



Quick Start Guide CathexisVision 2017.1

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1 Welcome

Thank you for choosing Cathexis products! This quick guide will provide basic instructions and information to setup **CathexisVision**.¹ The objective of this document is to get you up and running as quickly as possible. For more detailed information please contact your supplier or support at support@cat.co.za.

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

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.

2 Requirements/Restrictions

a. Supported Systems

Please [download CathexisVision Software](#) to continue with this document, and note that there is a **minimum requirement of 4 Gigabytes of RAM** to run this software.

Supported	Not Supported
Windows server 2003 R2 and later; Windows 7 and later.	Windows XP, Vista and earlier.
Ubuntu (Linux) ²	NetBSD 3 & any earlier NetBSD operating system.

b. Windows Update Requirements

The following Windows updates are required for certain systems.

Universal C Runtime Update (Older Windows Systems)

CathexisVision 2017 uses updated Windows runtime libraries. This means that the Windows 10 Universal C Runtime update must be run on systems prior to Windows 10 (see list below).

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 Server 2008 Service Pack 2 (SP2)
- Windows Vista SP2

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 you may first need to install:

- Windows Vista Service Pack 2 (download from <https://support.microsoft.com/en-us/kb/935791>)
- 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>)

² Cathexis provides a binary for Ubuntu 12.04 and Ubuntu 16.04 for approved hardware. Contact Cathexis support.

- Windows Server 2008 R2 Service Pack 1
(download from <http://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/2919355>)

OpenCL Driver Required

OpenCL is usually installed by the graphics card driver, but we have seen instances on virtual machines where that driver is not present. On these virtual machines the graphics device is an Intel device and installing the Intel OpenCL drivers resolves this issue. The Intel OpenCL drivers can be downloaded from <https://software.intel.com/en-us/articles/opencl-drivers>.

c. Hardware

The **CathexisVision** software architecture is designed to utilise the various hardware system components with maximum efficiency.

When choosing hardware for your solutions 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 you are using the I.P camera or the Cathexis software to perform Video analytics.
- Whether you are viewing cameras “live” from the same server on which you are recording
- Whether you are streaming “multicast” video streams from the camera
- Storage methodology (on-board, Network Storage etc.)

All of these aspects influence the hardware system required to optimise performance. Below are some guidelines which will assist you in choosing the hardware for your application. If you would like assistance with your design, contact your distributor, a **Cathexis** regional office, or complete the **System Design Form** by clicking on this link: <http://downloads.cathexisvideo.com/support/design-tools/>. Thereafter, you should email it to mailing it **Cathexis** and we will assist you.

CathexisVision System Requirements Guidelines:

Processor	RAM	Recording camera bitrate (Mb/s)	Live View MegaPixels/sec
Core i3	4GB	Less than 100Mb/s	< 100 MP/s
Core i5	8GB	Less than 150Mb/s	< 300 MP/s
Core i7	8GB	Less than 180Mb/s	< 600 MP/s

d. Routing/Port Requirements

The following information regards the router ports that need to be opened on the network firewall/router. These ports are important in allowing a number of **Cathexis** services to run correctly.

Ports to Open

Operational Ports	Protocol	Application
80	TCP	Default CatMobile Access
30010-30100	TCP	CathexisVision Software

Maintenance Ports	Protocol	Application
22	TCP	Secure Shell (SSH) - Linux
3389	TCP	Windows Remote Desktop
NA	NA	TeamViewer Access

Remote Support

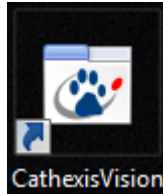
Secure Shell (SSH - TCP port 22) for **Linux** access.

TeamViewer, or **Remote Desktop**, access for **Windows** NVR units.

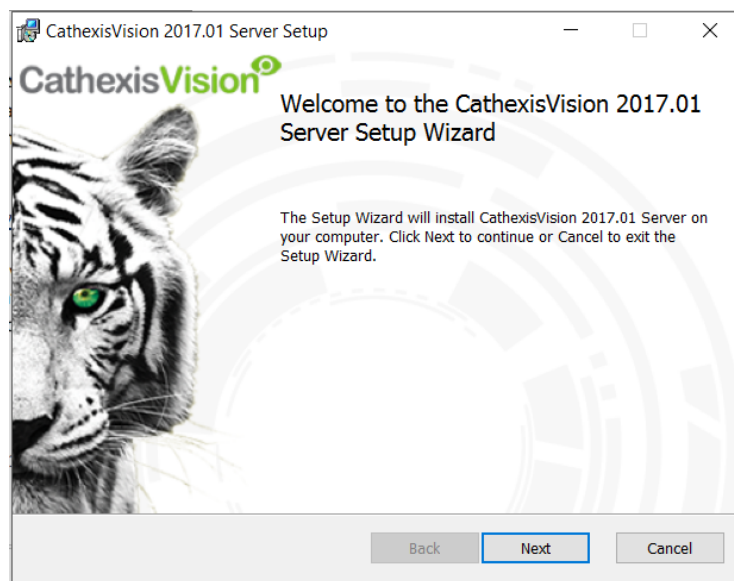
3 Installation

You will either receive the software on a CD, via a download link provided by **Cathexis**, or directly from the [website](#).

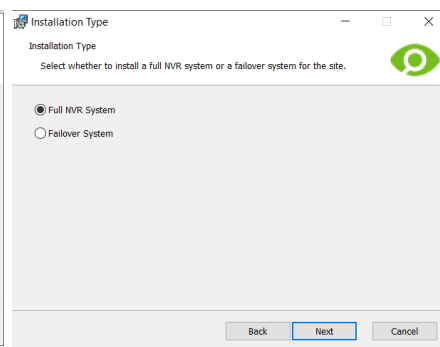
Once you have acquired the software, you will need to install it; double clicking the installer file will direct you to the **Installation Wizard**.



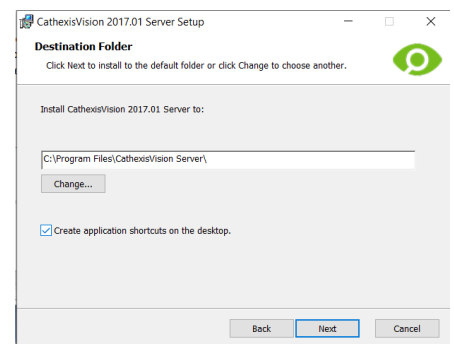
a. Follow the installation Wizard



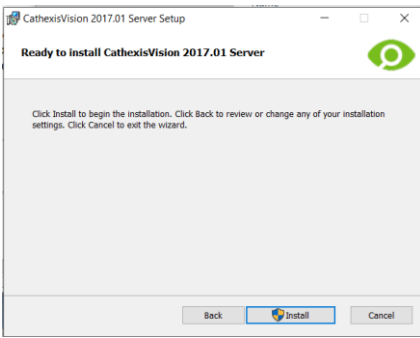
Accept the license agreement



If you are installing on a unit that has no **CathexisVision** software, you will be prompted to choose between a NVR and a Failover installation



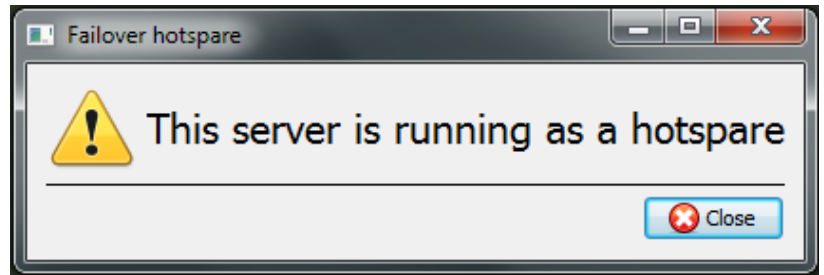
Choose the installation folder (this is best left as it is)



Click install, and when the installation is complete, click **Finish**

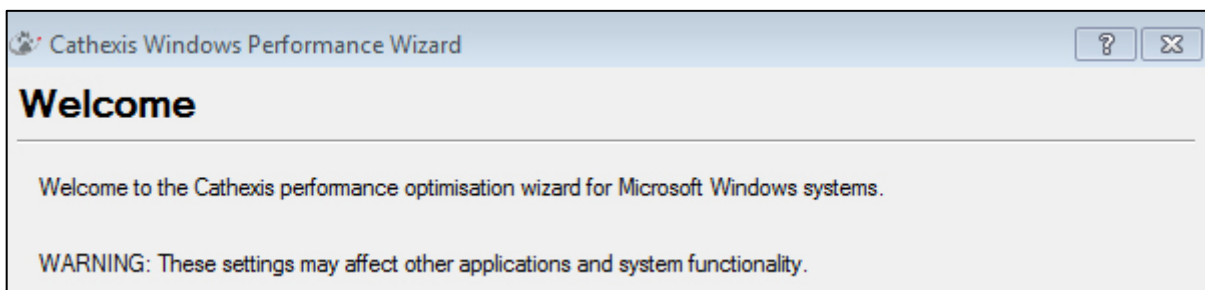
Failover Installation

After a successful Failover installation,³ attempting to initiate **CathexisVision** (by double clicking on the **CathexisVision** icon) will open the following dialogue box:



b. Cathexis Windows Performance Wizard

The Cathexis Windows Performance Wizard optimises several Windows system settings for use of the CathexisVision on a Microsoft Windows PC. 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

³ There is detailed information about Failover in the **Setup** section of the [CathexisVision manual](#).

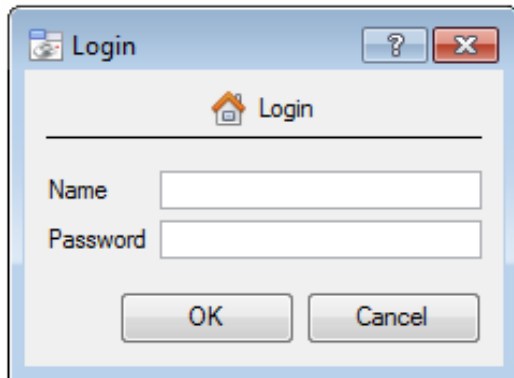
Disable the Windows Defender service	Not required, but provides a small performance gain over a secured system.	Optional
Disable the Windows Search Indexing service	Provides a significant performance gain by preventing background indexing of the file system	Recommended
Disable the Windows Desktop manager Service	Disables the Aero desktop and appearance enhancements to reduce graphics system load	Optional

c. Start CathexisVision

This is the user interface that allows you to configure the recording parameters, and allows you to view the live video and review the recorded video.



d. Log in



Default Login Details

Username: admin
Password: admin

NetBSD servers and all pre-CathexisVision 2014 systems:

Username: dvs
Password: dvs

4 Licensing

Before progressing, the licenses for the unit need to be applied to the software. The mode of licensing will depend on whether you have access to the internet, and how you purchased the software. You may be licensing from a remote unit (this being a viewing unit on which you have installed a copy of the software), or from the local unit (the unit you are working on). This section provides a guide for each situation.

a. Licensing from the Local Unit

NB: The following instructions describe the process for licensing the unit that you are **currently working on**. For the process for licensing a **remote unit**, see the next section ([4b Licensing From a Remote Unit](#)).



Log in

A Windows-style login dialog box titled "Login". It has a home icon and the word "Login" at the top. Below, there are two input fields: "Name" and "Password". At the bottom, there are "OK" and "Cancel" buttons.

Default Login Details

Username: admin
Password: admin

NetBSD servers and all pre-CathexisVision 2014 Windows systems:

Username: dvs
Password: dvs

Once you have logged in you should be presented with the following images. The splash on the left will be superimposed over the dialogue on the right.

A dialog box titled "This site is unlicensed". It contains three radio button options: "License using a product key" (selected), "License using a license pack", and "Save license request file". There are input fields for the product key and license pack, and a "Browse" button. A red error message "Enter a valid product key" is displayed. At the bottom, there are buttons for "Restore backup configuration", "License wizard", and "Next >>".

You may now license your unit via one of the following steps:

Trial License

To activate a trial license, simply copy and paste the product key from your trial license PDF (you need to be connected to the internet).

Internet Connection on the Unit

If you have access to the internet, and your vendor supplied you with a product key, enter the product key. The system will connect to the on-line licensing system and complete the process for you.

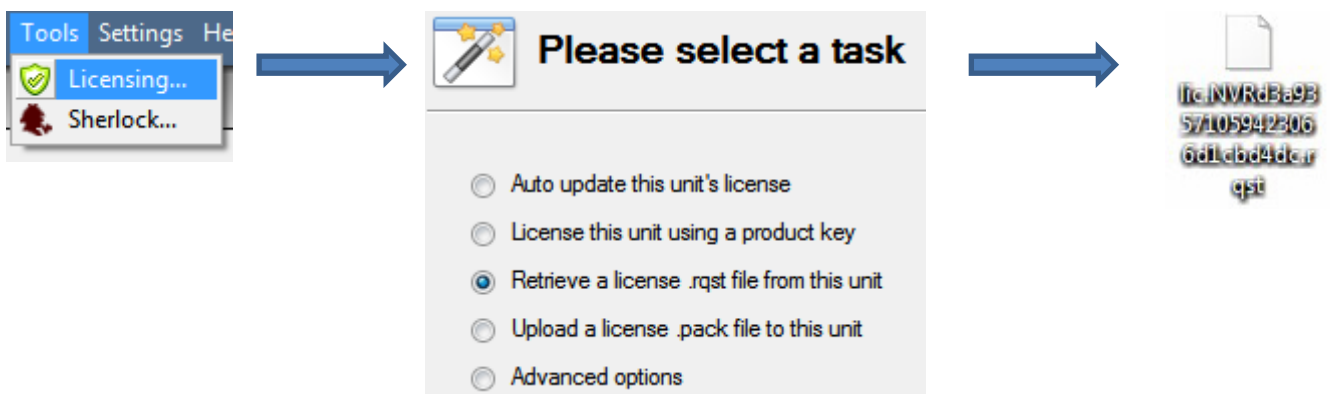
No Internet Connection on the Unit

If you have no internet connection on the unit that you are licensing from, then you will need to 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 you must save a **.rqst** (request) file, from the unit you are licensing, and email this to support, along with the information relevant to the licenses you wish to add to this unit. Support will then respond with a **.pack** file, containing the licenses, which you will then upload to that unit.

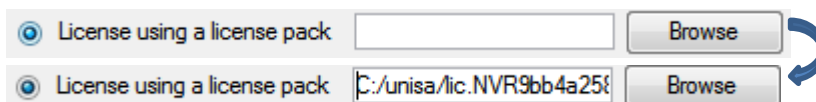
- *Save a licence request file to a USB key/cd*

A **.rqst** file must be retrieved from the unit that you wish to license.



Email this **.rqst** file to support, along with the information relevant to the licenses you wish to add to this unit.

- *Upload the .pack file to your unit*




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

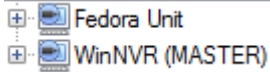
b. Licensing From a Remote Unit

When you are licencing from a remote unit (i.e. you are licensing a unit that is not the one you are working on), the procedure is different. This is because when you click **Tools** → **Licensing** this will license the unit you are currently logged in on.

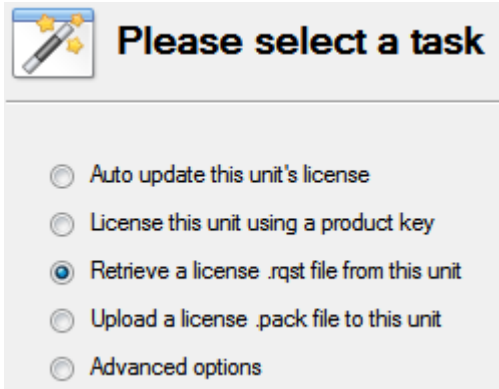
Open Configure Servers

To open **Configure Servers**, of the site that you are 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 that you would like to license and select **Licensing** from the drop-down menu.



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

You will get the options that you see here on the left.

You may **Auto-update** if this unit has already been licensed, or use a **Product Key** if one was provided.

If you need to request a license you should follow the procedure detailed above in the [0 No Internet Connection on the Unit](#) section.

Note: You will save the **.rqst** files, and upload **.pack** files, to storage media attached to the unit you are doing the licensing *from*, not the one that you are licensing. You should always retain the **.rqst** file & the **.pack** file for future licensing support.

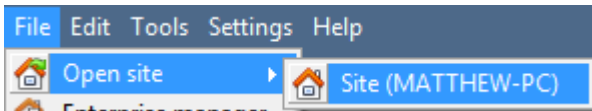
5 The Setup Tab

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**.

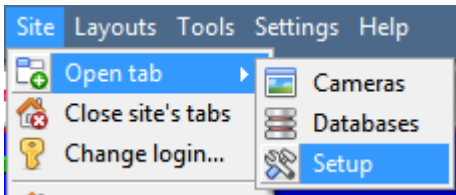
a. Open the Setup Tab

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

1. **File** → **Open Site** → **Site_Name**




2. **Site** → **Open Tab** → **Setup**




b. General Setup

General site setup

Site name	<input type="text" value="SiteName"/>
Offline access level	<input type="text" value="1"/>
Default access level	<input type="text" value="Password required"/>
Site contact	<input type="text" value="No contact"/> 
Network	<input type="text" value="312500kb"/> <input type="text" value="1 Gb LAN"/>
<input type="checkbox"/> Use site passwords	
<input type="checkbox"/> Hide failed cameras in resource panel	

From the general setup, you are able to set the site name, default access levels, site contacts and network speed.

Once you have made your changes you need to click  for them to take effect.

6 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.

a. Adding Cameras

There are two ways to add a camera in **CathexisVision**.

1. The camera **Addition Wizard**. (This will also give you the option to add databases, schedules, and events to system.)
2. The **Copy/Paste** Function.


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

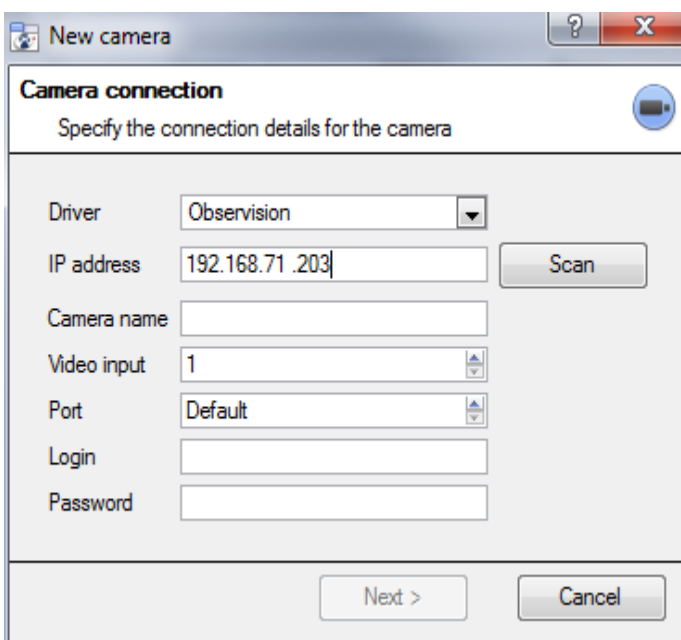
File → **Your_Site_Name** → **Open Tab** → **Setup** → **Configure Servers**  → **Expand the appropriate Server** →  **Cameras**.

Addition Wizard

The camera addition wizard will take you through all the steps needed to add a camera, as well as allowing you to create databases, schedules, and events along the way. There are two phases in the **Addition Wizard**:

1. The addition of the camera, and
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  button at the bottom of the cameras panel. This will begin the wizard. The following will take you through each step in the wizard.



Driver: Select the relevant driver for your camera.
IP Address: Set the IP address of the camera you want to add.
Scan: will scan the network for cameras that have been setup to make themselves available. You may then click on a camera and it will automatically set its driver and IP address.
Camera name: the descriptive name you give the camera.
Video Input: use if you are connecting to an encoder that has multiple analogue inputs (if not, leave it on 1).
Port: has a default setting, but if you wish to connect through a specific port, set it to the port of your choice.
Login and password: the cameras' current login details.

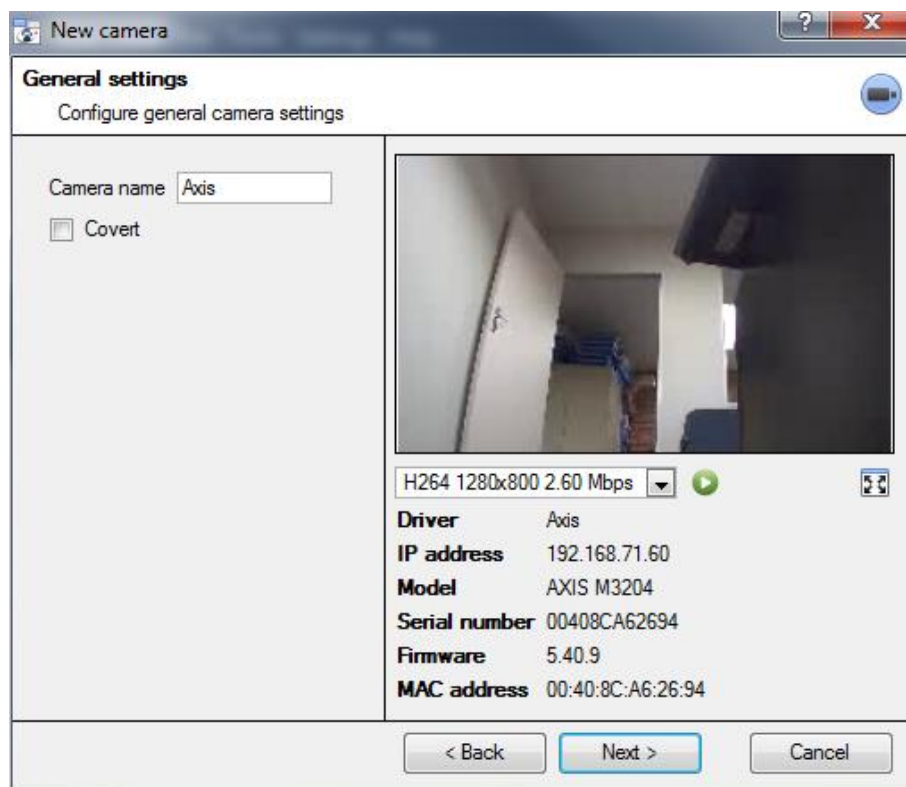
Connection

The first step in the Wizard is the Camera Connection step. Here you setup all the connection details of the camera.

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.

General Settings



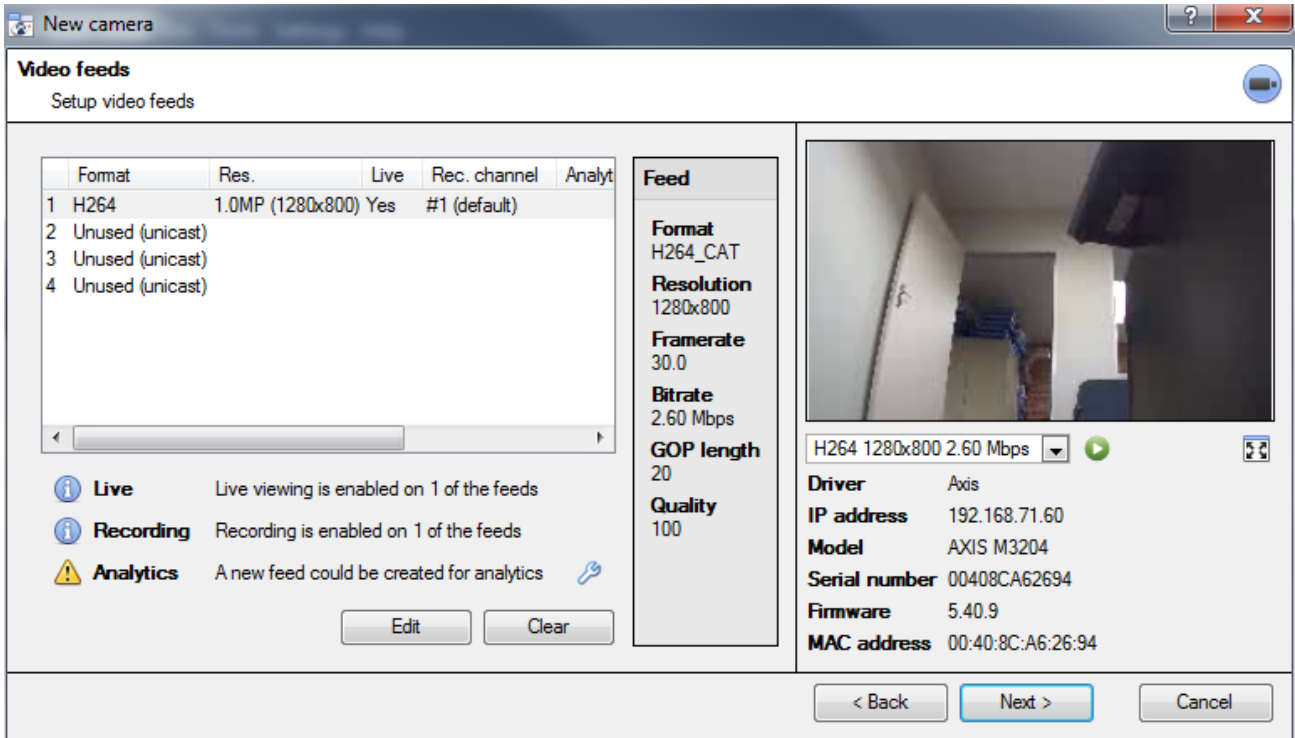
See the table below for description of this window.

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.

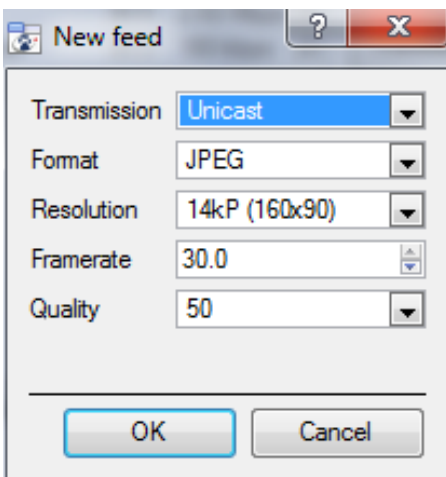
Name	Give the camera a descriptive name. So as to make it easily identifiable in a list.	
Covert	CathexisVision gives you the option to create a covert camera. There is a difference between a camera being covert, and a user not having access to it.	
	Covert vs.	Access Level Defined
	Will only be present 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 log in 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. You can see it underneath the image preview.	
Live Preview		The image you see is a frame grab from the video feed that you have chosen To play the live preview click on: To enlarge the image click on:

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.

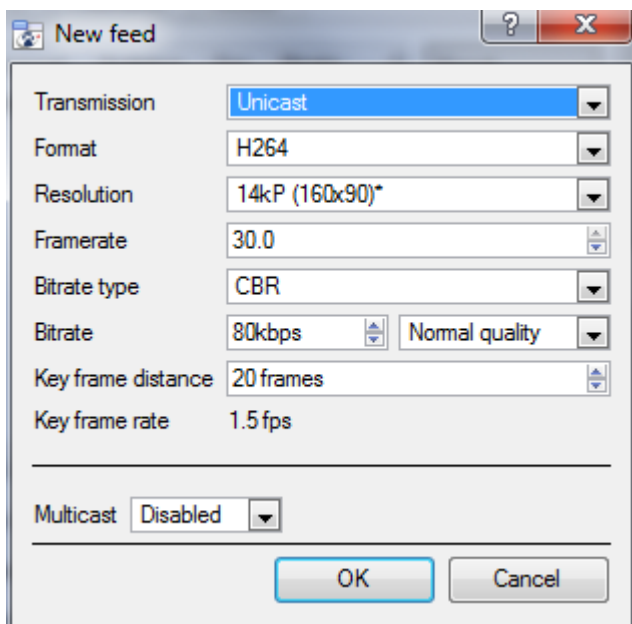


JPEG



Transmission will show the transmission type
Format is the compression format used by this stream. Click the drop-down menu to choose the one you desire.
Resolution is the amount of pixels in the image.
Framerate is the amount 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.

H.264



Transmission will show the transmission type.

Format is the compression format used by this stream. Click the drop-down menu to choose the one you desire.

Resolution is the amount of pixels in the image.

Framerate is the amount of frames recorded per second.

Bitrate Type this is the way that your 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).

Multicast

You may setup **Multicast** on your feeds by selecting the relevant option from the feed dialogue. There are three options; **disabled**, **auto**, and **manual**. If you do not want to use **Multicast**, leave this disabled.

Manual

Multicast

Multicast IP





Multicast port

With manual selected you will have to enter in your own **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**.



• Feed Notifications

 Live	Live viewing is enabled on 1 of the feeds
 Recording	Recording is enabled on 1 of the feeds
 Analytics	A new feed could be created for analytics 

This area will show you the status of the feeds you have created. Whether you have enabled **Recording**, **Live Viewing**, or **Analytics**.

Note: If you click on any of the above icons, they will display some detailed information about the feed/problem.

Automatic Configuration

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




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

Right-clicking on a feed, after you have set it up, will bring up the menu seen below. These are settings that can only be accomplished after the feed has been setup.

Disable live	Disable Live	viewing of the feed
Disable recording	Disable Recording	of the feed
Set recording channel ▶	Set Recording Channel	Define which channel number will represent this feed
Enable analytics	Enable Analytics	Enable Video Analytics

Analytics

In order to enable analytics on a unit you should 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 you do not setup an analytics enabled channel here you will not be prompted to add VMD later in this wizard, nor will you be able to add VMD, using this feed later.
2. Only Feeds that are QVGA resolution, and lower, will give you the option to enable analytics.
3. If you see a  at the end of the  **Analytics** feed notification, you do not have a feed enabled for analytics. Clicking on the  will automatically enable one.

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.



Setup I/O

Inputs

Name	State	Enabled
1 Input 1	 Clear	
2 Input 2	 Clear	

Enable

Outputs

Name	State	Enabled	Pulse duration	Pulse only
1 Output 1	 Clear		1000ms	yes

Enable Edit

I/O

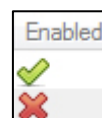
Inputs are used to trigger an event; **Outputs** are used to give a desired output as a result of a triggered event.

Renaming

Name	State	Enabled
1 Button	 Clear	

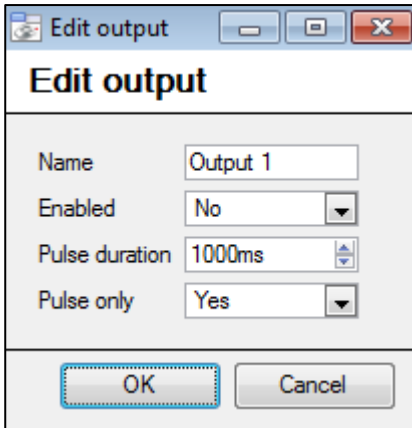
Double click on the I/O name to rename it.

Enabling



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

Edit an Output



Name

Give your output a descriptive name

Enabled

Will tell you whether the output is disabled/enabled.

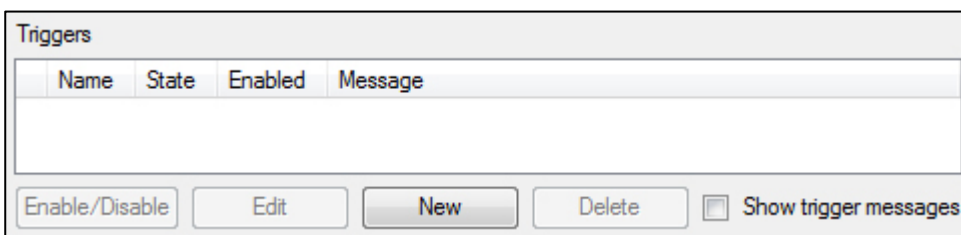
Pulse duration

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

Pulse only

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

Triggers

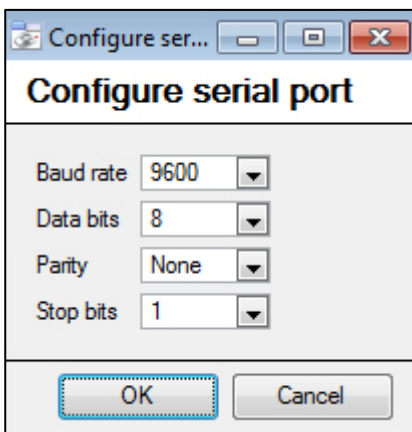



Certain cameras will have their own event triggers, and encoders will often have I/O options

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 your I/Os descriptive names, otherwise they will not be identifiable.

Serial Ports



Highlight the serial port you wish to configure then click the  button.

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

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

Pan-Tilt-Zoom (PTZ)




Check the **Enable PTZ** box, if you are adding a PTZ camera. After this all the available PTZ options will appear in the wizard interface:

- **General Settings**

Enable PTZ

Protocol



Address

Port   

Preset 1 name


Zoom speed

Home position

Go home during schedule  

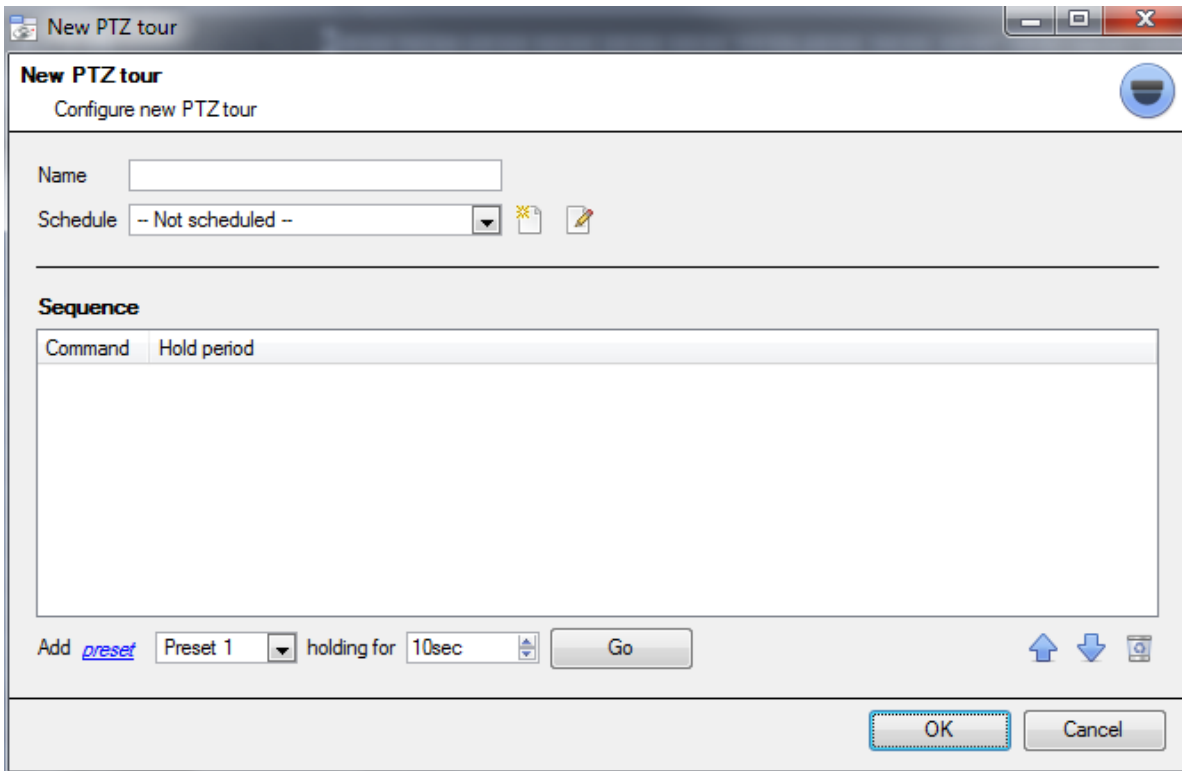
The home preset will be recalled when user control is relinquished
or after a system PTZ command is issued

Switch wash/wipe relays

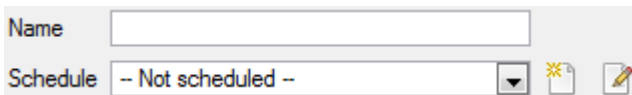
Preset Name	You may give your Presets descriptive names (such as 'front door' etc.)
Zoom Speed	This defines how fast your camera will zoom in when using the PTZ controls. Note: Use the live view panel, to the right, to see if the zoom speed is satisfactory. Test this by clicking on  on the PTZ control 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 You may set a schedule during which the camera will return to its home position. When the schedule (see: Schedule) is inactive the camera will remain in the last position that it was left in. If there is no schedule set, the camera will never 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.)

- **Configure PTZ Tours**

If your device supports Tours, to create/edit a PTZ tour click on ; this will take you to the list of tours. To create a new tour click on .



Name and Schedule



Give the tour a **descriptive name**, and, if you desire, a schedule (see: [Schedule](#))

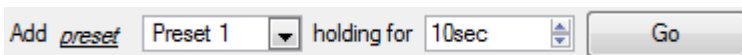
Sequence

This is the sequence that the Presets will run in.

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

Preset

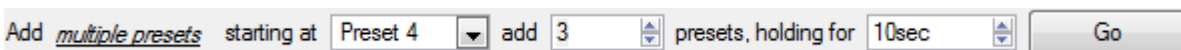
Select the preset, set how long you want the camera to linger at this preset.



Multiple Presets

- **Starting at:** Select the first preset you want to add.
- **Add:** This is the number of Presets, you want to add.

In the example below you will be adding Presets 4 to 6.

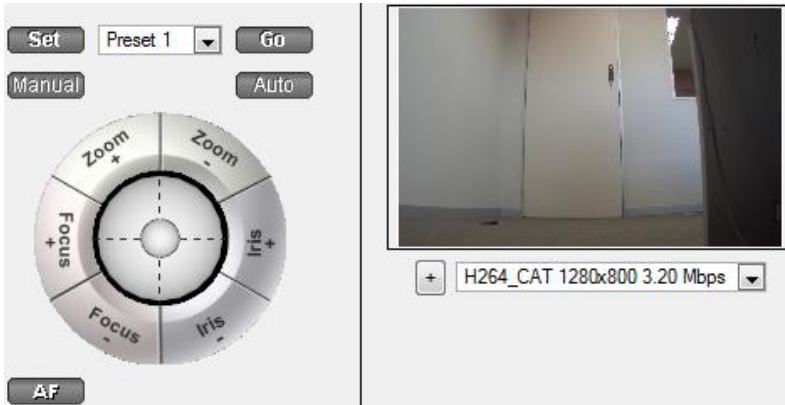


Pattern

Select the pattern that you want to add.

Add [pattern](#) 1 holding for 10sec

- **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). He / she can also control pre-configured camera views called "Presets".

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


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

Using the PTZ Control Panel

To pan left / right from the PTZ panel

 Drag joystick left / right.

To move the camera faster from the PTZ panel

 Distance determines speed - drag joystick out, in required direction.

To zoom in / out from the PTZ panel

Watch the live camera as you press the Zoom + and Zoom - button.

To go to a preset from the PTZ panel

Select the preset from the dropdown, and then click GO.

> The camera view will change to the preset.

To relinquish manual control of the dome / PTZ camera from the PTZ panel

Click **Auto**. > If your system runs remote tours automatically, or switches display based on events, these automated responses will take over.


To allow more or less light in the image (lighten and darken the live camera view) from the PTZ panel

Press the iris+, or iris - button. You will see the image lighten or darken.

To tilt up / down from the PTZ panel

 Drag joystick up / down

To move the camera slower from the PTZ panel

 Distance determines speed - drag joystick closer in, in required direction

To focus further / closer from the PTZ panel

Watch the live camera as you press the Focus + and Focus - button

To gain manual control of the dome / PTZ camera from the PTZ panel

(This applies if you system runs remote tours automatically, or switches display based on events)

Either click **manual**, or simply move the software joystick

Define a Preset (To set a preset from the PTZ panel)

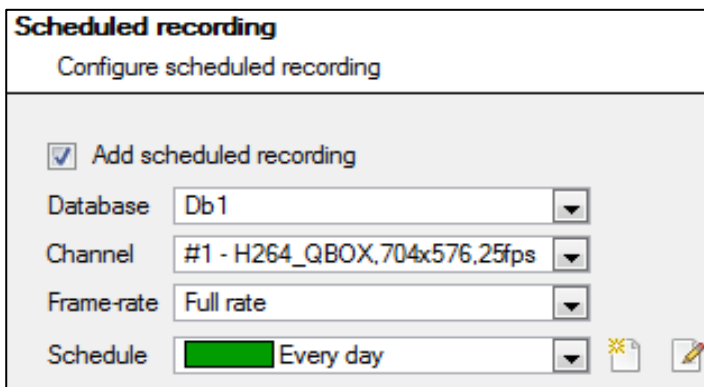
1. Select the preset number, from the dropdown menu.
2. Use the joystick controls to establish the camera View, Zoom, Focus and Light (Iris).
3. Click SET.
4. Go to this preset to check it.

Database

All cameras need to record to a database. If you have not yet created a database you will be taken to the database setup, after you are done with the PTZ setup. If you have already created a database you can either proceed straight to the **Scheduled Recordings/Video Motion Detection setup** and use the current database, or you may create a new database for this camera by checking the **Create a new database** option in the bottom left hand corner of the screen.

Note: This will setup the database on the recording server that you added the camera to, and not the unit on which you are working (if you are using a client, or other remote unit). This means that you will have no file system knowledge of the remote unit, and will need to enter the path manually. (If you are on a remote unit you will not have the option.)

Schedule

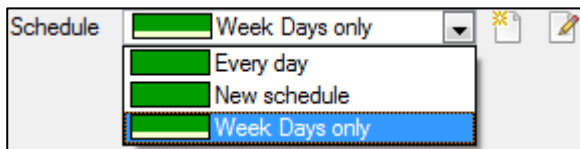


Schedule recording

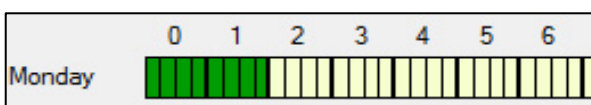
Set your camera to only record at certain times, to increase efficiency and save disk space.

Select the **database, channel and frame-rate** that you want to apply a schedule to.

Setup a Schedule



Select your schedule from the drop down menu. You can create a new schedule by clicking on the icon. To change an existing schedule click on the button.



Select recording time - Left-click and drag (the green bars).

Deselect recording time - Right click and drag (the yellow bars).

In the above image, Monday will be recording from 00:00 – 02:00 in the morning.

Activity Recording (VMD Event)

This does a number of things. This will add Video Motion Detection, pre-event recordings, and add an Event to the system.

- **Recording**

The recording option allows you to setup the recording settings.

Database is the database this event will record to. **Schedule** defines when this event will be active.

Recording channel defines which video channel will be recorded.

Frame rate defines the frame-rate that recordings will take place in.

Pre-events define a time that will be buffered, and recorded, from before the initial trigger.

- **Activity**

The default algorithm here is the **Basic Video Motion detection**. As a quick-start this should be fine for now.

The full details of the **CathexisVision** algorithms are too detailed to go into here, for a full description see the **Video Analytics** section of the main manual.

b. Copy/Paste Cameras

If you are adding more than one camera that operates on the same driver **CathexisVision** offers a very easy solution. You may copy and paste entire new cameras, using the addition information of one preciously added camera.

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

Paste Mode: Sequential

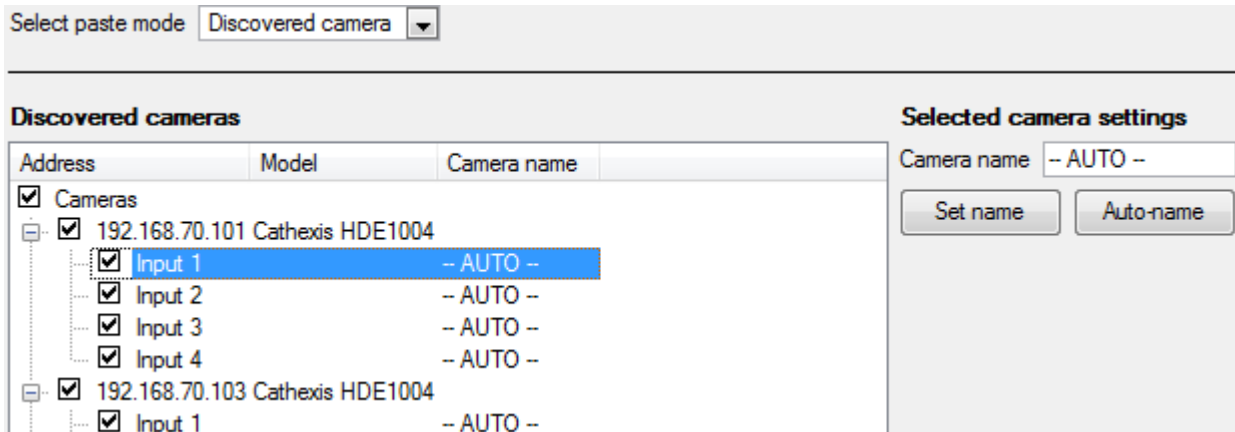
The paste mode sequential window gives you the option to add the new cameras as a direct copy of the camera that you copied.

Start IP Address will determine the IP address of the first new camera that you are adding. The IP addresses will be incremented from here. (So make sure you have no used IP addresses in this range.)

Number of cameras per encoder must be the full amount of channels available on this encoder

Start Input is the actual physical channel that you want to add the first camera to.

Paste Mode: Discovered



Note: This will copy the video settings from the copied camera onto the discovered cameras that you select.

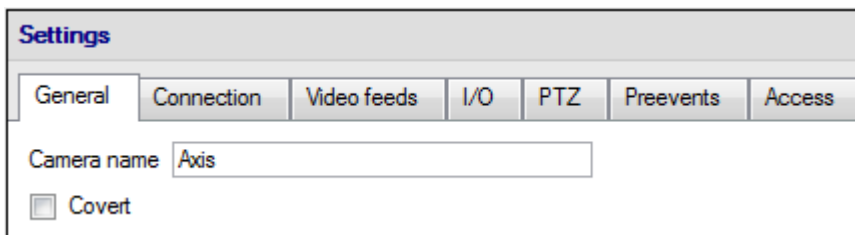
Copy/Paste Video Settings

If you have already added a number of cameras with the same drivers and simply wish to transfer the Video Settings of each camera across, then you may right-click and select **Copy**. Then right-click on the camera you wish 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.
- You may only copy onto cameras that have the same driver as the camera that has been copied.

c. Editing of an Added Camera (Tabs Based)⁴



You may 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.

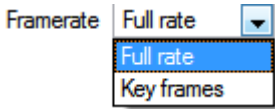
- **Repeated Options**

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, two new options are now available in the **Editing** tabs: **pre-events**, and **Access Levels**. These two options will be dealt with here.

Note: In the **Wizard**, you may have gone 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.

⁴ If you make any changes to the setup of a camera that is currently multicasting, you will need to restart the streams. This simply entails removing and reselecting the cameras in the Cameras tab, after you have saved your settings.

Pre-events



Pre-events were setup under the **Activity Recording** section of the **Wizard**. You cannot define the amount of pre-events here, but you may define the frame rate of the pre-events in this tab.

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

Access

Under the **Access** tab you will setup which user access levels have control of the different facets of the camera.

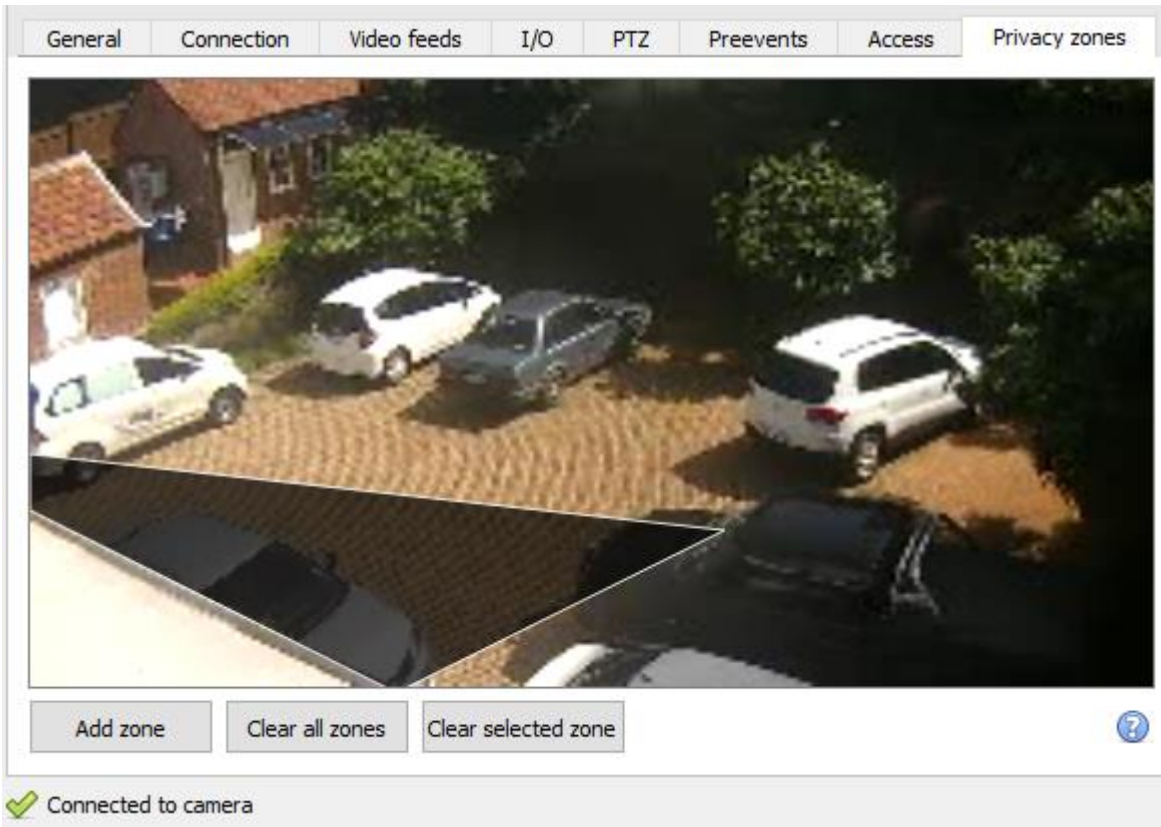
	Live	Review	PTZ	PTZ menu	Set presets	Audio listen	Hide privacy zones	Set all
Level 1	✗	✗	✗	✗	✗	✗	✗	✓ ✗
Level 2	✗	✗	✗	✗	✗	✗	✗	✓ ✗
Level 3	✗	✗	✗	✗	✗	✗	✗	✓ ✗

Live	This controls which Access Levels can view the camera's live feed
Review	This controls which Access Levels can review recorded footage from this camera.
PTZ	This controls which Access Levels can control PTZ movement.
PTZ Menu	This controls which Access Levels have the ability to change 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.

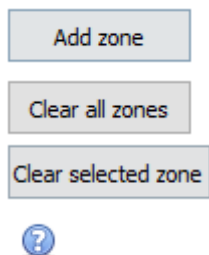
- Important Note on Access Rights:**

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

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.

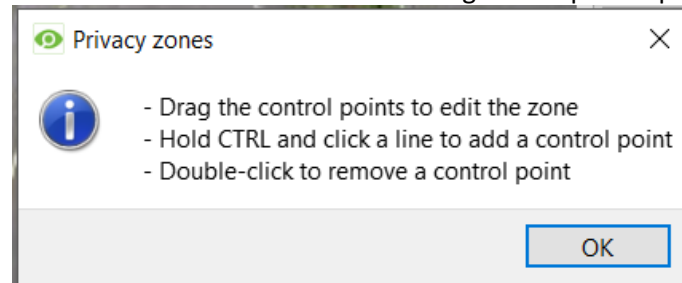


Add a new privacy zone to the camera image.

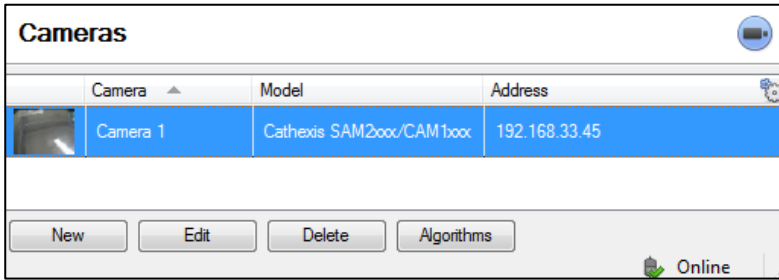
Clear all privacy zones from the camera image.

Clear only the selected zone from the camera image.

Click this show instructions on defining the shape of a privacy zone:



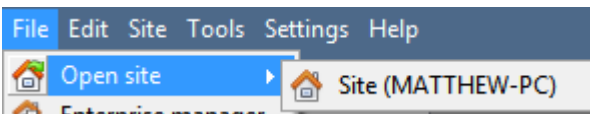
d. Camera Successfully Added



Your camera has now been setup and will start recording as configured. From this screen you can now add another camera or edit the camera you have just setup.

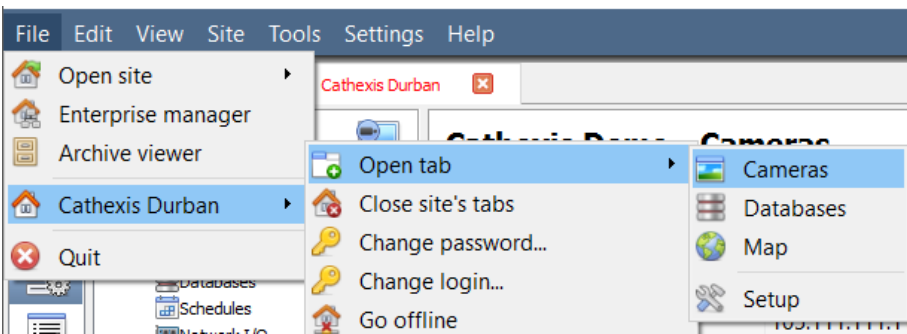
To view your Camera/s

- *Open Your Site*



File → Open Site → Your_Sites_Name.

- *Open the Cameras Tab*

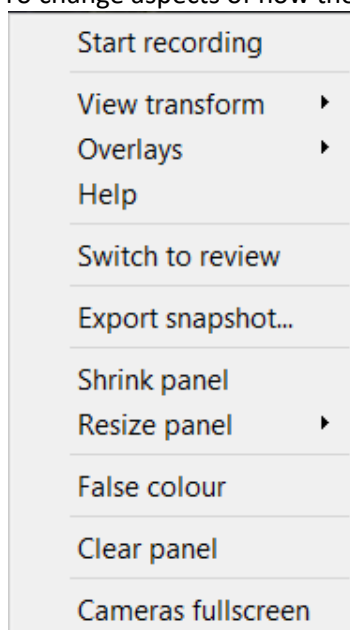



File → Your_Sites_Name → Open Tab → Cameras.

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

Middle Click on a Live Camera

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



Start recording: If User Recording has been setup, this option will allow the user to manually trigger a recording. (An  icon will appear in the top right hand corner, when a User Recording is in progress.)

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

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

Overlays: Allows you to view 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 you to switch back and forth between live and review footage.

Export Snapshot...: Opens a window which lets you print snapshot, save to folder, copy to system clipboard, or copy to CathexisVision clipboard. You may also choose to include the camera name and time of snapshot in the overlays.

Shrink panel: Reduces the size of the camera panel.

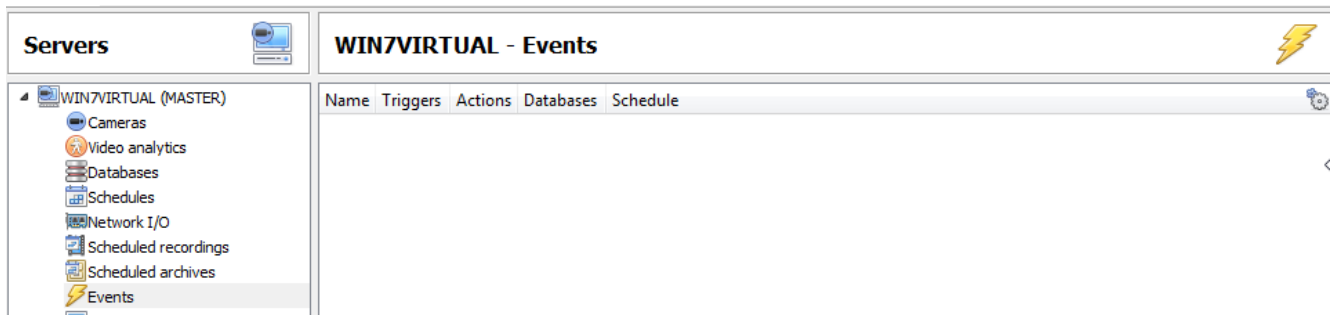
Resize panel: Gives you more resizing options.

False colour: Changes the colour of the image to false colour.
Clear panel: Removes the camera/s from the currently selected panel/s.
Cameras fullscreen: Fills the entire screen with the Cameras Panel; creating a Video Wall. The same procedure will exit fullscreen mode.

Middle-Click on a Camera in Review

View transform ▶	View transform: Allows you to transform images for cameras with special lenses. (E.g. 360 degree cameras.)
Select database	Select database: If you have multiple databases set up, you can set a camera to record to a certain database using this option.
Overlays ▶	Overlays: Allows you to view the different analytics algorithm's that have been applied to this camera's feed, live in the Cameras Tab.
Switch to live	Switch to review/live: Allows you to switch back and forth between live and review footage.
Export snapshot...	Export snapshot...: Opens a window which lets you print snapshot, save to folder, copy to system clipboard, or copy to CathexisVision clipboard. You may also choose to include the camera name and time of snapshot in the overlays.
Shrink panel	Shrink panel: Reduces the size of the camera panel.
Resize panel ▶	Resize panel: Gives you more resizing options.
False colour	False colour: Changes the colour of the image to false colour.
Clear panel	Clear panel: Removes the camera/s from the currently selected panel/s.
Search ▶	Search: Use snap-search feature to search the database for snapshots similar to the current image.
Cameras fullscreen	Cameras fullscreen: Fills the entire screen with the Cameras Panel; creating a Video Wall. The same procedure will exit fullscreen mode.

7 Events



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

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

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

New Event
New event

General | Triggers | Actions | Resources

Name:

Description:

Schedule:

Priority:

OK Cancel

- A Trigger is what sets off an event. You can have 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.

8 Uninstall

Thank you for using **Cathexis** products! We are sorry to see you uninstalling the software. We welcome any feedback or comments that you might have on our products and services.

To uninstall, simply follow the uninstallation process that is native to the operating system which you installed **CathexisVision** onto.