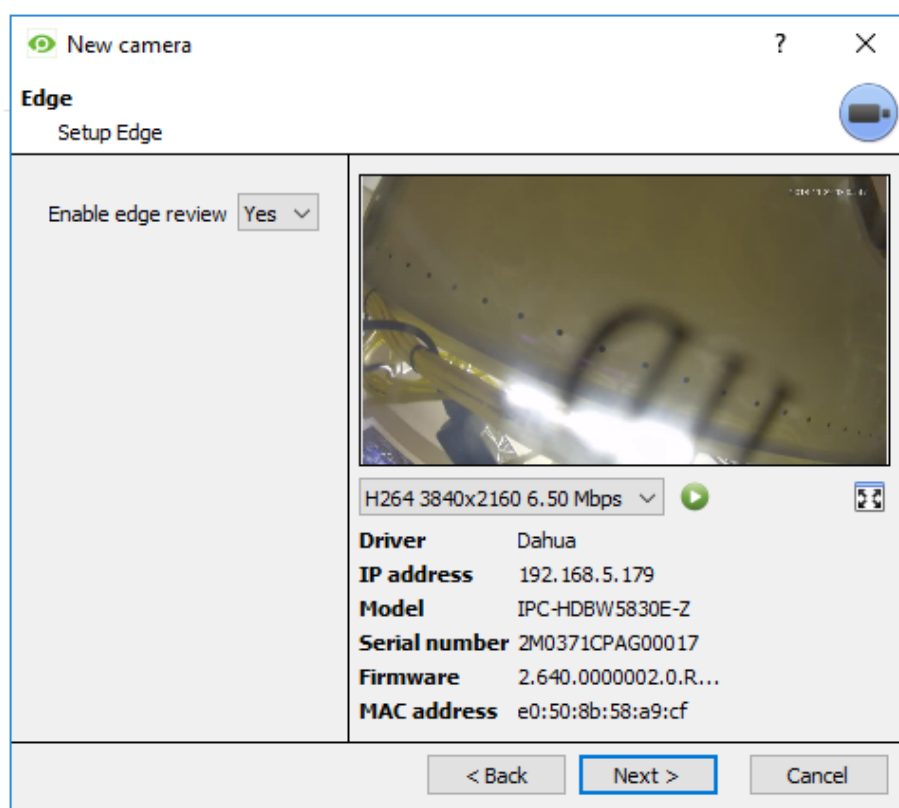
5.1.8 *Serial Ports*
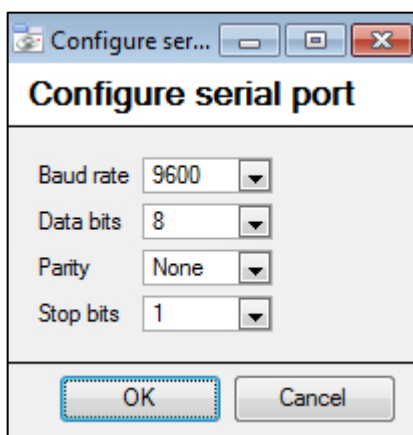
Highlight the serial port to configure, then click the Configure button.

This provides the option to change the **Baud rate**, **Data bits**, **Parity, Stop bits**, and other camera dependent settings.

Note: This option will only be available if the camera has serial ports.

5.1.9 *Camera Edge Review Setup*

Cameras which support Edge recordings will have an additional tab in the camera wizard, which enables viewing of the camera's onboard Edge database within CathexisVision.

Select **Yes** from the drop-down menu to enable the database.

When this is enabled, the camera's Edge database will be available for selection in camera review, as with other CathexisVision system databases.

If this is disabled, the database will not be available for selection.

5.1.10 *Pan-Tilt-Zoom (PTZ)*

Check the ☑ Enable PTZ box, if a PTZ camera is being added. After this, all the available PTZ options will appear in the wizard interface:

5.1.10.1   *General Settings*

Note: These options can vary on a camera-by-camera basis.

Preset Name	Give Presets descriptive names (such as 'front door' etc.)
Zoom Speed	This defines how fast the camera will zoom in when using the PTZ controls. **Note:** Use the live view panel, at the bottom of the Resources Menu, to see if the zoom speed is satisfactory. Test this by clicking *Zoom* on the PTZ control wheel.
Home Position	A home position is a pre-set position to which the camera will return to after a set period of inactivity. **Automatic Return to Home** Set a schedule, during which the camera will return to its home position. When the schedule (see: Error! Reference source not found.) is inactive, the camera will remain in the last position that it was left in. If there is no schedule set, the camera won't return automatically to its home position. To have it always return home after a period, simply enable the **Every Day** schedule.
Switch Wash and Wipe Relays	In the case that the Wash and Wipe relays are incorrectly attributed, this will swap them over to the correct order.
Configure PTZ tours	A PTZ tour will run through a sequence of pre-set positions. (See section immediately below.)

5.1.10.2   *Configure PTZ Tours*

If the device supports Tours, to create/edit a PTZ tour click on [Configure PTZ tours]. This navigates to the list of tours. To create a new tour, click [New].

Name and Schedule

Give the tour a **descriptive name**, and, if desired, a schedule (see: Error! Reference source not found.)

Sequence

This is the sequence that the Presets will run in.

5.1.10.2.1 Add Preset, Multiple Presets, or a Pattern, to the tour

Preset

Select the Preset, set how long the camera should linger at this Preset.

Multiple Presets
- **Starting at**: Select the first Preset to add.
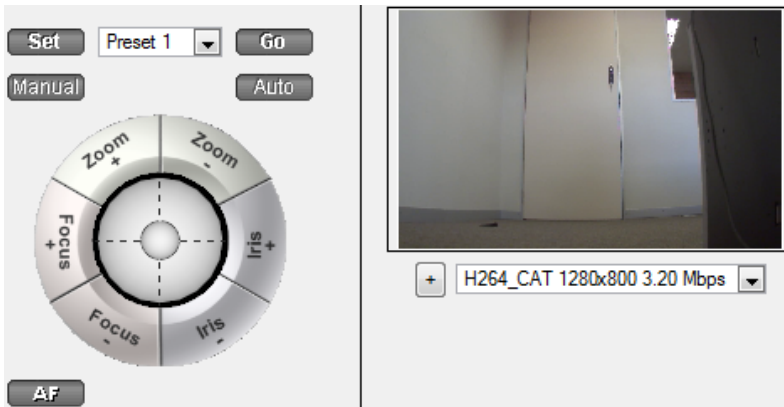- **Add**: This is the number of Presets being added.

In the example below, Presets 4 to 6 will be added.

Pattern

Select the pattern to add.

Add *pattern* [1] holding for [10sec] [Go]

5.1.10.3 *PTZ Procedures*

Note: Don't forget to select/play a live feed.

With a Pan-Tilt-Zoom (PTZ) camera, an operator can manipulate the camera's direction, Zoom, focal distance (Focus), and amount of light (Iris). The operator can also control pre-configured camera views called "Presets".

A Dome Control Panel becomes available when a Live PTZ camera is selected in the CathexisVision interface.

Click the panel's dropdown menu and select **PTZ** (see below). The software joystick displays:

5.1.10.3.1 Using the PTZ Control Panel

|	
Pan Left/Right:	**Tilt Up/Down:**
Drag joystick left / right**.**	Drag joystick up / down.
Move Camera Faster:	**Move Camera Slower**:
Distance determines speed - drag joystick out, in required direction.	Distance determines speed - drag joystick closer in, in required direction.
Zoom In/Out:	**Focus Further/Closer**:
Watch the live camera, while pressing the Zoom + and Zoom – button.	Watch the live camera, while pressing the Focus + and Focus – button.
Go to Preset:	**Gain Control of Dome/PTZ**:
1. Select the Preset from the dropdown, and then click GO. 2. The camera view will change to the Preset. 3. To relinquish manual control of the dome/PTZ camera from the PTZ panel, click Auto. 4. If the system runs remote tours automatically, or switches displays based on events, these automated responses will take over.	(Applies if system runs remote tours automatically, or switches display based on events.) Either click manual, or simply move the software joystick.
Lighten/Darken Live Camera View:	**Define a Preset**:
Press the iris+, or iris – button. The image will lighten or darken.	1. Select the Preset number, from the dropdown menu. 2. Use the joystick controls to establish the camera View, Zoom, Focus, and Light (Iris). 3. Click SET. 4. Go to this Preset to check it.

5.1.10.3.2 PTZ Priority Control

Control of a PTZ camera works on a priority system to determine who gets control of the camera should more than one user at a time attempt to control the camera. Administrators get the highest priority, after which the priority hierarchy runs from user level 30 down to user level 1. For example, should a level 10 user and a level 1 user attempt to control the PTZ camera, the level 10 user will get priority control. An administrator would get priority over both.

Note:

1. If two users of the same user level attempt to control the camera, then the first user gets priority and the second user will have to wait until the 'Dome override' period has elapsed.
2. Manual control of the camera takes priority over event-initiated/auto control of the dome.

5.2. Configure Camera

The operator can now add motion recordings and configure camera access rights.
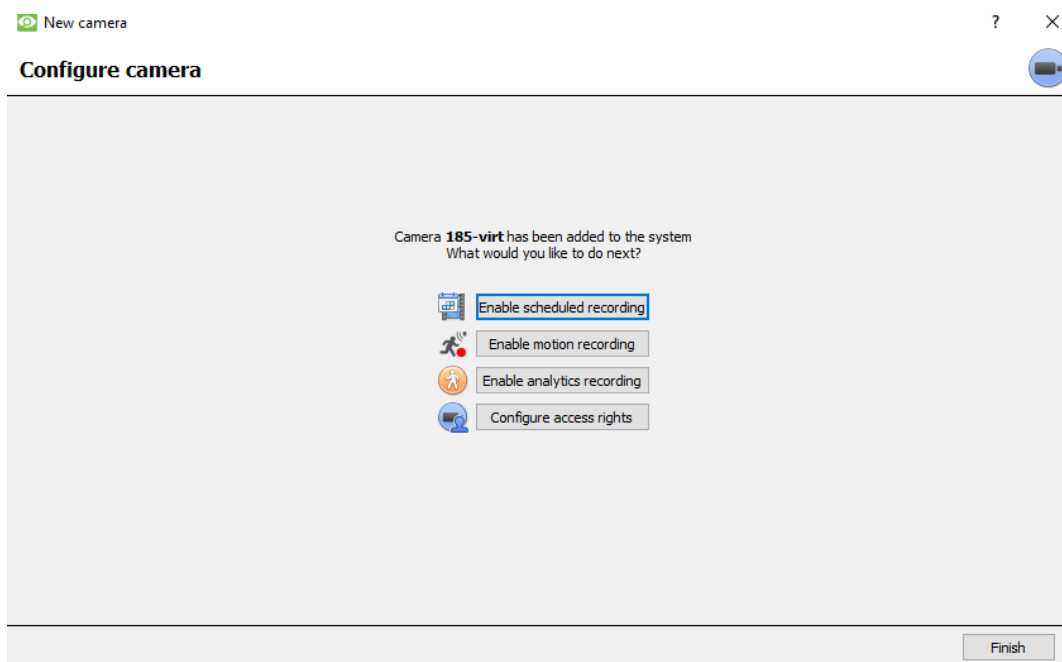
5.2.1 *Enable scheduled recording*

Scheduled recording can be enabled in the Camera addition wizard. Here, set **Database, Schedule, Channel, Framerate, and Condition.**

5.2.2 _Enable motion recording_

Motion recording can be enabled. here, the user can set **Database, Schedule, Scene, Sensitivity, Recording time before and after motion, Channel, Framerate, Flare Suppression, Noise Suppression, and Condition.** One can also **Add mask** and **Test settings.**

5.2.3 *Enable analytics recording*

New camera
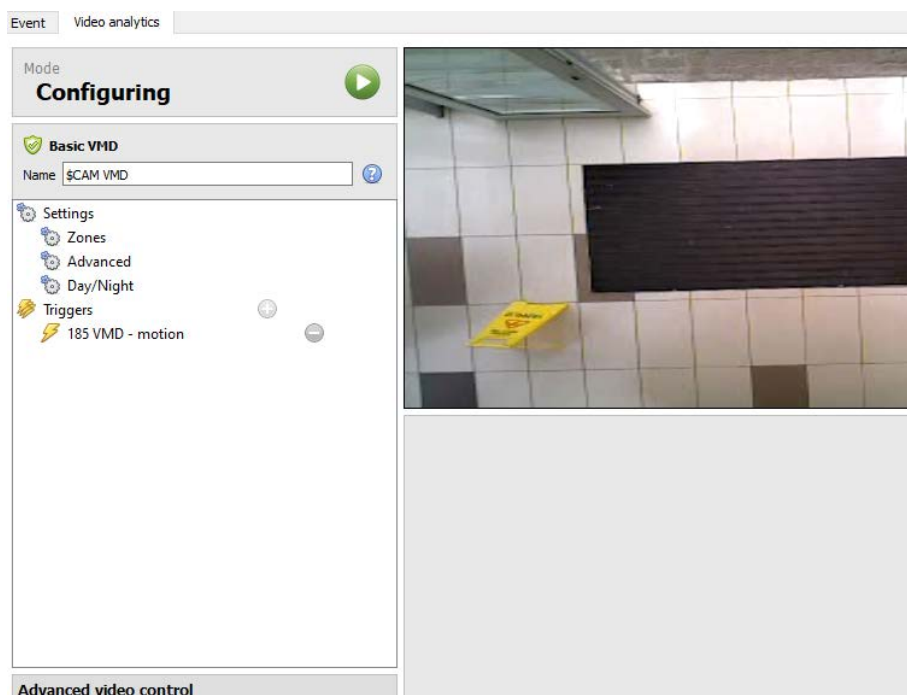
Analyitcs recording

Configure analytics recording

When configuring analytics, under the **Event** tab, set:

Name, Database, Schedule, Recording channel, Frame-rate, and Pre-event.

Event	Video analytics
Name	185 activity
Database	Camera Database
Schedule	Always
Recording channel	#1 - JPEG (320x240 30fps)
Frame-rate	1.0
Pre-event	0sec

When configuring analytics under the **Event tab, set Zones, Advanced options, Day/ Night settings, and Triggers.**

Advanced video control may also be used.

Mode
Configuring

Basic VMD
Name $CAM VMD

Settings
  Zones
  Advanced
  Day/Night
Triggers
  185 VMD - motion

Advanced video control

5.2.4 *Configure access rights*

Configure relevant Access rights by clicking the **Configure access rights** button.
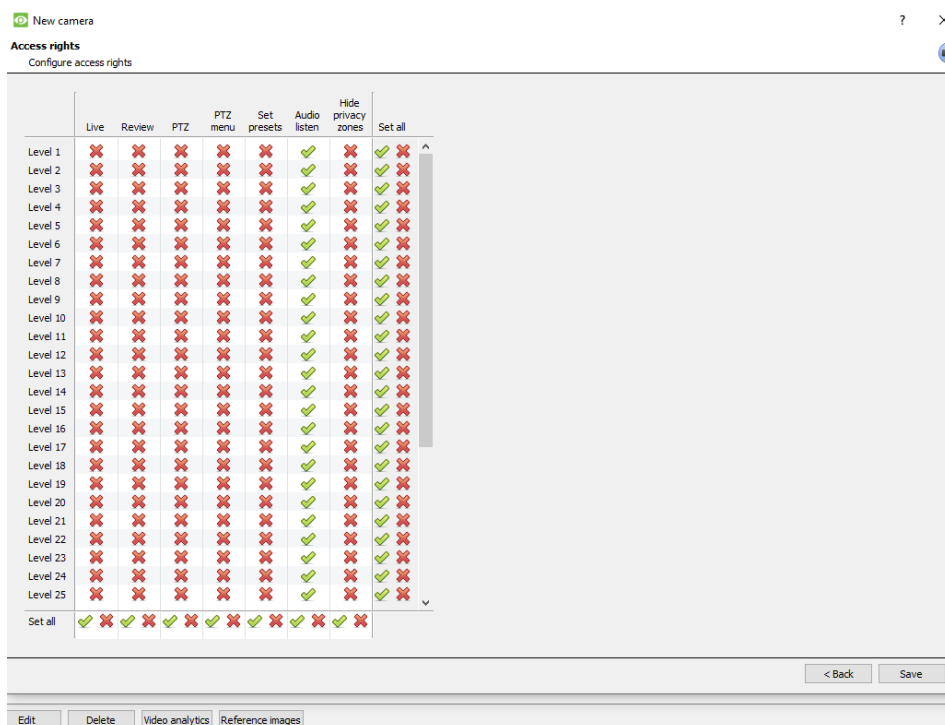
5.3.   Copy/Paste Cameras

If adding more than one camera that operates on the same driver, **CathexisVision** offers a very easy solution. Copy and paste new cameras, using the addition information of one previously added camera.

To Paste New cameras, right-click on the previously added camera and click Copy. Then right click anywhere in the Cameras Panel and click Paste new… .

5.3.1 *Paste Mode: Sequential*

The paste mode sequential window provides the option to add the new cameras as a direct copy of the camera that copied.

Start IP Address will determine the IP address of the first new camera being added. The IP addresses will be incremented from here. (So, make sure no IP addresses in this range have been used.)
Number of cameras per encoder must be the full number of channels available on this encoder
Start Input is the actual physical channel that the first camera is added to.

5.3.2 *Paste Mode: Discovered*
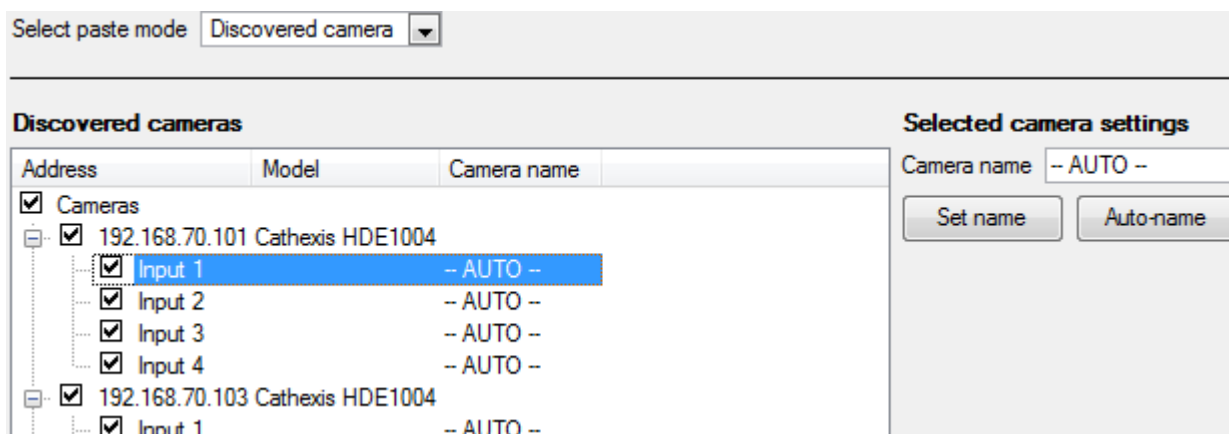
Note: This will copy the video settings from the copied camera onto the discovered cameras selected.

5.3.3 *Copy/Paste Video Settings*

If a number of cameras with the same drivers have already been selected, and the user simply wishes to transfer the Video Settings of each camera across, right-click and select Copy. Then right-click on the camera to add the video settings to, and select Paste video settings.

Note:
- This is just the Video Feed settings; it will not add Video Motion Detection analytics.
- Only copy onto cameras that have the same driver as the camera that has been copied.

5.4. Edit Existing Camera

Note: If any changes are made to the setup of a camera that is currently multicasting, restart the streams. This simply entails removing and reselecting the cameras in the Cameras tab, after the settings are saved.
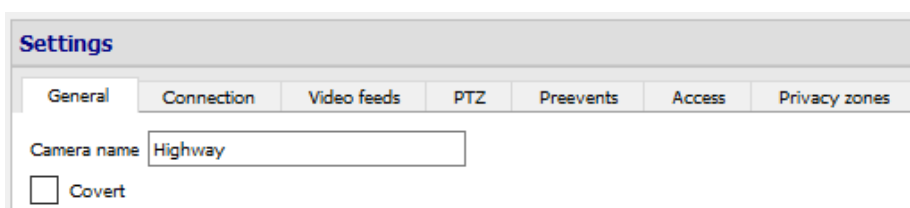
Edit an already added camera by returning to **Setup Tab → Configure Servers → Cameras**, selecting a camera and clicking Edit. This will bring up an interface with tabs containing the cameras editable details.

5.4.1.1 *Repeated Options*

The camera setup options of **General**, **Connection**, **Video Feeds**, **I/O**, and **PTZ** are all dealt with in section **6a** (above), and they will not be repeated here. However, the Pre-events, Access, and Privacy Zones tabs will be dealt with below.

Note: Tthe **Wizard** goes through the process of setting up a **Database**, **Scheduled Recordings**, and **Video Motion Algorithm** triggered recordings; these appear as individual panels in **Configure Servers** and not as options within the **Edit** tabs.

5.4.2 *Pre-events Tab*
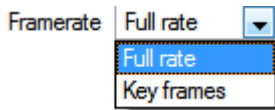
 Pre-events were setup under the **Activity Recording** section of the **Wizard**. The number of pre-events cannot be defined here, but the frame rate of the pre-events may be defined in this tab.

Note: JPEG is recorded in Key Frames, so there will only be the option of *Frames per Second* when setting the pre-events on a MJPEG stream.

5.4.3 *Access Tab*

Under the **Access** tab, set up which user access levels have control of the different facets of the available cameras.

Live	This controls which Access Levels can view the camera's live feed
Review	This controls which Access Levels can review recorded footage form this camera.
PTZ	This controls which Access Levels can control PTZ movement.
PTZ Menu	This controls which Access Levels have the ability to change the PTZ menu.
Set Presets	This controls which Access Levels can change PTZ Preset positions.
Audio Listen	This controls which Access levels can listen to the audio from the onboard mic.
Hide privacy zones	This controls which Access Levels can hide privacy zones on the camera image.
Set All	Selecting ✔ will give this level access to all settings; selecting ✖ will give this level access to none.

5.4.3.1 *Important Note on Access Rights:*

1. All access levels on this unit are managed in the Access Rights Panel of the Server (**Site → Open Tab → Setup → Configure Servers → Expand the Server → Access Rights**).

2. Access rights pertain to the access levels assigned to specific users. If a user is given level 1 access, and this camera is only assigned to other levels, that user will not see this camera. (Users are managed in the **Site → Open Tab → Setup → Users**).

3. Non-admin users may be given the right to configure other non-admin users. See the main Setup manual for more information on this.

5.4.3.2 *Audio Listen Access Right*

The table below details situations in which the Audio Listen access rights settings configured by the user do and do not apply.

Audio Listen access right settings **do apply** to:	Audio Listen access right settings **do not apply to**:
Live viewing.	Independent audio channels.
Reviewing from the camera tab.	Archived video.
Reviewing from the database tab (both video and integration databases).	Connecting to a 2016.2 server using a 2015/2016.1 viewer.
Viewing video when handling an alarm in the Alarm Management Gateway.	Connecting to a 2016.1 server using a 2016.2 viewer.

5.4.4 *Privacy Zones*
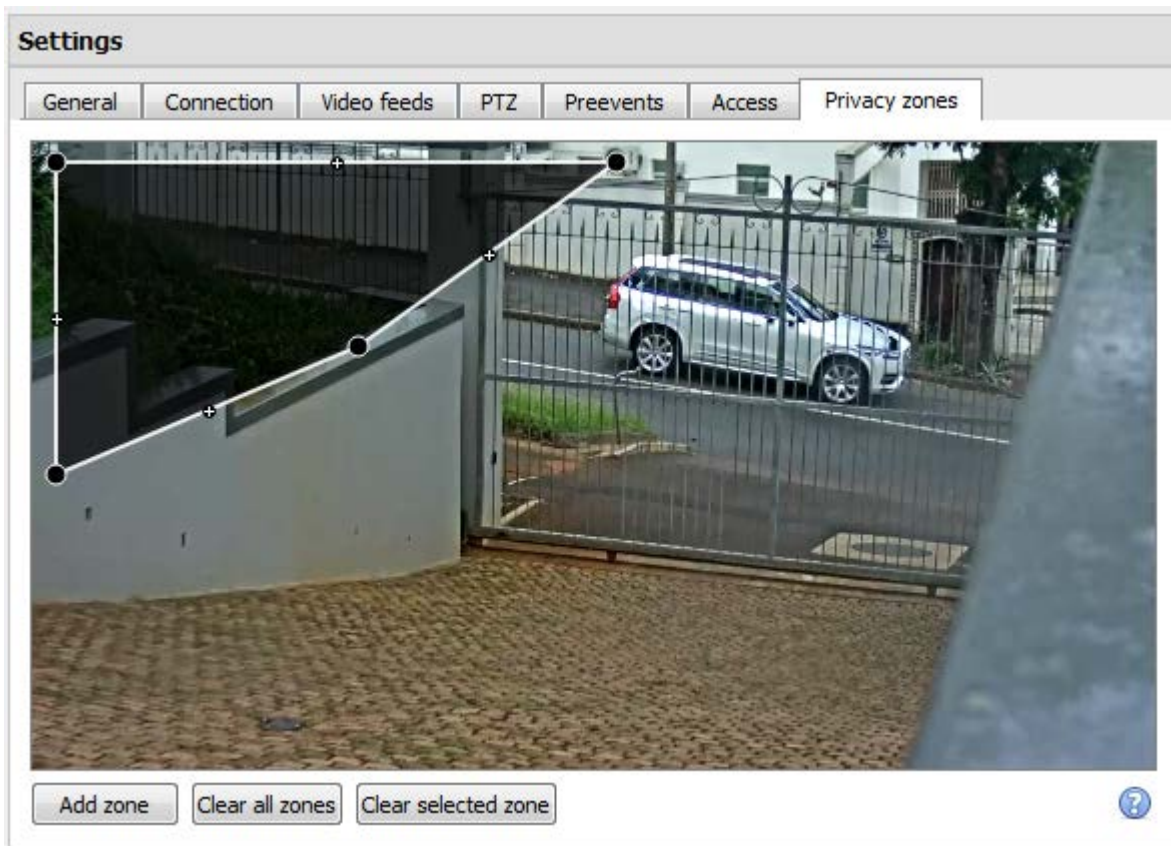
Using privacy zones, certain areas of the camera image can be blocked from view. They can be hidden (removed) by operators who have been granted access rights to do so (see above). Otherwise, privacy zones can be set to blacken out the sensitive information on the camera image, and will reflect in snapshots, recordings, and review.

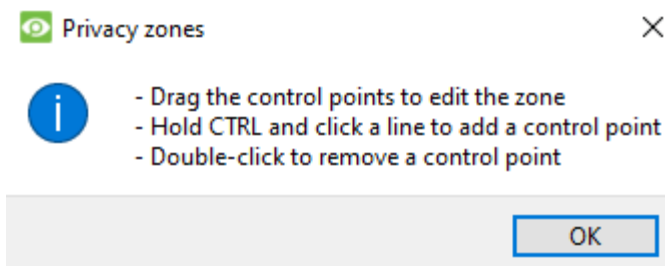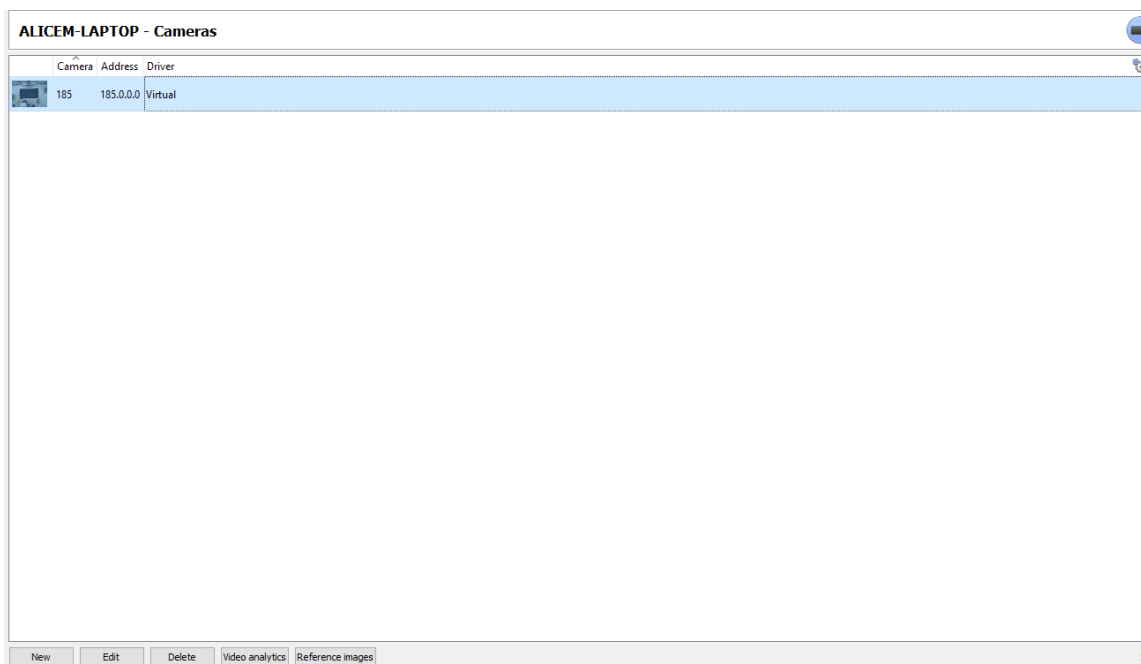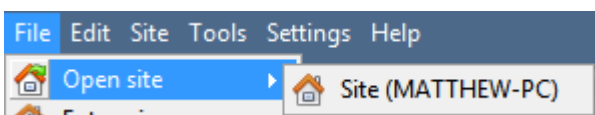|	
Add zone	Add a new privacy zone to the camera image.
Clear all zones	Clear all privacy zones from the camera image.
Clear selected zone	Clear only the selected zone from the camera image.
?	Click this to show instructions on defining the shape of a privacy zone:

Privacy zones ✕

ⓘ - Drag the control points to edit the zone
- Hold CTRL and click a line to add a control point
- Double-click to remove a control point

OK

5.4.5 *Camera Successfully Added*

ALICEM-LAPTOP - Cameras	
Camera	Address	Driver
185	185.0.0.0	Virtual

New   Edit   Delete   Video analytics   Reference images   1 it

The camera has now been set up and will start recording as configured. From this screen, another camera can be added or the camera just set up can be edited.
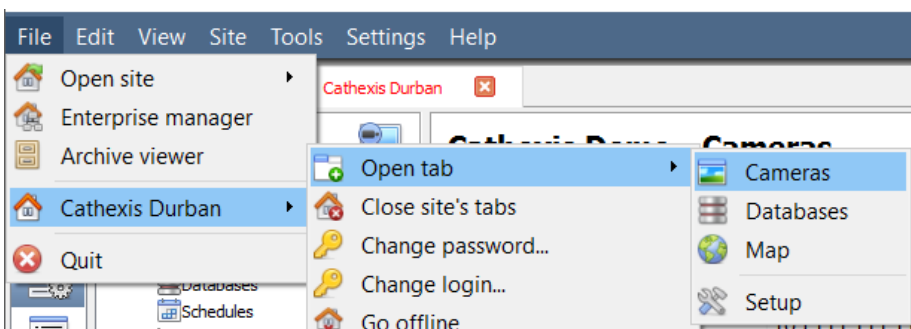
5.5.   **View Camera/s**

5.5.1.1 *Open Site*

File Edit Site Tools Settings Help
🏠 Open site ▶ 🏠 Site (MATTHEW-PC)
Enterprise manager

File → Open Site → Your_Sites_Name.

5.5.1.2 *Open the Cameras Tab*

File Edit View Site Tools Settings Help
🏠 Open site ▶ Cathexis Durban ❌
🏢 Enterprise manager
🖥 Archive viewer
🏠 Cathexis Durban ▶   📋 Open tab ▶ 🖼 Cameras
❌ Quit   🔒 Close site's tabs   🗄 Databases
                            🔑 Change password...   🌐 Map
                            Databases   🔑 Change login...   🔧 Setup
                            Schedules   🏠 Go offline
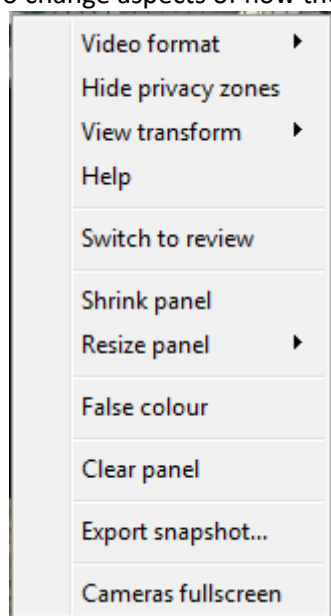   Network I/O

File → Your_Sites_Name → Open Tab → Cameras.

Double click on a camera in the **Resources** panel, to start viewing it

5.5.2 *Middle Click on a Live Camera*

To change aspects of how the camera appears in a panel.

Video format: Allows the user to select which of the camera's video streams (which format/resolution) they wish to view.

Hide/show privacy zones: Will hide/show privacy zones on camera image depending on access rights.

View transform: Allows transforming images for cameras with special lenses. (E.g. 360-degree cameras.)

Overlays: Allows viewing the different analytics algorithm's that have been applied to this camera's feed, live in the Cameras Tab.

Help: Pops-up a help window on Digital Zoom, and PTZ Control within this panel.

Switch to review: Allows switching back and forth between live and review footage.

Shrink panel: Reduces the size of the camera panel.
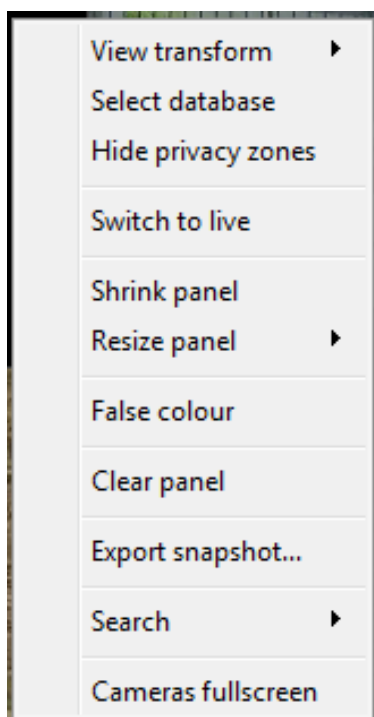
Resize panel: Gives more resizing options.

False colour: Changes the colour of the image to false colour.

Clear panel: Removes the camera/s from the currently selected panel/s.

Export Snapshot…: Opens a window to print snapshot, save to folder, copy to system clipboard, or copy to CathexisVision clipboard. Also choose to include the camera name and time of snapshot in the overlays.

Cameras fullscreen: Fills the entire screen with the Cameras Panel; creating a Video Wall. The same procedure will exit fullscreen mode.

5.5.3 *Middle-Click on a Camera in Review*

View transform: Allows transforming images for cameras with special lenses. (E.g. 360-degree cameras.)

Select database: If multiple databases are set up, set a camera to record to a certain database using this option.

Hide/show privacy zones: Will hide/show privacy zones on camera image depending on access rights.

Switch to review/live: Allows switching back and forth between live and review footage.

Shrink panel: Reduces the size of the camera panel.

Resize panel: Gives more resizing options.

False colour: Changes the colour of the image to false colour.

Clear panel: Removes the camera/s from the currently selected panel/s.

Export snapshot…: Opens a window to print snapshot, save to folder, copy to system clipboard, or copy to CathexisVision clipboard. Also choose to include the camera name and time of snapshot in the overlays.

Search: Use snap-search feature to search the database for snapshots similar to the current image.

Cameras fullscreen: Fills the entire screen with the Cameras Panel; creating a Video Wall. The same procedure will exit fullscreen mode.

6 Events

Events are located under **Site→ Setup→ Events.**

When creating VMD, it will immediately be added as an event. This VMD setup can be used in other events though. From the Events panel, edit current events, create new events, or delete events that are no longer desired.

Double clicking on, or editing, an event will allow adjusting the **Schedule**, **Resources**, **Triggers**, and **Actions** as required.

- A Trigger is what sets off an event. There can be more than one trigger per event (e.g. VMD from two cameras will cause the same Action).
- Actions are the actions taken by the system as a result of the Trigger.

Note: The "Resources" section pertains to the ability to switch the display on a Client Viewing PC [to a relevant camera's stream], as a result of an action. This does not affect which cameras will be recorded.

7 Uninstall

To uninstall, simply follow the uninstallation process that is native to the operating system on which CathexisVision was installed.