



CathexisVision 2020.2 Operator's Manual

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1. Introduction

This guide will detail the different operating procedures that the person in the control room may be expected to undertake, using the CathexisVision Client software. This does not include the setups that take place, either in the setup tab, or via the menus. For this information please refer to the Setup Manual.¹ This manual will deal with questions such as “how do I zoom on a PTZ camera”, and “how do I review previously recorded footage?” The Setup Manual, on the other hand, will provide information on how one would add, and setup, a new camera, or add a motion detection algorithm to a camera.

1.1. Supported Languages

The CathexisVision GUI supports the following languages:

- Arabic,
- Dutch,
- English,
- French,
- Hungarian,
- Italian,
- Portuguese,
- Spanish.

To change the language of the GUI, follow **Settings Menu → General → Language**, and consult the Setup Manual section for more a more detailed description of this menu.

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.

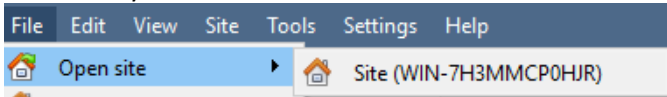
2. General Interface

The CathexisVision interface changes depending on the tab that is opened. However, some elements of the interface are common across all tabs. Those elements are dealt with here.

2.1. Connect and Login to Site

2.1.1. Open Site

The CathexisVision Client is not tied to any particular Site, and as such, the user first has to open a connection to the Site they wish to view.



Clicking on **File** → **Open Site** will open a list of all Sites that have been added to the viewing PC. Select the Site to view.

2.1.2. Login



After selecting a Site, there will be a prompt to enter login credentials.



Name

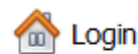
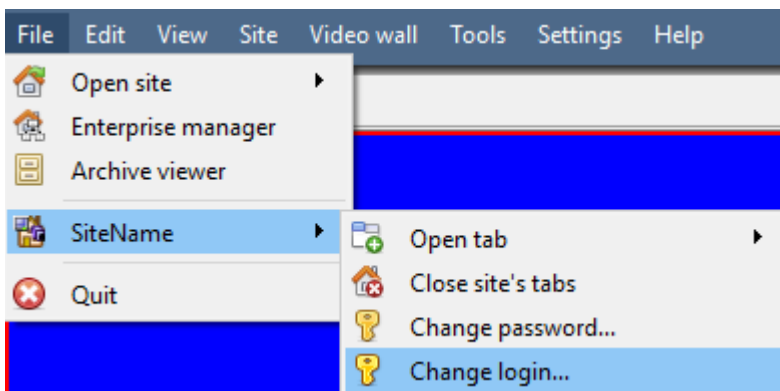
Password

OK

Cancel

2.1.3. Change Login

To change login, follow **Site** → **Change login...** and enter details.



Name

Password

OK

Cancel

2.2. Minimising the GUI

2.2.1. Windows

It is not recommended to minimise the CathexisVision GUI in Windows. If the application is minimised, and an event occurs, a notification will popup only if there is no other active application running. The taskbar will flash indicating

there is a message in CathesisVision, but the popup will not appear on top of other open applications. This is because Microsoft Windows does not allow applications to interrupt what the user is currently doing.

2.2.2. Linux

In Linux, the event notification will appear on top of other applications.

2.3. Site Tabs


These are the various tabs for one or multiple Sites. The nature of the tab is indicated by icons and the Site name of the tab is indicated.



2.3.1. Open a Tab

Option 1: **File Menu → Site → Open Tab.**

Option 2: **Right-click on open Site tab → Open tab.**

Close tab: .

2.3.2. Tab Types



Cameras Tab.

Setup Tab.

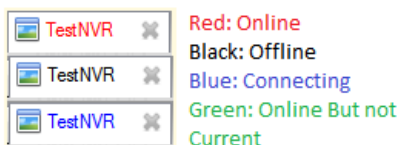
Databases tab.

Maps tab.


Archive Viewer tab.

2.3.3. Connection Status

The colour of the text in the tab indicates its connection status:



2.3.4. Default Open Tabs

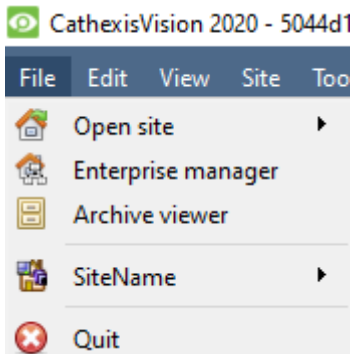
Each Site can be custom-configured to automatically load certain tabs, when a connection is made to the Site (this is configured from **File → Enterprise Manager → Right-click Site → Properties**). To close a tab, click on .

2.4. Menu Bar

The CathesisVision menu bar is present in all Site tabs, however some tabs present additional menu options. This section outlines the menu bar and its options specific to certain Site tabs.

2.4.1. File Menu

The CathexisVision File Menu does not change when different Site tabs are opened.



Open Site: The menu attached to this tab will be a list of the Sites that have been added to this unit.

Enterprise Manager: The enterprise manager is where all Site management occurs. Add/edit/remove Sites, as well as create Site folders. The assignment of Resource Sites occurs in the Enterprise Manager as well.

Archive Viewer: This will open up the Archive Tab. If there is any archived video it can be viewed here.

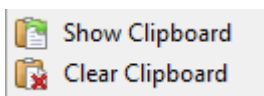
SiteName will open site and setup information.

Open Sites: The Site names under Archive Viewer and above Quit, represent the Sites that currently have connection tabs open in the GUI.

2.4.2. Edit Menu

The edit menu, in general only displays the Show Clipboard, Clear Clipboard options. When the Enterprise Manager is open, there will be a range of different options.

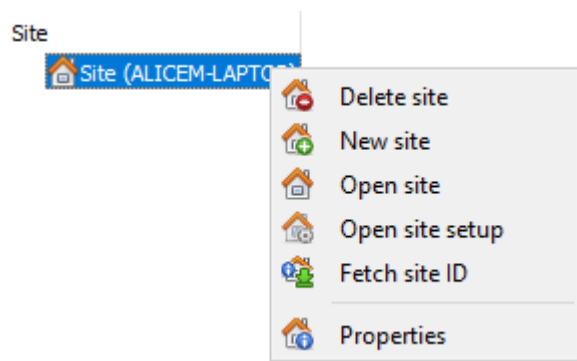
2.4.2.1. General Edit Menu



The only information contained on the clipboard in question will be when a screen grab is captured from one of the cameras in the Cameras Tab.

2.4.2.2. Enterprise Manager Edit Menu

Right- clicking on the site will bring up the following options:



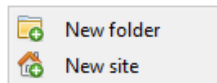
New/Open/Delete Site will add a new Site; open an existing Site, or delete an existing Site.

Fetch Site ID gives a created Site an ID, which is essential for a Site to run. Perform this after creating the Site, and adding unit connections to it.

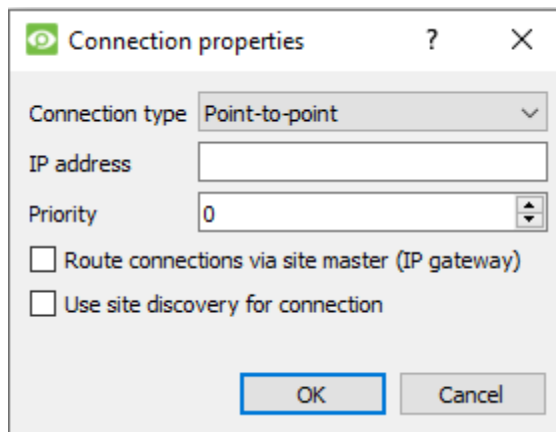
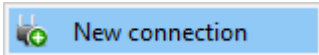
Right-clicking in the space below the site in the enterprise manager will bring up the options to create a **new folder** or **new site**.

Site

Site (ALICEM-LAPTOP)



Right-clicking in the box to the right of the site, enables one to add a new site connection



Choose **Connection type**, **IP address**, and **Priority**. The priority is a number assigned to the connection. A site can have more than one connection. The connection with the highest priority (0 being the lowest) will be used first to make the connection.

Also check whether to enable **route connections via site master or to use site discovery for connection**.

Route connections via site master are used for access sites on public IP addresses, or sitting behind a router.

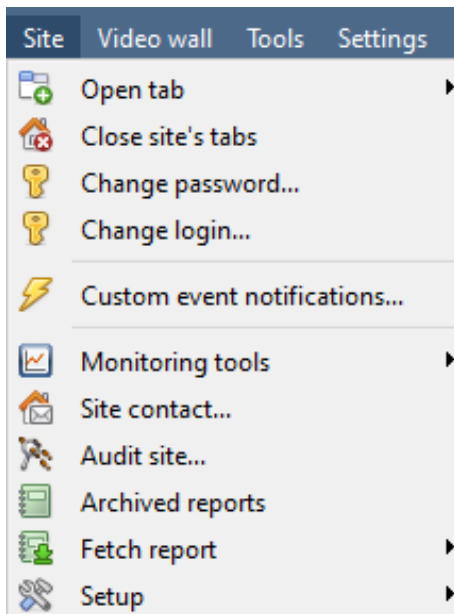
Use site discovery for connection is used for the failover client setup. It will be used to discover the failover server on the site running as master during failover, and also when the master servers recover again.

2.4.3. View Menu

The only option available here is to change the GUI view to fullscreen.

2.4.4. Site Menu

The Site menu will relate to the currently viewed Site. To open a new Site, follow **File→ Open Site→ Site Name**. This same menu can also be found from a list of all currently open Sites under the **File Menu**.



Open Tab **will open any available tabs (Cameras, Database, Map)**.

Close Sites Tabs **will close all open tabs for this Site**.

Change password will **change the password**.

Change Login **will change the user who is logged in**.

Custom event notifications... will set **specific event notifications**.

Monitoring tools lays out the **Forensic Tool, Stats, and Site Overview**.

Site contact **will show the name and details of the Contact person for the Site**.

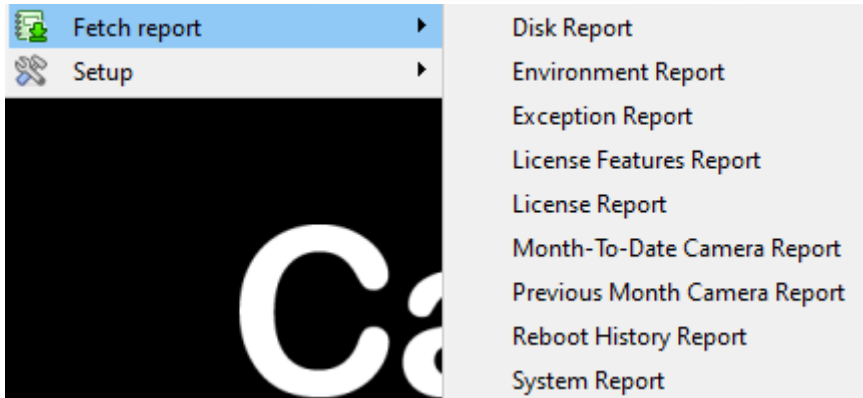
Audit Site...allows auditing SiteName details.

Archived Reports **will display a list of previously archived reports**.

Fetch Report **will fetch a Site report**.

Setup is **greyed out unless logged in as an administrator**.

2.4.4.1. *Fetch Report*



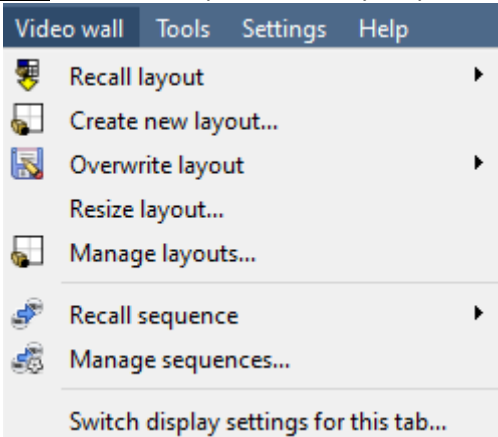
This menu allows a full report to be pulled for the entire Site.

Select to pull a Template, or pull up a quick report based on the list of variables below the border line.

Note: For individual unit reports, and a full description on the nature and details of reports, see the **Setup Guide** → **Configure Servers** → **Setup Tab: Reports** section of the manual.

2.4.5. Video Wall Menu

Note: this menu option will only be present when viewing a **Cameras Tab**.




A **Layout** defines how the cameras appear on the screen, in the Cameras Tab. Including which cameras are shown, and how much space they take up on the screen.

A **Sequence** is a cycle of individual cameras that will run, on a timer, in a single viewing panel, in the Cameras Tab.

The **Switch Display Settings** for this tab will define the behaviour of the currently open Cameras Tab, when video information is sent to the Client Station with an alarm.


2.4.5.1. *Recall a Layout*

To bring up a list of existing Layouts, click on  **Recall** and select the layout name desired.

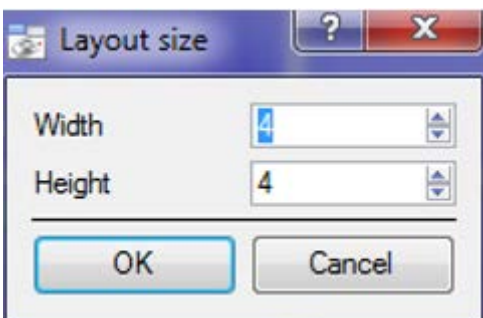
2.4.5.2. *Create new Layout*

To create a layout, organise cameras on the screen as desired (**double-left-click to expand; single-right-click to reduce**). Then click on **Layouts** → **New**. Give the Layout a name, and click OK. (One can use Layouts created in the Cameras Tab in the Monitors Tab, and Vice Versa).

2.4.5.3. *Overwrite Layout*

Clicking on  **Overwrite**, and selecting one of the Layouts in the list, will overwrite that Layout with the current panel organisation.

2.4.5.4. *Resize Layout*




Clicking on **Resize layout...** will give the ability to change how many cameras are arranged on the screen. Here, define how many cameras there are per row, and per column.

The maximum number of cameras allowed per screen will be an 8*8 matrix. This gives a Layout with 64 cameras. (This would require an incredibly large screen to be practical though.)

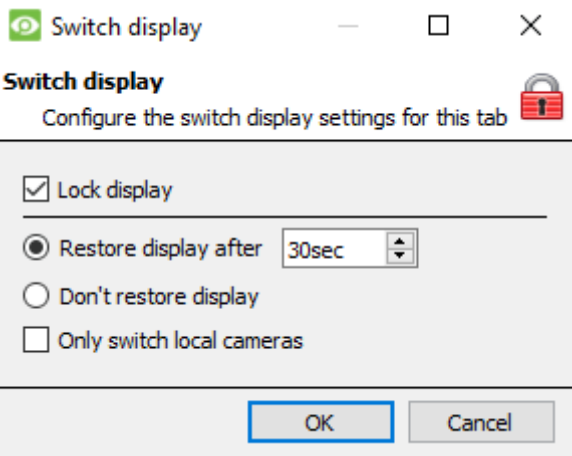
2.4.5.5. *Recall Sequence*

A **Sequence** is a cycle of individual cameras that will run, on a timer, in a single viewing panel.

To recall an existing sequence, click on  **Recall sequence** to bring up a list of all existing sequences. Click on the sequence to run.

2.4.5.6. *Switch Display Settings For this Tab*

Note: The Switch Display Settings set here are for the currently open tab only. To define the default Switch Display Settings for all tabs that are opened, navigate to **Settings Menu → Switch Display settings for new tabs...**



Switch display
Configure the switch display settings for this tab

☒ Lock display

☒ Restore display after 30sec

☐ Don't restore display

☐ Only switch local cameras

OK Cancel

Lock Display
Will prevent the Cameras Tab from displaying any video feeds sent to it by the Event.

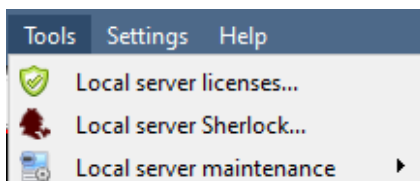
Restore display after
Will define how long after switching to the Event Cameras the Cameras Tab will return to the original display settings.

Don't restore display
Will leave the Cameras Tab on the Event Cameras until an operator, or administrator, resets the display.

Only Switch Local Cameras
Will only switch to Event cameras originating from a local Site.

Note: Lock/unlock the currently opened Cameras Tab by clicking on the **lock/unlock icon** located at the bottom of the Resource Panel in the Cameras Tab (only appears when the mouse hovers over it).

2.4.6. Tools Menu

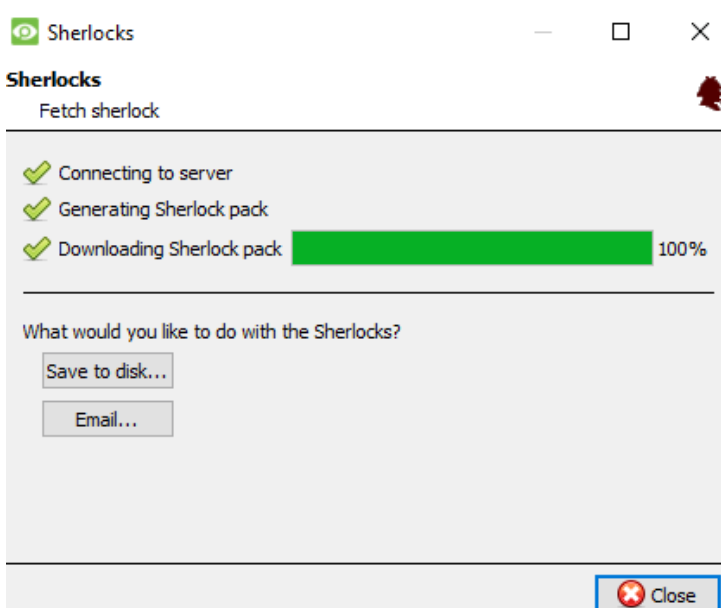


If on a client PC, this will read 'Viewing Station licenses.' If on the server it will say "Local server licenses". Also retrieve the server licenses from Site, or units, by entering the **Setup → Configure Servers→ and right-clicking on the unit.**

2.4.6.1. Licenses

This allows adding a license to the Base Station being worked on, not to any of the Recording Servers on the Site.

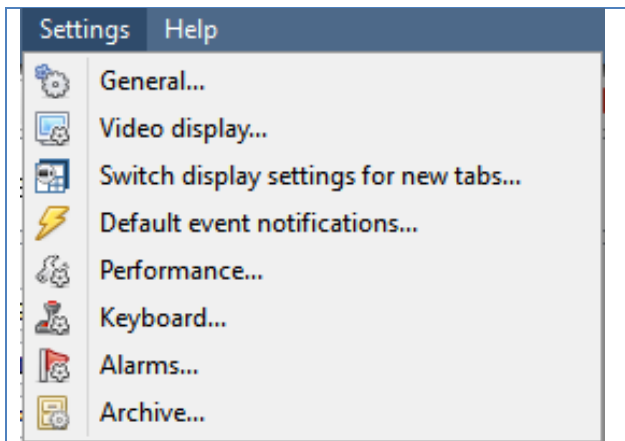
2.4.6.2. Sherlocks



Sherlock files are a diagnostic tool, used by the Support Desk. The normal procedure is to email the Sherlock file to the Support Desk, with a description of the problem, but it can also be saved to disk.

Note: clicking on **Email to Recipients**, will open up the Operating Systems default email client. **Save to Disk** will allow saving of the Sherlock files to any storage attached to the workstation.

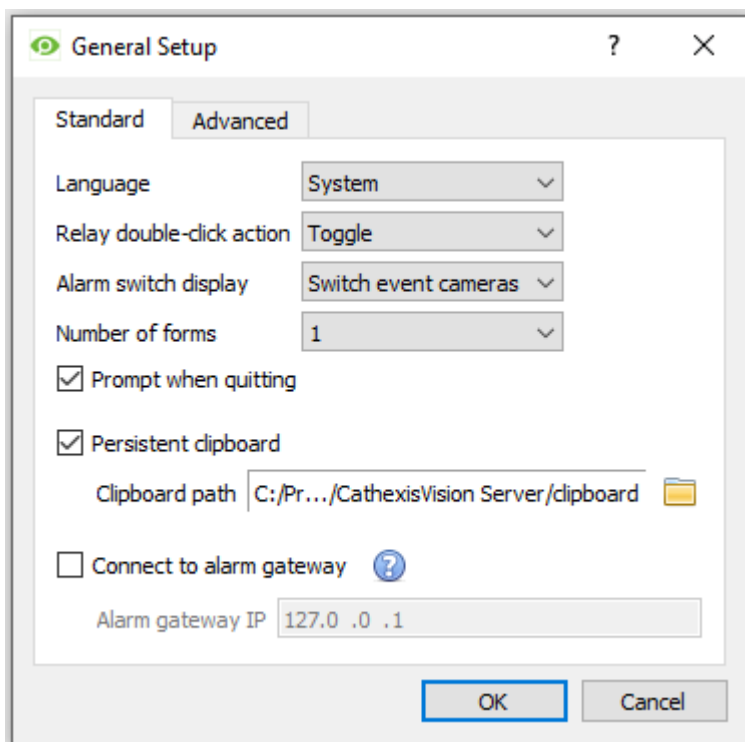
2.4.7. Settings Menu



This section deals with the **Settings Menu** common across all Site tabs.

2.4.7.1. General

2.4.7.1.1. Standard Tab



Language: Select the language of the GUI from the drop-down menu.

Relay Double Click Action will set whether or not a relay in the Resources Panel, will be changed from its current state, or set to pulse.

Alarm Switch Display defines the GUI behaviour for when a user is handling an Event Alarm. It defines whether or not the display will switch to show the cameras attached to that Alarm.

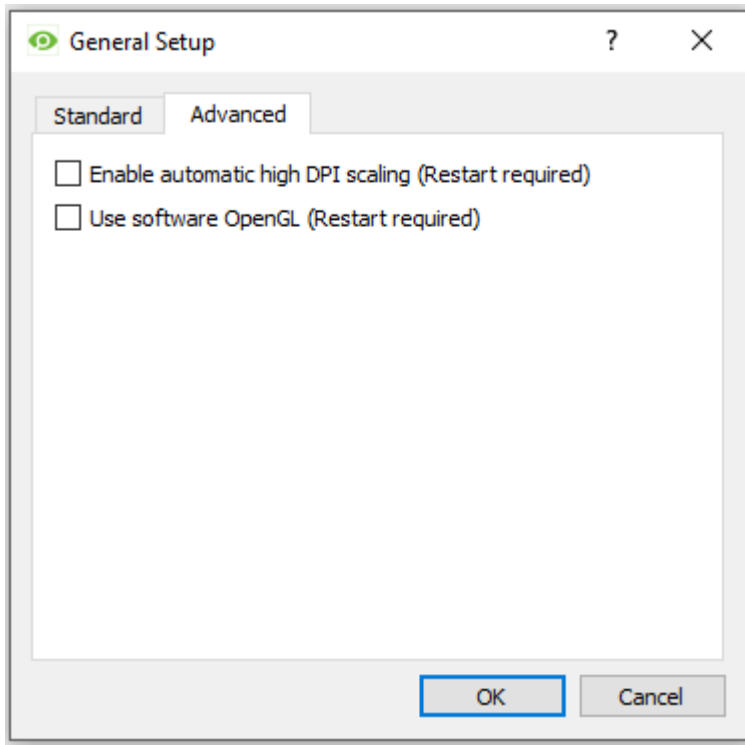
Number of Forms Selects the default number of monitors to be displayed. The default maximum is 6, but this option can be overridden by editing the command line. See the Command Line Options section.

Prompt When Quitting will prompt the user every time CathesisVision quits, regarding whether or not the current tabs should be reopened when the program is started.

Persistent clipboard will persist after closing CathesisVision.

Connect to alarm gateway: Check to enable connection to the alarm gateway. Enter the gateway unit's IP address. Click the ? icon to display license information. These settings can also be configured by editing the command line. See the Setup Manual.

2.4.7.1.2. Advanced Tab



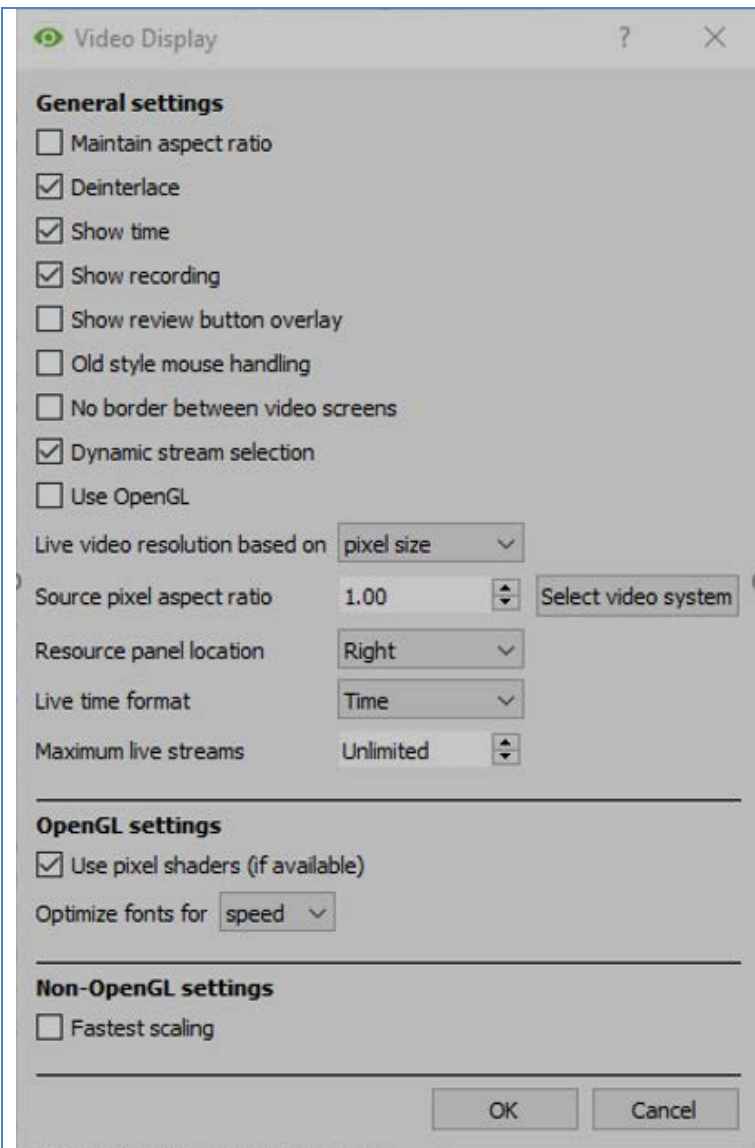
This tab deals with slightly more advanced settings for the GUI.

Check to **enable automatic high DPI scaling of the GUI**.

Check to **enable use of OpenGL software**.

Note: Restart required for both settings.

2.4.7.2. Video Display



Maximum Live Streams. An option to limit the number of live video streams in the CathexisVision Camera Tab. The limit is a global limit and applies across all screens. (On an NVR/DVR this setting is only accessible to an administrator).

Pixel shaders: Pixel shading setting used for OpenGL. Font optimisation option for speed or quality.

Fastest scaling: For use without OpenGL. When the CPU has to be utilised to handle the load, this option helps optimise the instructions for the CPU.

General Settings

Maintain aspect ratio: The ratio between the width and the length will be kept constant as the video size changes.

Deinterlacing: A process of converting interlaced video (like analogue) to a non-interlaced form.

Show time: Shows the time on the video.

Show recording: indicates when, with a red dot, the video feed in a panel is currently being recorded.

Show review button overlay: will overlay buttons for review on mouse-over, on a camera panel, when it's video feed is being reviewed.

Old style mouse handling: Use pre-2017.2 mouse handling.

No border between video screens: Check to remove borders between video screens.

Dynamic stream selection is enabled by default. This will dynamically select the stream based on the display resolution.

Use OpenGL: Check to use cross-platform API for writing applications for 2D and 3D graphics. The graphics card utilises the OpenGL, and thus the load will be passed on to the GPU, freeing the load on the CPU.

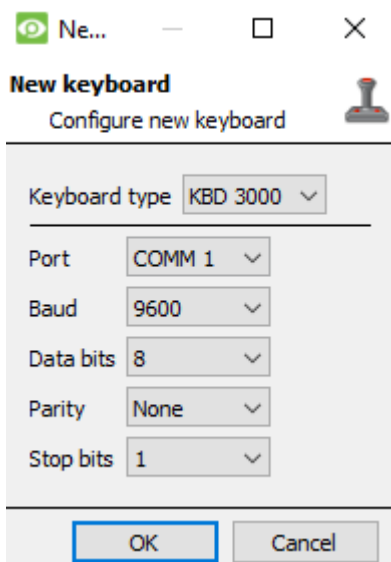
Live video resolution: Based on either panel size or pixel size.

Source pixel aspect ratio: Will conform the video source's correct aspect ratio, making the object look more real-world. For example, when a video of a perfect circle appears oval on the screen, it is an indication that the aspect ratio might be different from the original source.

Resource Panel Location: Resource Panel can be configured for left or right of video screen.

Live Time Format: Time or Date and Time.

2.4.8. Keyboard



This option is for adding a keyboard to a **Base Station on a client pc**. If adding a Keyboard to a Recording Server, do so via **Site→Open Tab→Setup→ Configure Servers → Keyboard → New**.

Enter in the details relevant to the keyboard.

2.4.9. Alarms





Enter an IP address for a technical alarm server, or gateway, for the viewing software to send alarms to.












2.4.10. Help

Archive Guide	Will launch a quick guide on archiving.
Local server stats	Will show the statistics for the local server if it's an NVR, or for the Viewing Station, depending on which unit is being worked on.
Manuals	Manuals: The Setup, Operator's, Quickstart, and Archiving manuals are accessible within the software.
About	Will inform about the License, the Release version, and the email address for Support. The following information will be provided: Version: License ID Build ID Architecture Support Email


2.5. Status Bar


The status bar, at the bottom on the interface provides relevant information about the status of the software and its various components.


Notification Icon	Notification Description
 dvs (Administrator)	The username , and their access level.
 CathexisVision Premium	This represents the main license of the unit.
Supplied to Documentation by Cathexis Internal	The distributor of the license.
	The cameras notification will only appear to alert the user when cameras are down. Clicking on it allows one to see which cameras these are.
	The licensing notification will be permanently present, but will change colour depending on licensing status.


Admin 	Green indicates a healthy licensing status. Orange indicates that there are demo licenses due to expire. Red means either missing or expired licenses.
	The performance monitor notification is permanently present, and will allow viewing of performance statistics. See the Appendix of this document for a full explanation.
	The connection status icon is permanently present, and indicates the status of the connection to the current Site.
	Video Analytics notification. Warns the user when an error has occurred which involves one or more of the video feeds on a Site.
	Failover notification will provide information about the status of existing failover servers.
	Database volume/slice or performance notification. It can also indicate when cameras have been configured to record without being assigned a database
	Failover database synchronization notification. The failover server is transferring recorded footage back to the main server after recovery.
	LPR notification. It will show an error when there are LPR license/dongle problems.
	A health alert notification. Check the tooltip to see the health status. If the primary disk is "full" the health alert will be triggered
	Tamper detection alarm. It will indicate the cameras where a tamper has been detected.
	A gateway notification. It is shown if the gateway database couldn't be started

2.6. Local Resources


 The **Local Resources** bar (top right) shows the status of local hardware resources:


 Local default audio input (e.g. microphone)


 Local default audio output (e.g. speakers)


 Local monitor

When active, these resources display **bright green**, and when inactive they are **grey**. If the cursor is run over an active resource, a "tooltip" will provide information on the activity. For example, mouse-over a green monitor to see what camera is displaying to that monitor. If there are many local resources, they will be arranged in a scrolling area, with left and right scroll arrows.

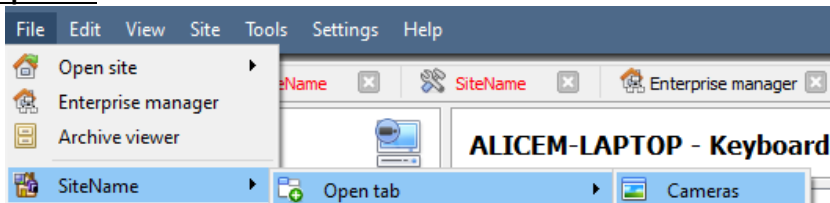
3. Cameras Tab

This section will deal with the Cameras Tab, which is the tab through which the operator will view live footage, as well as review recorded footage.

3.1. Open the Cameras Tab

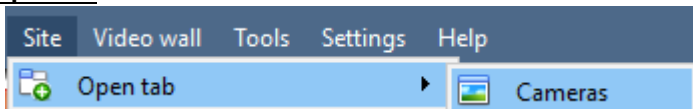
After opening a connection to the desired Site, open the Cameras Tab. There are three ways to do this:

Option 1



File → SiteName → Open tab → Cameras Tab

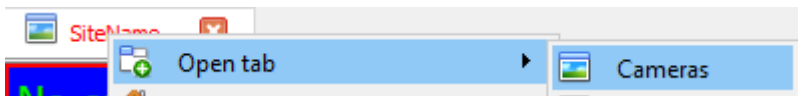
Option 2



Site → Open tab → Cameras Tab

Option 3

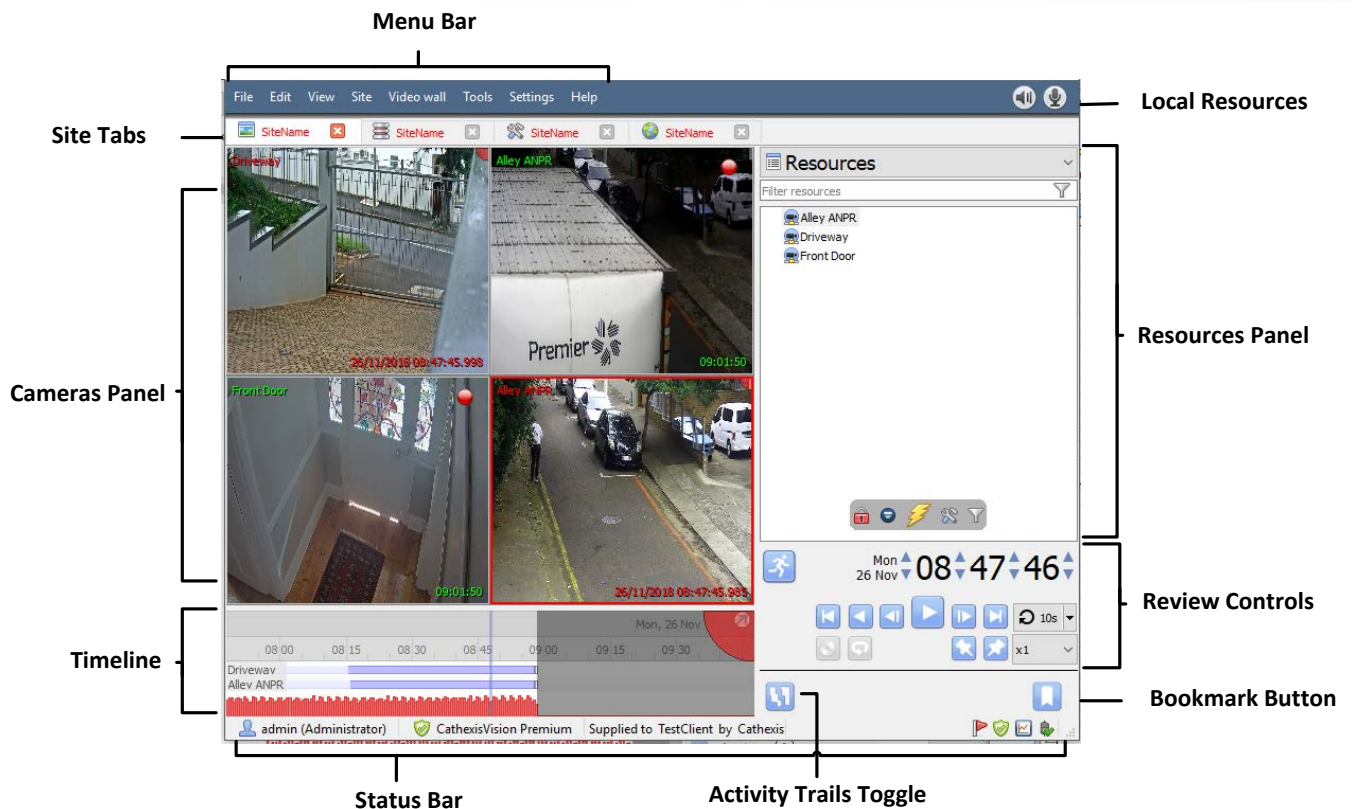
Site must already be open for this option.



Right-click on Site tab → Open tab → Cameras Tab

3.2. Interface

The following section includes a description of the CathesisVision Cameras Tab interface with corresponding sections, which provide further information for each indicated area. For information relating to other tabs, consult the relevant section. Menu bar, Site tabs, and local resources have been dealt with in previous sections.



3.3. Camera Panels

This section will cover the different overlays that are visible on each panel, and the options available in the context menu.

3.3.1. Overlays


3.3.1.1. *Live*



Green text shows that the stream is live.

The text in the top left (Highway 1 here) is the camera's given **name**.

The **timestamp** is seen on the bottom right.

A  present in the top right-hand corner of the panel indicated that the camera is currently recording to one of the databases.

3.3.1.2. Review



Red text indicates that the video in this panel is being reviewed, from previously recorded footage.


The text in the top left (Highway 1 here) is the camera's given **name**.


The **date**, and, **timestamp** is seen on the bottom right.

3.3.2. Video feed Options Panel

Hover the mouse over a camera's panel and a little black- arrow icon will appear on the left- middle of the panel. Clicking on this icon will expand the menu, as seen below:



Click on  to select available overlays (if configured and enabled).

Click on  to select between available video feeds for the selected camera. This is very useful to view a camera over a slower link and the camera provides a lower format/resolution feed.

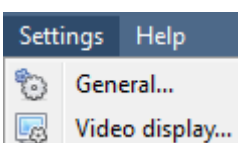
If in review, the following icons will also be present:



Database icon. Allows the user to select which database to review video from.

Smart Search button. Click to perform a Motion Search or SnapSearch. See respective sections further on.

3.3.2.1. Review Button Overlay



Under **Settings** → **Video Display**, there is an option that reads ☒ **Show review button overlay**.

When checked, the following overlay will be displayed when hovering the mouse over a camera panel where the video is currently being reviewed.



Live Context Menu

To see the context menu, middle-click the mouse on the camera panel of choice.

Start audio
Video format ▶
View transform ▶
Overlays ▶
Help
Switch to review
Shrink panel
Resize panel ▶
False colour
Clear panel
Export snapshot...
Cameras fullscreen
Open motion heatmap

Start Audio: If the camera supports audio, select to listen to live audio.

Video format: Allows the user to select which of the cameras 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 the user to transform images for cameras with special lenses. (E.g. 360-degree cameras.)

Overlays: Allows viewing of 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.

Export Snapshot...: Opens a window to print snapshot, save to folder, copy to system clipboard, or copy to CathexisVision clipboard. One 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 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.

Open motion heatmap: Open the Motion Heatmap search window.

3.3.3. Middle-Click on a Camera in Review

View transform ▶
Select database
Overlays ▶
Switch to live
Shrink panel
Resize panel ▶
False colour
Clear panel
Export snapshot...
Smart search ▶
Cameras fullscreen
Open motion heatmap

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

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

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

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

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

Smart search: Provides access to snap and motion search.

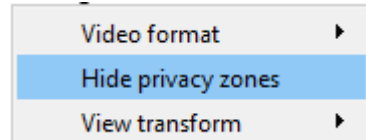
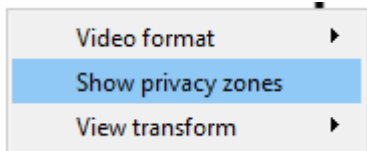
Cameras fullscreen: Fills the entire screen with the Cameras Panel; creating a Video Wall. The same procedure will exit fullscreen mode.

Open motion heatmap: Open the Motion Heatmap search window.

3.3.4. Hiding/Showing Privacy Zones in the Cameras Tab and Database Review

Privacy zones will be shown by default, with the option to hide them in the **context menu** of the camera in the **Cameras Tab, and in the Database Video Player**. Users with **Access rights** may hide/show **Privacy zones** in both **Live** and **Review** mode, and from within the **Video** and **Integration Database Reviews**.

Middle-click on the camera image to open the **Context Menu**. If the user has the access rights, the option to hide or show privacy zones will be presented.



Note:

1. Only users with access rights to do so will be able to hide/show privacy zones.
2. One **cannot hide/show privacy zones in archived footage**: Privacy zones will be hidden/shown depending on whether the privacy zones are hidden/shown during archiving.
3. Privacy zones will be exported for all snapshots
4. **Privacy zones are stationary**: Only areas of the camera image can be hidden and objects which move out of the privacy zones will be seen.
5. When **privacy zones** are added to a panoramic camera, the CathexisVision image transformations are disabled.

3.3.5. Select, or Move, Cameras

1. To **select a single camera** left-click on it.
2. To **select multiple cameras**, hold down CTRL while left-clicking on the cameras to select.
3. To **move a camera**, from one panel to another, right-click-and-hold the camera and drag it to the new panel.
4. CTRL-A will **select all cameras** in the Cameras Tab.

3.3.6. Digital Zoom

The user can zoom in digitally on cameras that have no physical PTZ capability. This is done by selecting the specific camera in the Cameras Panel and doing the following:

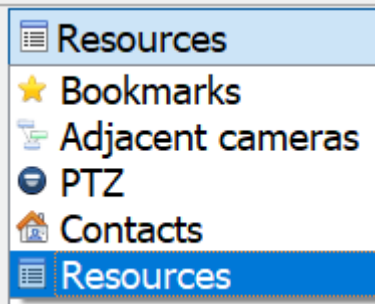
Zoom in/out: Scroll the mouse wheel.

Zoom to area: While holding the shift key, drag-select an area using the left mouse button

Pan: Pan the image using the left mouse-button. This is done by holding down the left mouse button, while moving the mouse.

3.4. Resources Panel

The Resources Panel shows a list of resources, and available resource tools, depending on which resource type is selected from the Panel selector.



The **panel selector** is a dropdown bar for selecting from a variety of panels. Selecting one of the panels will determine the resources that appear in the resource list.

See below for each panel type and associated resources.

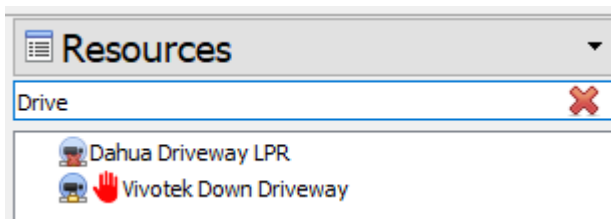
Note: Configure areas 4, 5, and 6 to appear on the left- or the right-hand side of the screen. Follow **Settings Menu → Video Display → Resource Panel Location**.

The Contacts are special Site contacts, setup by an administrator. The Resources are the Site resources, such as Cameras, Relays etc.


3.4.1. Resources

When the Resources option is selected from the dropdown menu, the panel will populate with all Site resources that have been made available on the Site.

3.4.1.1. *Filter Resources*



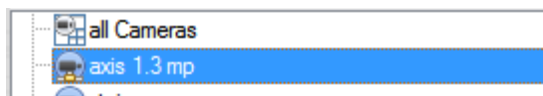
In the Resources Panel, resources may be filtered by typing in part/s of the resource name.

Click the  to clear the search.

3.4.1.2. *Select a Camera*

The Resources Panel will be the one from which cameras are selected, to view in the Cameras Panel. There are a few ways to do this.

3.4.1.2.1. Double-click a camera in the Resources Panel



Double-click a camera in the Resources Panel to load it Live into the camera panel that currently has focus (is selected).

3.4.1.2.2. Drag a camera from the Resources panel



Left-click on a camera, holding down the mouse button, and drag a camera from the Resources panel (first drag the camera horizontally left, and then to the panel to view it in).

3.4.1.2.3. Drag a group of cameras from the Resources panel



From release 5042c2, January 2011, one can select a group of cameras from the Resource Panel and drag them onto the camera display (for Cameras Tab or multiSite tab). This is a quick and convenient way to populate a screen with cameras.

This is achieved by selecting cameras while holding down the CTRL button on the keyboard, then dragging them across.

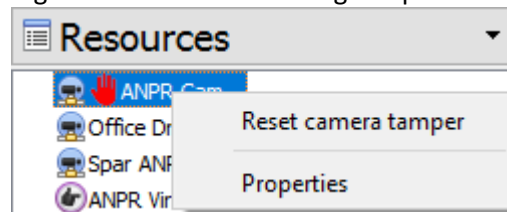
3.4.1.3. *Reset Camera Tamper*

Depending on access rights, one may be able to reset a camera tamper if it is being tampered with. In some cases, a camera will remain in a tamper state until the camera has been restored to its normal state; this may include the physical removal of the tamper such as refocusing the camera lens or correcting the camera's position. However, when necessary, one may need to clear the tamper state from within the software.



In the **Resources Panel**, a camera tamper icon (red hand) will appear in front of a camera that has been/is being tampered with.

Right-click the camera being tampered with and select **Reset camera tamper**.



3.4.1.4. *Mouse-Over Options*

With the Resources Panel selected, hover over the bottom of the Resources List. The resource panels mouse-over options include:



Lock display. Some CathexisVision events will be setup to switch the camera panel to view cameras related to the event. Clicking on this lock will enable/disable this feature. An unlocked display (🔓) will switch; a locked display won't.



PTZ Controls. This will pull up a basic PTZ control menu. Alternatively, select PTZ from Panel selector. Event Notifications.



Configure Resource Panel.



Resource Panel Filter.



3.4.1.4.1. **Lock Display**



Lock display. Some CathexisVision events will be set up to switch the camera panel to view cameras related to the event. Clicking on this lock will enable/disable this feature. An unlocked display (🔓) will switch; a locked display won't.

3.4.1.4.2. **PTZ Controls**



Click this to bring up the PTZ panel, or select PTZ from the Panel Selector.

3.4.1.4.3. **Event Notifications**




If an administrator has set up **Event Notifications** for this unit then notifications will be received based on these setups.



1 A Message Notification

- An audio notification. This is a sound clip that gets played when the event triggers.
- A message notification. This is a message that gets displayed in the notification area of the Resource Panel. It's meant as an unobtrusive feed of events.

Note: To show the notifications area, click the  icon at the bottom of the Resource Panel. (This can be resized.) If an event has camera resources associated with it, then the notification can be double-clicked and the cameras will be shown in the camera view.



2 A Popup Notification

- A popup notification. This is a popup message that is shown when the event triggers.



Clicking on the database icon in the Notifications Panel, will open that camera in the cameras panel at the point in the database, where the event occurred.



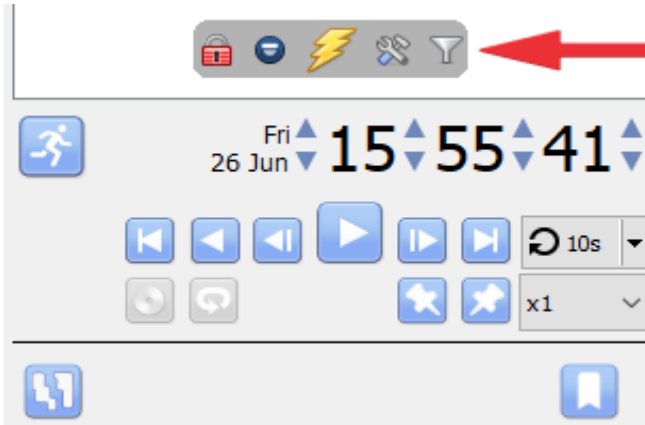
Clicking on the recycle icon will either clear the notification (if clicking on the recycle icon attached to the notification); or clear all notifications (if clicking on the one at the top of the notifications panel).

3.4.1.4.4. Configure Resource Panel


This section allows the administrator to setup the various resources that are pulled through into the resources panel. These include the Unit Resources, Camera Layouts, Camera Sequences, Layout Salvos, and Site Actions.

Note: Since this is part of the Site Configuration it has been dealt with in the full Setup Manual, for further information, refer to this manual.

3.4.1.4.5. Resource Panel Filter



Hover the mouse above the date/time or at the bottom of the resource window to bring up additional resource options.

Clicking on the resource **filter**  icon will bring up the filter panel window below.





The checked items ☒ will appear in the resources panel; the unchecked items will not appear.

This is useful in Sites that have many resources that the user may want to filter when looking for something specific.

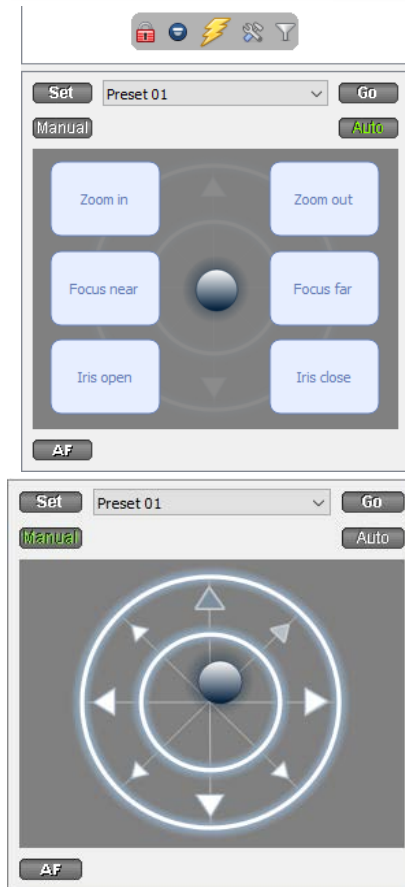
0

3.4.2. PTZ Panel

To bring up the PTZ panel, click on the  icon in the Mouse Hover Options, in the Resources Panel. Alternatively, select the PTZ option from the Panel Selector.

With a PTZ camera, an operator can manipulate the camera's direction, zoom, focal distance, and amount of light. A PTZ camera is indicated in the Resources Panel, with an  icon. The operator can also control pre-configured camera views called "Presets".

This panel provides controls for camera Presets, and a software joystick for interactive control of the camera.



The **Presets controls** enable one to set Presets and go to Presets.

The **Manual button** is for manual override of the dome (to override automated patterns, local tours, etc.). The Auto button relinquishes manual control, to let the system regain its automated configuration.

Note: The green text **Auto** on one of these buttons. This indicates which mode currently applies: Manual or Auto. In the example on the left, the system can function automatically. The screen may change unexpectedly as it runs patterns, tours, etc.

The Dome/PTZ camera can be panned/tilted by dragging the joystick positioned in the middle of the PTZ control block.

3.4.2.1. PTZ Panel

To go to a Preset from the PTZ panel Select the Preset from the dropdown menu, and then click GO. The camera view will change to the Preset.	To set a Preset from the PTZ panel 1. Select the Preset 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.
To relinquish manual control of the dome / PTZ camera from the PTZ panel Click Auto. If the system runs remote tours automatically, or switches display based on events, these automated responses will take over.	Pause a PTZ Tour PTZ tours can be paused/restarted, per camera. This is achieved by right-clicking on the camera in the Resource Panel and selecting the "Pause/restart PTZ tours" option.
To lighten/darken the live camera view from the PTZ panel Watch the live camera as the iris+, or iris button is pressed. The image will lighten or darken.	To gain manual control of the dome / PTZ camera from the PTZ panel (This applies if the system runs remote tours automatically, or switches display based on events) Either click manual, or simply move the software joystick.

3.4.2.2. Individual Camera Panel Zoom Options

Note: If the camera supports any of the above then one can switch between digital and PTZ control using the icons on the bottom-left of the camera panel.



Zoom In/Out Scroll the mouse wheel. Holding down the shift key while scrolling the mouse wheel will do an accelerated zoom.	Zoom to Area Holding the shift key, select an area using the left mouse button.
Zoom out completely Press the Z key or;zz hold the left mouse-button down, for half a second, and select the zoom-out menu option.	Centre on Point Holding the shift key, press the left mouse button; or Hold the left mouse button down, for half a second, and select the centre on point menu option.

3.4.3. Contacts Panel

The contacts panel displays the special Site contacts and their details that have been setup by the Site administrator.

Contacts

Tshepo Zuma

Tshepo Zuma

Michelle Smith

Barry Donovan

Position

Support Manager

Passcode

tshepo

Work

033033011

Cell

011011033


Select the desired contact from the dropdown list to display his/her details.

3.4.4. Adjacent Cameras

Adjacent cameras are set up by the Site administrator, and allow operators to navigate quickly and seamlessly between cameras. This feature is beneficial as one will be able to follow a person in real time using linked cameras (see blue direction arrows), which appear over the camera image as overlays.

Select Adjacent Cameras from the panel selector.

Driveway



11:15:29

Tue, 27 Nov

10:30 10:45 11:00 11:15 11:30 11:45 12:00

Adjacent cameras

Alley ANPR

Front Door

Tue 27 Nov

11:15:29

⏮ ⏪ ⏩ ⏭

⏮ ⏪ ⏩ ⏭

⏮ ⏪ ⏩ ⏭

⏮ ⏪ ⏩ ⏭

10s

x1

3.4.4.1. *Resources List*

The list of cameras that are adjacent to the currently selected camera will be displayed as thumbnails in the adjacent cameras resource list. Double-click on a camera to switch to it.

3.4.4.2. *Navigate*

Click the blue arrows to navigate to cameras that are adjacent to the current camera. The direction of the arrow (the direction of the connection between the cameras) will have been determined by the system administrator, when adjacent cameras were configured. One may also double-click on a camera name from the Resources list to switch to it.


3.4.5. *Bookmarks*

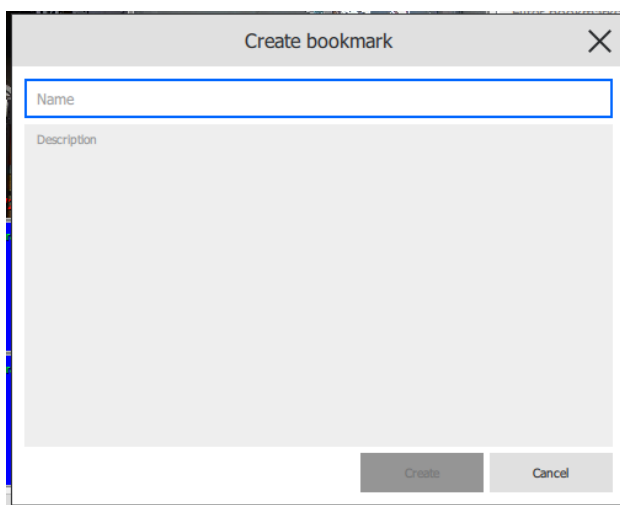
Bookmarking is a feature which preserves camera layouts in live/review.

Note:

1. When a bookmark is recalled, any cameras that were live will switch to review at the time the bookmark was created.
2. Bookmarks will only contain resources the user has access to.
3. Bookmarks are stored locally (on the client PC). If the same user logs in from a different unit, the saved bookmarks will not be available.
4. Bookmarking will not save:
 - a. PTZ position,
 - b. Current digital zoom parameters,
 - c. Live camera sequence running in a panel.
5. Bookmarks do not prevent data from being overwritten on the server. If the user requires bookmarked video to be retained, then the user should create an archive.

3.4.5.1. *New Bookmark*

To create a bookmark, first layout the cameras as desired. Then click the  button located beneath the Review Controls Panel.



In the window that opens, give the bookmark a name and a description.

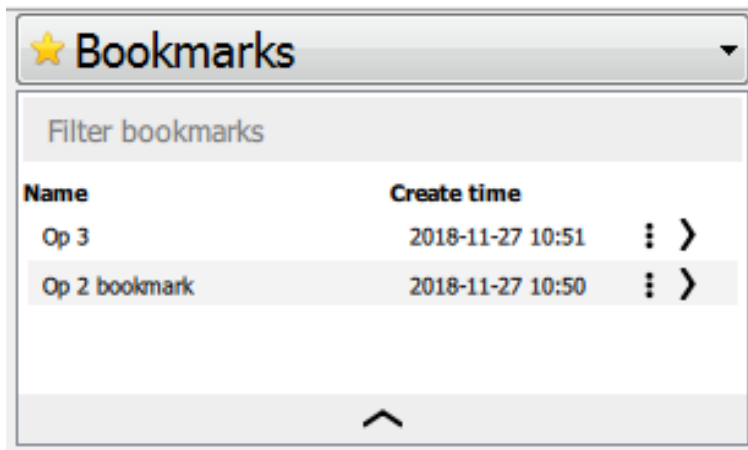
Click **Create** when done.

Note:

1. When a bookmark is recalled, any cameras that were live, will switch to review at the time the bookmark was created.
2. Bookmarks will only contain resources that the user has access to.

3.4.5.2. Bookmark Panel

Once bookmarks are created (above), they can be viewed and managed in the bookmarks panel. Select bookmarks from the Panel Selector.



Enter a search term, to filter through bookmarks. See below.

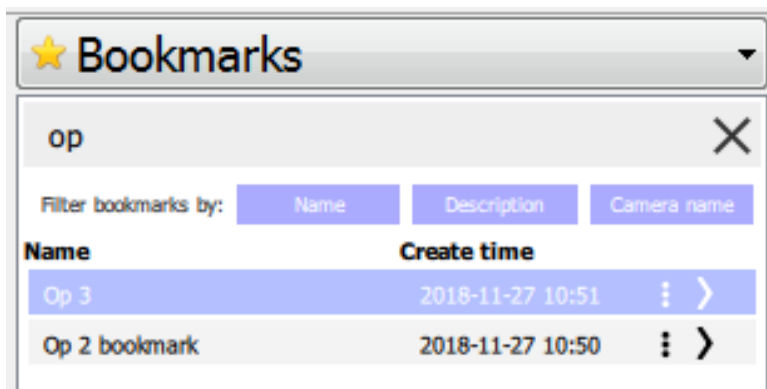
Click column names to sort.

Open bookmark: Double-click on entry or click >.

Click ⋮ to show bookmark options to export/delete bookmark. See below for export.

Click the arrow at the bottom of the panel to show more information about the selected bookmark. See below.

Filter Bookmarks



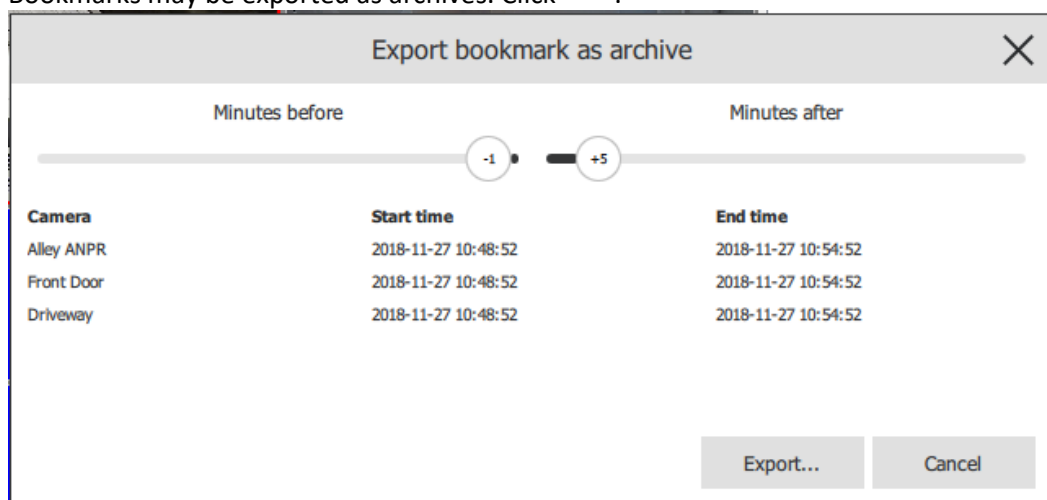
Enter a search term in the text field. This can be a camera name, or an excerpt from the description.

Associated results will be displayed.

Results can be further filtered by name of bookmark, bookmark description, or name of camera in the bookmark.

3.4.5.2.1. Export Bookmark

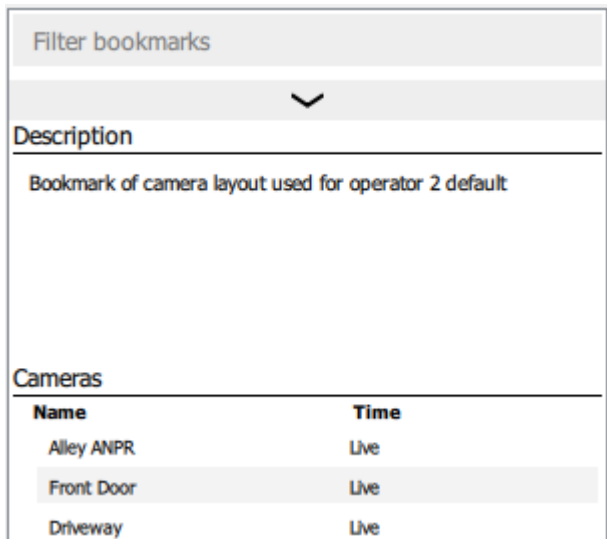
Bookmarks may be exported as archives. Click ⋮.



The list of cameras in the bookmark will be shown. Set the Start/End time of the archive by dragging the sliders to determine how many minutes before/after the time of bookmarking the archive should be. The times listed next to each camera will adjust accordingly. Click Export to bring up the archive window. See archiving section for more.

Note: The bookmark's name will be used as a default filename and the bookmark's description will be used as the default archive description.

Display Bookmark Information



Name	Time
Alley ANPR	Live
Front Door	Live
Driveway	Live

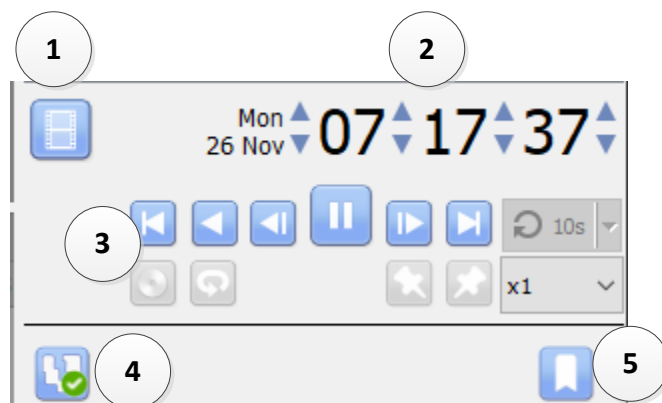
Click the arrow at the bottom of the bookmarks Resource Panel to display more information about the selected bookmark.

Bookmark description (if any) will be shown.

List of cameras and time of bookmarking will be shown.

Click the arrow again to close this panel.

3.5. Review Control Panel



1. **Toggle Live/Review mode.**



In Review, click to return to Live.



In Live, click to switch to Review.

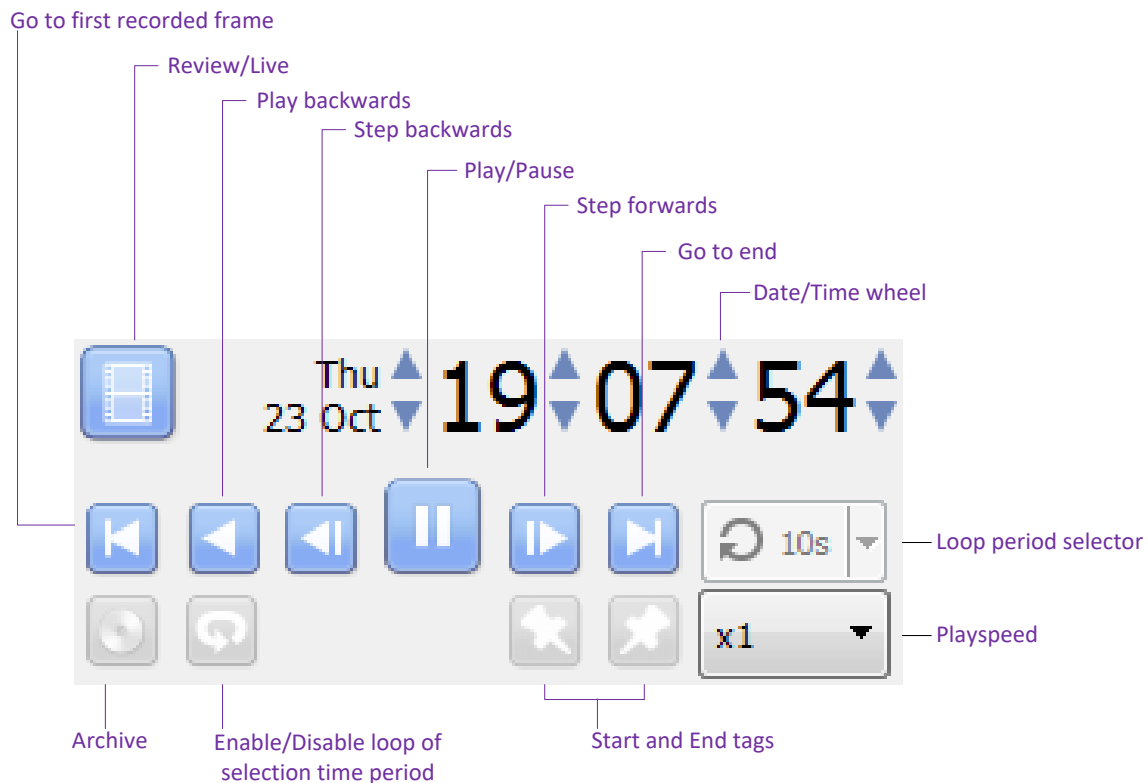
2. **Go to date/time.**

3. **Review Controls**

4. **Toggle Activity Trails on/off.**

5. **Bookmarks.**

3.5.1. Review Controls



Note: When a camera is put into review mode, and another camera is selected for the same panel, that camera will retain the review time of the original camera.



3.5.1.1.1. **Playback Speed**

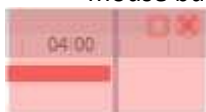
Select a play speed up to x64 from the Play speed options. Then click either **Play** to play forwards at the selected play speed, or **Play Backwards** to rewind at the selected play speed.

3.5.1.2. *Selecting a Period for Review*

After finding something of interest, one may wish to loop through the recorded footage around that event. (This can also be useful when selecting footage for archive). One may move the timeline around by left-click-dragging it.

There are two ways to select the period for review.

1. **Tagging:** Click on the  icon to tag the start of the selection. Then navigate to the end of the desired period, and click on the  icon, to tag the end of the selection.
2. **Shift-selection:** This is done by holding down the SHIFT key, while click-dragging the selection with the left mouse button. The selection will look like the image below.



The selected areas will appear as illustrated on the left. By default, it will be set to loop. This can be seen when looking at the loop icon.

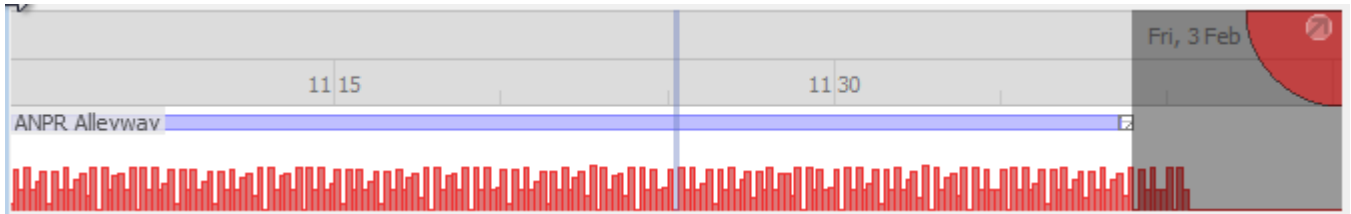


Means that it will loop, to the beginning of the selection, as it gets to the end of the selection.



Means that the video will continue to play past the end of the selection.

3.6. Timeline



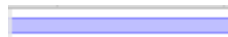
The timeline at the bottom of the GUI indicates where in time the currently selected cameras are.

Note: while review legacy video is available in CathexisVision 2015 and onwards (recordings made on pre-2015 systems) the timeline will remain blank.

3.6.1. Basic Description

The following will describe the basic function of the timeline. Continue in this section for more details.

Recordings



This indicates there are recordings for this camera. A white area indicates no recordings.

Actions:

- Click anywhere to go to a time in recording, or drag the timeline to the desired location.
- Hover mouse over recording area to display thumbnail preview image of recording.

Motion Analytics



This indicates that this camera has a **motion database**, and that there has been activity in the area.

Actions:

- Click anywhere to go to a time in recording, or drag the timeline to the desired location

Popout



Click this to pop the timeline out into a detached mode. Click the arrow again to dock it.

3.6.2. Timeline View Types

3.6.2.1. Live View Timeline



The live view timeline simply shows the current time at the intersection between white and grey.

3.6.2.2. Single and Multiple Camera Review Timeline

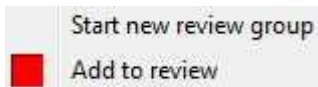


When reviewing a camera's recorded video, one will see the timeline change to show red blocks. These blocks on the timeline represent recorded events. If multiple cameras are selected to review, they will appear stacked on the timeline.

3.6.2.3. Synchronised/Independent Review

By default, all reviews are synchronised, when multiple cameras are selected for review. It is possible to review cameras independently.

When already reviewing a camera, middle-clicking on a camera's panel will display the following options in the context menu:



Start new review group will add this camera to a separate group of review cameras, which will be asynchronous to the original review group. The new review group is indicated by the tag on the top-right of the video. Each review group will get its own colour.

Add to review will add this camera to the already existing review group. As review groups are added, the number of options here will increase as a result.


3.6.2.4. Zoom in on Timeline

There are two ways to zoom in on a section of the timeline.

1. Mouse over the timeline (during review) and roll the mouse-wheel forwards. Roll back to zoom out.
2. Shift-select a section of the time line.



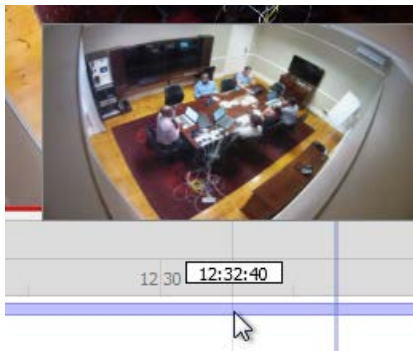
This is done by holding down the **SHIFT key**, while click-dragging the selection with the left mouse button. The selection will look like the image to the left.

To **zoom in** on this selection click on the  icon.

3.6.2.5. Move the Timeline with the Mouse

One may move backwards and forwards in time, by left-click dragging the timeline in the desired direction of travel.

3.6.2.6. *Hover over Timeline*



If a camera has recordings, one may hover over the timeline to display a thumbnail preview image of the recording at the selected time.

3.7. Smart Search Tools

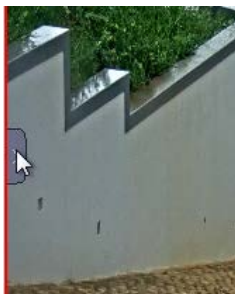
Smart Search is a collection of tools which intelligently search video footage. These are **Motion Search** and **Snap Search**, and are dealt with below.

Note: Camera must be in review for Smart Search tools to appear.

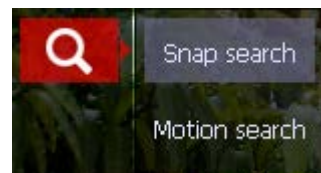
3.7.1. Open Smart Search Tools

First, turn to review mode.

Option 1

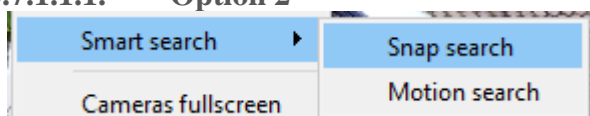


Open the Video Feed Options Panel by hovering near the left of the panel and clicking the arrow that appears.



Click the **Search Tools** icon and select either **Motion Search** or **Snap Search**.

3.7.1.1.1. Option 2

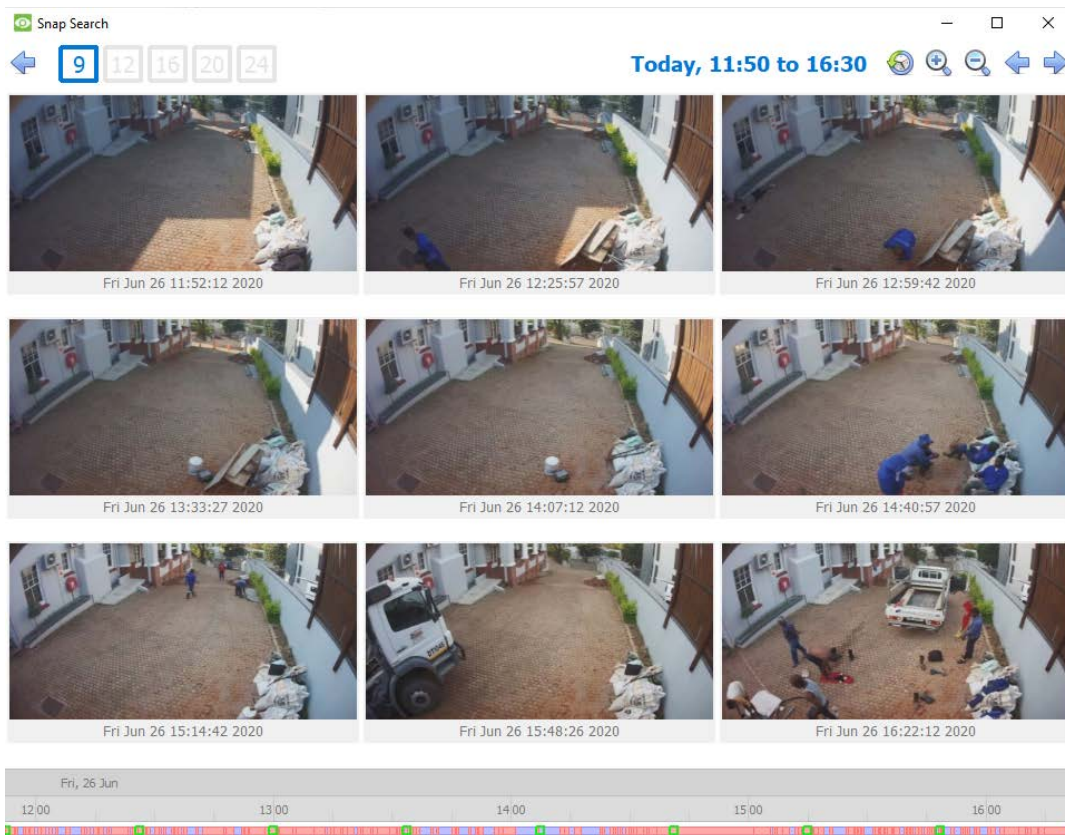


Middle-clicking on the camera image and selecting **Search** → **Snap search**.

3.7.2. Snap-Search

While in review mode, one will be able to search the database recordings for frames which match the current still-image on the screen.

3.7.2.1. Snap Search Window



- 1 **Frame Display.** Choose how many frames to display on the page.
- 2 **Time Range Control.** Set the time range of the search, zoom in/zoom out to narrow or widen the time range, or go backwards and forwards between time periods.
- 3 **Frame Area.** All frames which are similar to the image used to search will be displayed in this area.
- 4 **Timeline.** Use this timeline to navigate between relevant frames.

3.7.2.2. Time Range Control

Today, 09:50 to 13:20 

See the table below for an explanation of the time range control buttons.

Today, 09:50 to 13:20

The current time range in which frames are being viewed. If the time range is changed, it will reflect here.

Set the time range. Clicking this icon will bring up the window below, in which the range may be set.



Start		End	
Mon 1 Aug	09:50:58	Mon 1 Aug	13:17:31
		✓ ✗	

Set a Start and End time range.



to **Accept**.



to **Cancel**.



Zoom in to narrow the time range, zoom out to widen the time range.

Go next/previous time periods. Depending on the time range set, using the clock icon above, one can navigate between time range periods using these buttons. The length of the period is determined by how narrow/wide the time range has been set to.

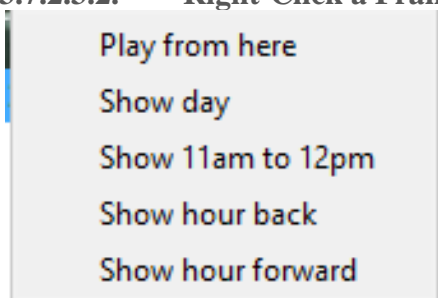
3.7.2.3. *Frame Area Controls*

In the frame area, a number of controls are available. These are:

3.7.2.3.1. **Double-click a frame**

Double-clicking on a thumbnail will start playback from that frame in the CathexisVision GUI review, but the **Snap Search Window** remains open.

3.7.2.3.2. **Right-Click a Frame**



Play from here will open an embedded video player and start playback of the recording from the frame selected.

Show day will display frames from that day over 24-hours (midnight to midnight).

Show 11am to 12pm: This shows frames from the hour of the selected frame. Thus, this time range will change according to the time of the specific frame right-clicked on.

Show hour back will move the time range an hour back and display the relevant frames.

Show hour forward will move the time range an hour forwards and display the relevant frames.

3.7.2.3.3. **Search Between Frames**

Search time periods between specific frames on the page by clicking-and-dragging.

Click on the desired frame to start search with, and drag to the frame where the search is desired to end.

A blue line will visualise this, and the time between the two frames will be displayed.



A negative (-) or positive (+) sign indicates whether the time difference is ahead or behind the selected frame.



Search between any frames, in any direction.

3.7.2.4. Timeline



The snap search timeline functions in the same way as the CathexisVision GUI timeline. Click anywhere on the timeline to go to that time. Also archive from the embedded player.



Indicates there are recordings during the highlighted time period.

The green square on the timeline indicates that the position of matching frames. Click on it to display.

3.7.3. Motion Search



In review mode, the **Motion Search** function allows the selection of certain areas of the camera image to search for recent motion in the selected area.

When attempting to perform a Motion Search on a camera that is not being recorded in the motion database, a notifying popup will be displayed. See notes below.


Note:

- **Camera must be in review for Motion Search to work.**
- Motion Search uses metadata from the Motion Search analytics database. To perform a motion search, cameras must have Motion Search analytics configured (**Setup Tab → Configure Servers → Video Analytics → Motion Database**).
- Motion search data is gathered in real time; this means that there won't be any search data available for periods when Motion Search was not configured.
- This feature is not connected to Activity Trails, although both utilise data collected by
- the motion database.

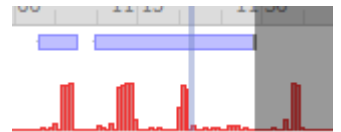
3.7.3.1. Select Region to Search




With the left mouse-button, click and drag to select an area on the camera.

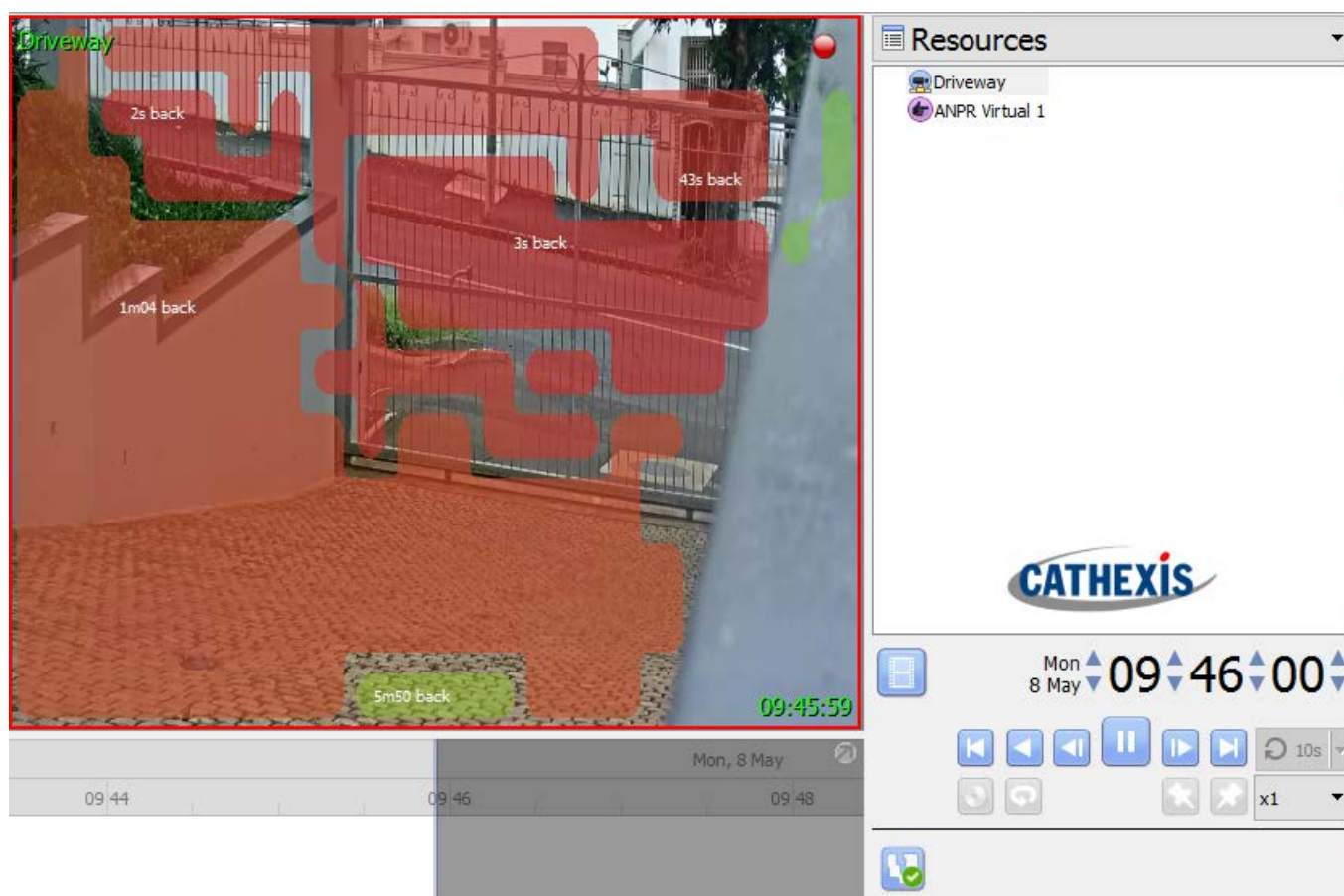
Click  to search for motion in the selected region.

Motion will be displayed on the timeline:



Click  to exit Motion Search.

3.8. Activity Trails



The Activity Trail feature will indicate where and when activity happened in an area by displaying an overlay over the camera feed. The movement of a person or object will be recorded as an activity trail and is represented in this overlay with the colour of the overlay indicating how recently the activity took place. The overlay is interactive, and clicking on a certain activity area will navigate to the time that activity occurred.


The information below pertains to the elements of the **Activity Trails feature** which applies to both **Live and Review mode**. Below this, there are dedicated sections for both **Live and Review** which deal with the options specific to each mode.

When attempting to enable Activity Trails on a camera that is not being recorded in the motion database, a warning notification is displayed.

Note:

- Cameras must have recording set up in order for all features to work.
- The Activity Trails feature uses metadata from the Motion Search analytics database. To view Activity Trails in review mode, cameras must have Motion Search analytics configured.

3.8.1.1. *Toggle Activity Trails On/Off*

Click the  button to turn Activity Trails on/off:



Activity Trails **off**.



Activity Trails **on**.



When Activity Trails are **on** and the camera is in review, these arrow buttons will appear which look back/ahead for activity trails in the recording.

3.8.1.2. *Activity Trail Overlays*

The time that activity occurred in the area is indicated by the **colour of overlays** and by **Activity Time** (in minutes and seconds, which is displayed on top of the overlay).

Note: In live mode, the overlay will show the most recent activity in an area provided that activity occurred in the last 15 minutes. In review mode, the overlay is able to show activity up to an hour before and an hour after the current review time.

3.8.1.2.1. **Overlay Colours**

Overlays, which range along a spectrum from green to red, are coloured according to when activity occurred in an area. The greener an overlay, the further back in time the activity in that area occurred; the redder an overlay, the more recent the activity in that area is.



3.8.1.2.2. **Activity Time**



Time of activity in the area is also indicated by the actual time in minutes and seconds, which is displayed on top of the overlay.

3.8.1.2.3. **Go to Time of Activity**

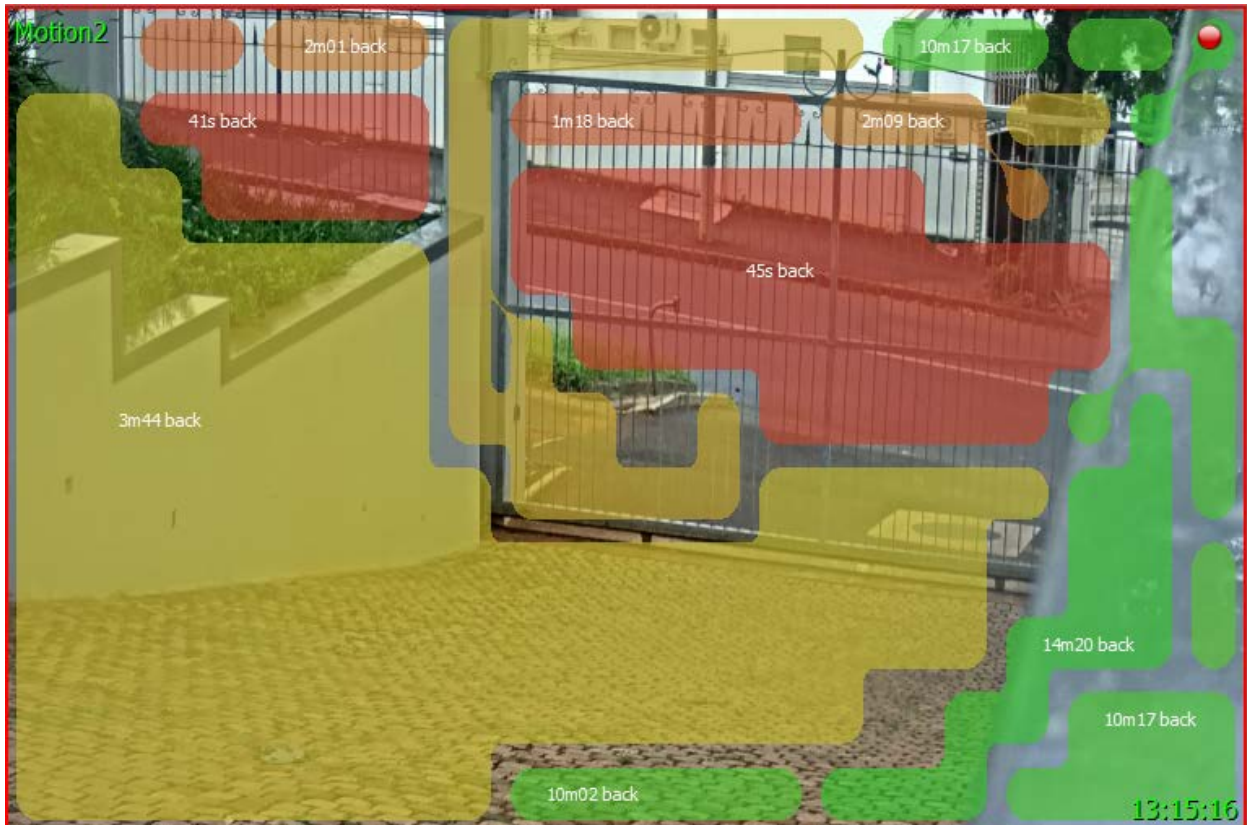
Double-click on one of the activity areas (highlighted by the overlay) to go to the time of that particular activity in the recordings. If in Live mode, this option switches to review mode.

Note: This option is dependent on recording being set up on the camera.

3.8.2. ***Live Mode***

When in live mode, and Activity Trails is toggled on, the activity overlays will appear. The time that activity occurred in an area is indicated both by the colour of the overlay, and by the activity time (displayed in minutes and seconds), which appears on the overlay.

In live mode, the overlay will only show activity which has occurred in the last 15 minutes.



- Clicking on an activity area will switch to review mode.
- In Live mode, motion is displayed along the timeline.

3.8.3. Review Mode

If the user has double-clicked an activity area to review, or the user has switched to review, the activity overlays and the timeline will differ slightly from live mode.

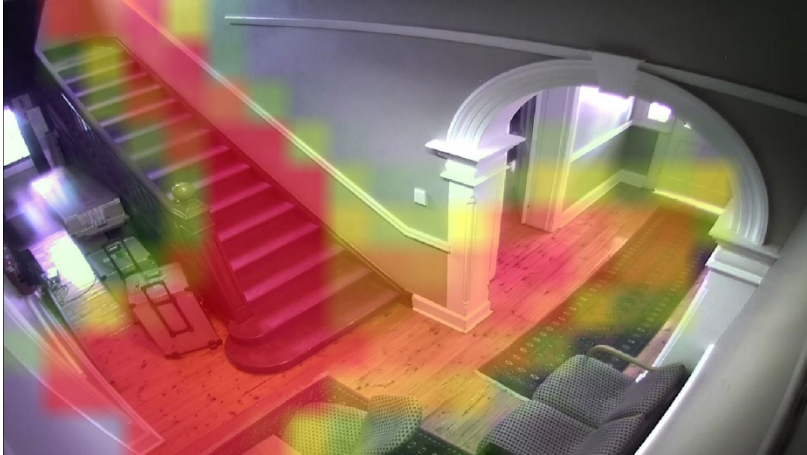
Note:

- In review mode, the overlay is able to highlight activity up to 60 minutes ahead or behind the current review time.
- The Activity Trails feature uses metadata from the Motion Search analytics database. To view Activity Trails in review mode, cameras must have Motion Search analytics configured.



1	Overlay and Activity Time	<p>The overlays will change colour and the activity time will decrease/increase depending on how recent the activity is.</p> <p>When activity is 'Active', it means that activity occurs at that point in the recording.</p> <p>When looking forwards, the activity time counts down to the time that activity occurs (instead of counting the time after activity occurred).</p>
2	Activity level on Timeline	<p>This indicates that this camera has Motion Search analytics enabled, and that there has been activity at the points indicated along the timeline. The higher the motion spikes, the more activity in the area at that point.</p> <p>Activity levels on the timeline are enabled by default when Motion Search analytics is configured on a camera.</p>
3	Look Back/Ahead	<p>These buttons allow looking back/ahead 60 minutes in the activity data.</p>

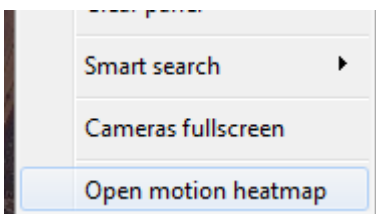
3.9. Heatmaps



Similar to Activity Trails, the Heatmaps feature uses data from the Motion Database to indicate less/more motion in the camera by overlaying a heatmap over a camera snapshot.

The greener an overlay, the less motion occurred in that area; the redder an overlay, the more motion in that area.

3.9.1. View Heatmap



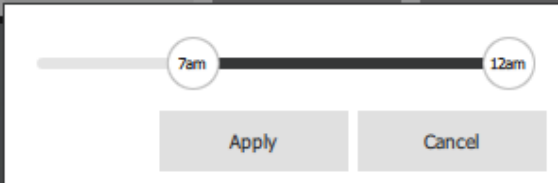
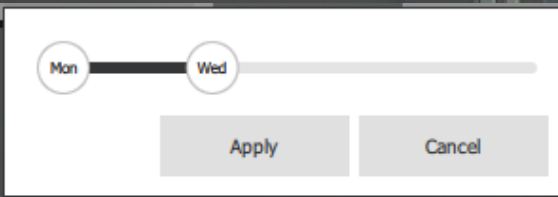
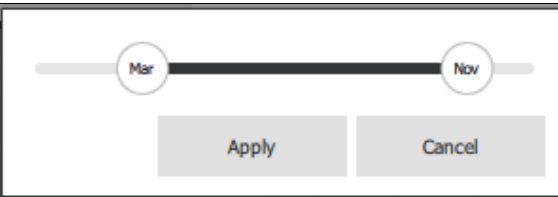
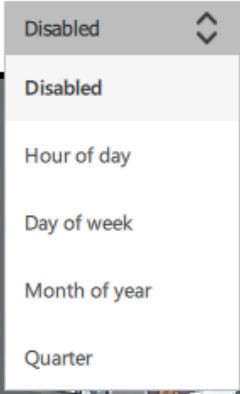
To view a camera's heatmap, load a camera in the **Cameras Tab** → **right-click on the feed** → **select Open motion heatmap**.

3.9.2. Heatmap Parameters


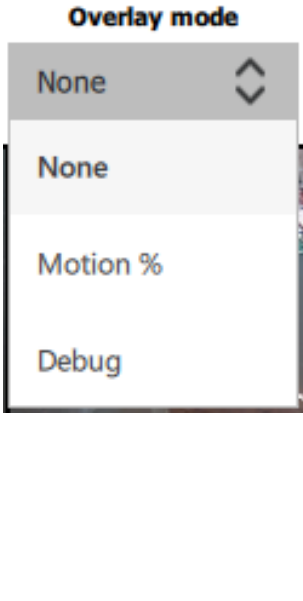
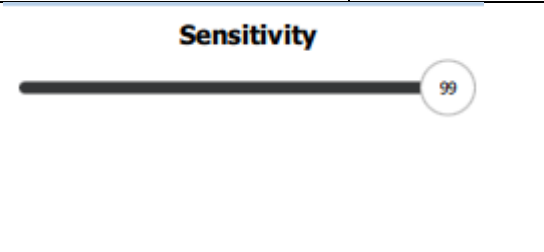

When the heatmap window opens, the user will need to define a few parameters before a heatmap can be generated. See below.

Period Monday 05 Nov 2018	Time of day filter 7am - 12am	Day of week filter Mon - Tue	Month filter Mar - Apr	Breakdown by Disabled	Breakdown cell size Small	Overlay mode None	Sensitivity 99	Threshold 7
--	---	--	----------------------------------	---------------------------------	-------------------------------------	-----------------------------	--------------------------	-----------------------

Period	<div> <div>Day Week Month Quarter Year</div> <div> <div>< November 2018 ></div> <table border="1"> <thead> <tr> <th>Mon</th> <th>Tue</th> <th>Wed</th> <th>Thu</th> <th>Fri</th> <th>Sat</th> <th>Sun</th> </tr> </thead> <tbody> <tr> <td>29</td> <td>30</td> <td>31</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> </tr> <tr> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> </tr> <tr> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> </tbody> </table> <div> <div>Apply</div> <div>Cancel</div> </div> </div> </div>	Mon	Tue	Wed	Thu	Fri	Sat	Sun	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	<p>A period of analysis needs to be selected.</p> <p>Select: Day/Week/Month/Quarter/Year from the tabs at the top of the period table, and then refine further by selecting either a specific day in a week/week in a month/month in a year/quarter in a year/year.</p> <p>When done, click Apply.</p>
	Mon	Tue	Wed	Thu	Fri	Sat	Sun																																												
	29	30	31	1	2	3	4																																												
	5	6	7	8	9	10	11																																												
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	3	4	5	6	7	8	9																																												

Time of Day Filter		<p>The period (defined above) can be further refined by dragging the sliders to limit analysis to certain times of the day.</p>
Day of Week Filter		<p>The period (defined above) can be further refined by dragging the sliders to limit analysis to certain days of the week.</p> <p>Note: Not applicable when only 'Day' is selected for analysis period.</p>
Month Filter		<p>The period (defined above) can be further refined by dragging the sliders to limit analysis to certain months of the year.</p> <p>Note: Only applicable if Quarter/Year is selected for period of analysis.</p>
Breakdown	<p>Breakdown by</p> 	<p>Results generated by the application of the above filters are displayed in snapshots which can be broken down according to various timeframes:</p> <p>Hour of day: Displays 24 snapshots. Day of week: Seven snapshots. Month of year: 12 snapshots. Quarter: Four snapshots.</p> <p>Note: Breakdown options will be determined by the period of analysis. I.e., Month of year breakdown cannot be selected if only 'Day' is selected for period of analysis.</p> <p>Below is an example of the heatmap snapshot results when 'Hour of day' is selected for the breakdown. There are 24 snapshots for each hour of the day.</p>



Breakdown Cell Size		<p>The size of the breakdown snapshots can be set to small/medium/large.</p> <p>The snapshots in the above example are set to 'Small.'</p>
Overlay Mode		<p>Select which mode of overlay to display:</p> <p>Motion %:</p> <ul style="list-style-type: none"> - Displays amount of time (in percentage) out of the selected time period in which motion occurred. E.g., If the 24-hour time period is selected and motion is 50%, this means that motion occurred for 50% of the 24-hour period, which is 12 hours. - Displays motion in percentage (in text) over corresponding zones of motion in the snapshot. <p>Debug:</p> <ul style="list-style-type: none"> - As above, debug overlay also displays amount of time in percentage during which motion occurred. - The fraction value represents the actual data used to generate the percentage value, and indicates the number of seconds out of an evaluation period of 3600 seconds during which motion occurred.
Sensitivity		<ul style="list-style-type: none"> • For scenes with low overall activity, increase the sensitivity to highlight small differences in motion in the scene. • For scenes with greater overall activity, decrease the sensitivity to allow comparison between areas that have a higher base motion level.
Threshold		<ul style="list-style-type: none"> • The threshold slider allows the user to filter out low levels of activity in the scene. The slider adjusts the minimum level required for motion to be shown in the heatmap overlay.

3.9.3. Heatmap Results

Click **Apply** once parameter adjustments have been made and the heatmap results will be updated. The greener an overlay, the less motion occurred in that area; the redder an overlay, the more motion in that area.



Close the window when done.

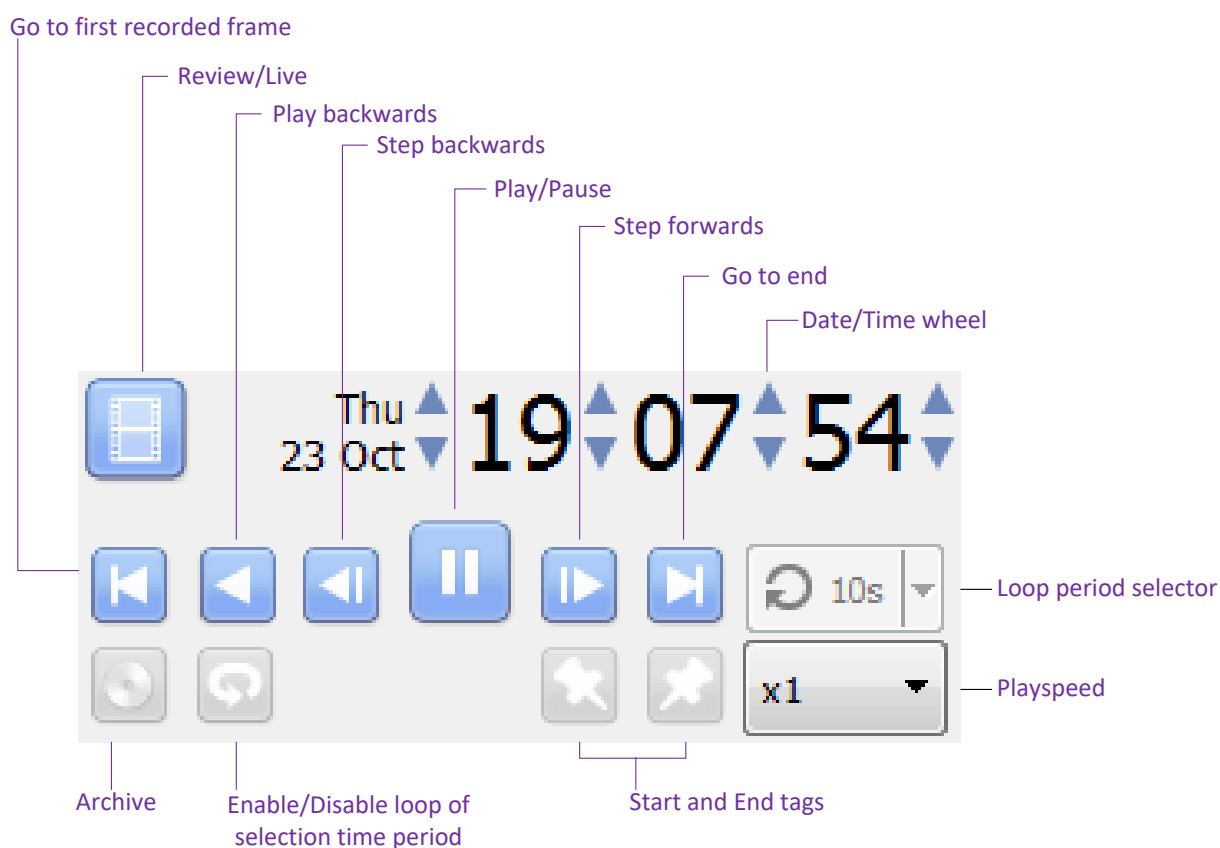
4. Archiving



Archiving is a process of selecting recordings and copying them to archiving media, such as USB key, hard drive, or CD/DVD. Archived recordings retain their authenticity and can be verified as authentic (unaltered) on replay. Creating an archive is done from within the Cameras Tab; reviewing and exporting an archive all occurs in the **Archive viewer tab**, or the **CathexisVision Archive Player**. This section details the procedures for reviewing video and selecting portions of the video to be archived, from either the Archive Player or the Archive Viewer tab in the CathexisVision software, as the interfaces for doing so are the same.

4.1. Review Controls (Timeline and Review Controls Panel)

This section will deal with reviewing video in CathexisVision. There are two sections that may be used to review recorded footage. The **Review Control Panel**, and the **Timeline**.

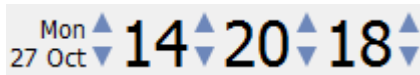
4.1.1. Review Control Panel



Note: Clicking the  icon, to enable review, will change to an  icon. Clicking the running-man icon will return one to live view.

4.1.1.1. *To Review Footage from a Certain Date*

Using the Time/Date Wheel





To go to a specific date, select the camera/s for review, and click on the arrows of the date/time wheel until the correct date/time is selected.

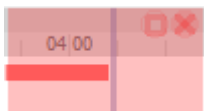
Using the Timeline

To move to a date and time, using the timeline, simply left-click and hold anywhere on the timeline, and drag the timeline to the desired time/date.

4.1.1.2. *Selecting a Period for Review*

After finding something of interest, one can loop through the recorded footage around that event. (This can also be useful when selecting footage for archive).

Start by using the date/time wheel, to navigate to the desired beginning point. Once this is done, click on the  icon, which will tag the start of the selection. Then navigate to the end of the desired period, and click on the  icon, to tag the end of the selection.



The selected areas will appear to the left. By default, it will be set to loop. This can be seen when looking at the loop icon.



means that it will loop, to the beginning of the selection, as it gets to the end of the selection.



Means that the video will continue to play past the end of the selection.

4.1.2. Timeline

The timeline at the bottom of the GUI indicates where in time the currently selected cameras are.

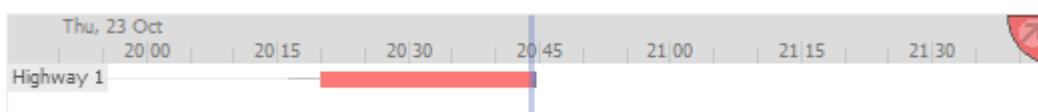
Note: While one may review legacy video in CathexisVision 2015 and onwards (recordings made on pre-2015 systems), the timeline will remain blank.

4.1.2.1. *Live View Timeline*



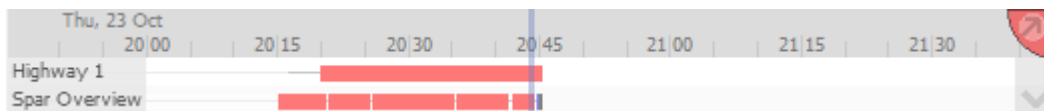
The live view timeline simply shows the current time at the intersection between white and grey.

4.1.2.2. *Single and Multiple Camera Review Timeline*




When reviewing a camera's recorded video, the timeline will change to show red blocks. These blocks on the timeline

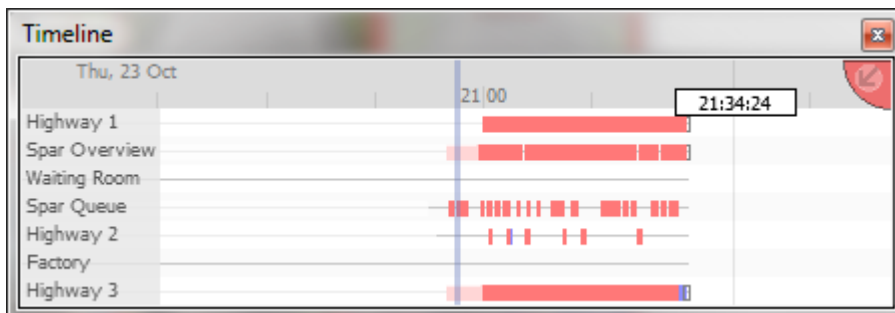
represent recorded events.





If multiple cameras have been selected for review, they will appear stacked on the timeline.

Note: One may only view two cameras' timelines at once. To cycle between them click on the  icon at the bottom right of the timeline. To see more, detach the timeline from the GUI. This is described below.

4.1.2.3. Detached Review Timeline

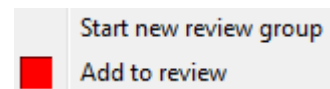


To detach the timeline from the GUI, click on the  icon, at the top right of the timeline. To reattach the timeline, click in the same place, on the  icon.

4.1.2.4. Synchronised/Independent Review

By default, all reviews are synchronised, when multiple cameras are selected for review. It is possible to review cameras independently.

When already reviewing a camera, middle-clicking on a camera's panel will display the following options in the context menu.



Start new review group will add this camera to a separate group of review cameras, which will be asynchronous to the original review group. The new review group is indicated by the tag on the top-right of the video. Each review group will get its own colour.

Add to review will add this camera to the already existing review group. As review groups are added, the number of options here will increase.

4.1.2.5. Timeline Actions


Zoom in on Timeline

There are two ways to zoom in on a section of the timeline.

1. By mousing over the timeline (during review) and rolling the mouse-wheel forwards. To zoom out, roll it backwards.
2. By shift-selecting a section of the timeline.



This is done by holding down the SHIFT key, while click-dragging the selection with the left mouse button. The selection will look like the image to the left.

To **zoom in** on this selection, click on the  icon.

Move the Timeline with the Mouse

Move backwards and forwards in time, by left-click dragging the timeline in the desired direction of travel.

4.2. Archiving Video

Once the video is selected, it may be archived for later review.

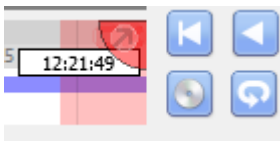
Special Notes

1. A Windows/Linux GUI can only output new archive files, but will be able to archive video from a VR running any OS.
2. Do not format, or configure, the newly inserted CD/DVD. Windows presents an option to configure the disk as CD/DVD, or drive. This must not be done!
3. When archiving a video stream which has **Privacy Zones**, the archive file will have the zones included only if the feed is set to “Show privacy zones” at the time of archiving.



4.2.1. Archiving from Live/Review


The Archive system has changed both the creation, and review, processes for archiving.

4.2.1.1. Select Video to Archive



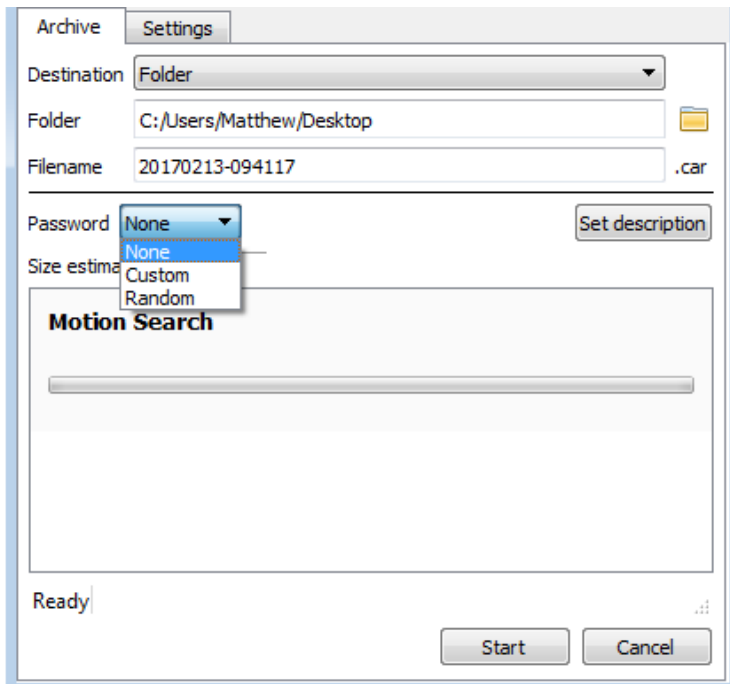
There are two ways to select the period for archiving.

1. **Tagging:** Click on the  icon to tag the start of the selection. Then navigate to the end of the desired period, and click on the  icon, to tag the end of the selection.
2. **Shift-selection:** This is done by holding down the SHIFT key, while click-dragging the selection with the left mouse button. The selection will look like the image to the left.

Click on the  icon to start archiving the selection.

4.2.2. Apply Archive Settings

Archive Tab



Choose the **Folder** to which the archive should be sent. Select a **subfolder** for this specific archive. The default folder name will be the current date, but it can be renamed to something more descriptive.

The **filename** may be defined manually.

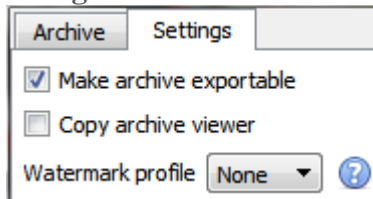
Add a **Password**, if needed.

A **Size estimate** of the archive is provided.

Clicking on **Set description** allows one to give this specific archive a title.

Click on **Start** to archive the selection with these settings.

Settings Tab

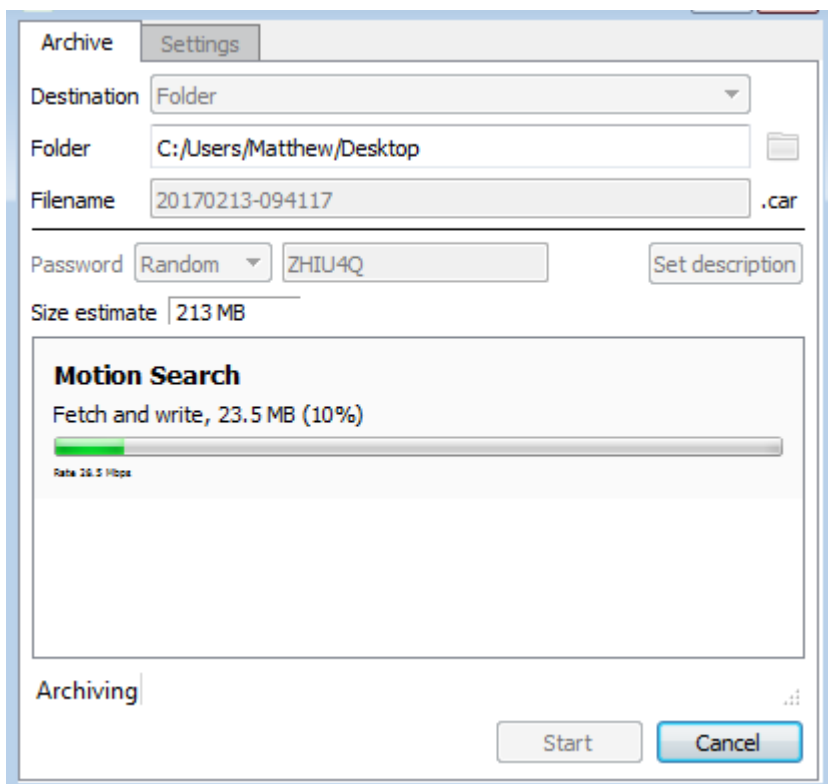


Make archives exportable or not exportable, by checking the box.

Use the **Copy archive viewer** option when the archive will be viewed on a computer that does not have the CathexisVision interface installed.

Note: The option to setup **Watermark profiles** is configured in **Setup Tab → General Site Setup → Configure archiving**. This setting is controlled by the administrator of the Site.

4.2.2.1. Complete the Archive process



While archiving the interface will display moving progress bars to indicate the progress of the archiving process.

4.3. Reviewing Archived Video

Archives can either be reviewed from within the CathexisVision software using the Archive Viewer, or from the standalone Archive Player software, which is installed with the CathexisVision software. The interfaces for both are exactly the same.

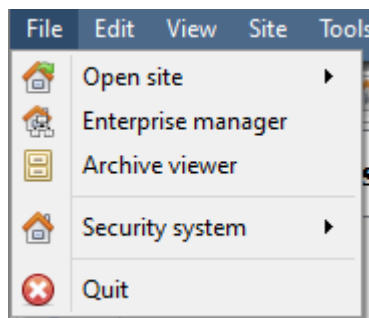
Note: 'Maintain aspect ratio' is enabled by default and can be toggled on/off in **Settings Menu → Video Display → Maintain Aspect Ratio**.

4.3.1. Multi-Camera Archive Player

Archives with multiple cameras can be reviewed in the CathexisVision Multi-Camera Archive Player, available in CathexisVision 2020 and later. It is installed along with the software, however is only launchable from the Windows Start Menu. The Multi-Camera Archive Player is dealt with in the CathexisVision Archiving Appnote. For more information, please consult this guide, or contact Support at support@cat.co.za.

4.3.2. Open Archive Viewer/Player

Archive Viewer



Open the CathexisVision GUI, and select File Menu → **Archive viewer**.

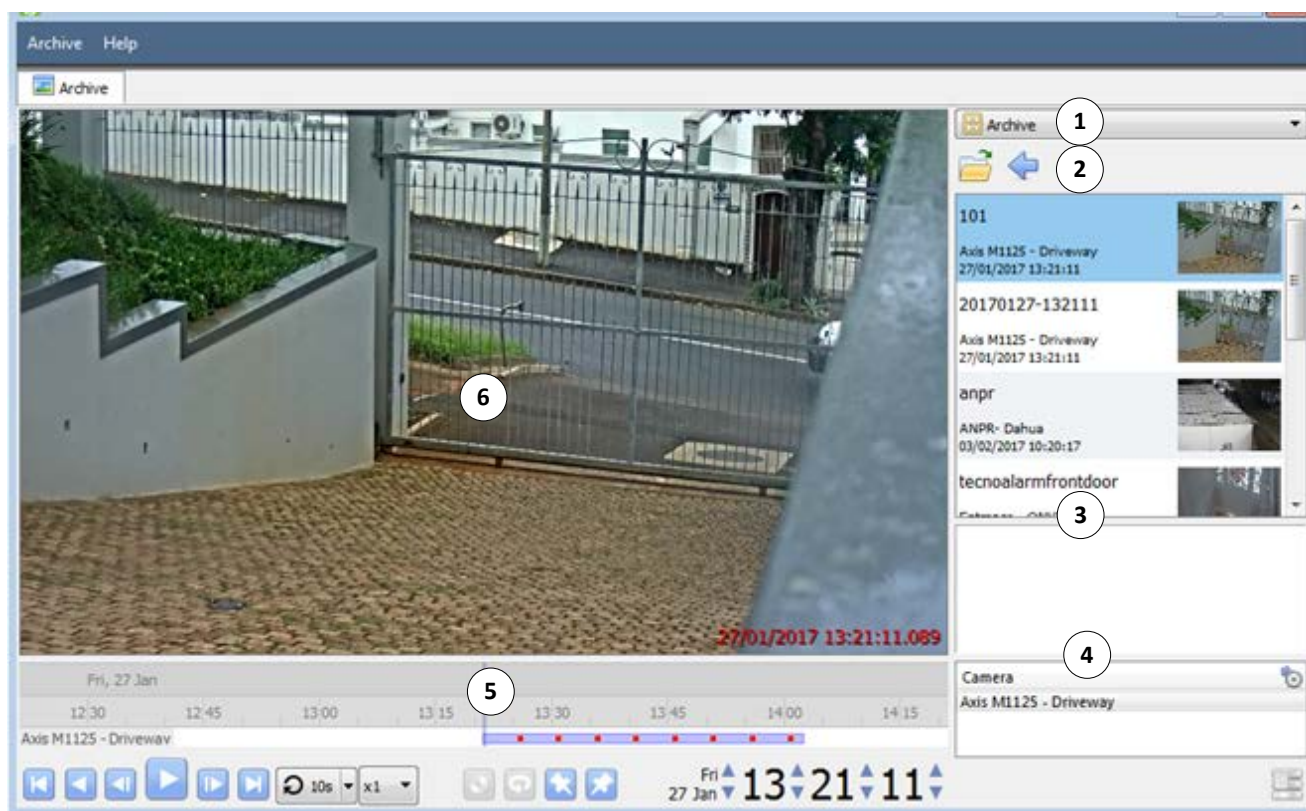
Archive Player



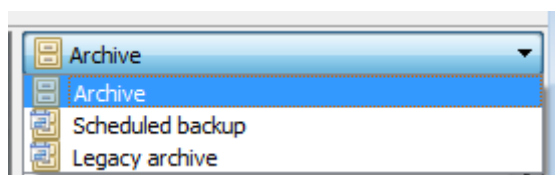
Double-click the **Archive Player shortcut** that is automatically created when the CathexisVision software is installed.

4.3.3. Archive Viewer/Player Interface

This section details the interface of the **archive viewer/player**, and the processes that are performed in each.



1 Type Selection



From this drop-down menu, select the type of archive to view.

Folder Navigation and Archive File List

Navigate folders on the computer containing archive files in order to find and view them.



Click to browse folders in dialog window.






Click to go back to previous folder.

Once the folder containing the archive is selected/opened, all appropriate archive files will be populated in the archive file list.

Note: Individual archive files will not be visible when searching through folders. Archive files are only visible in the archive file list, once the general folder containing the archive files has been selected.

File Information

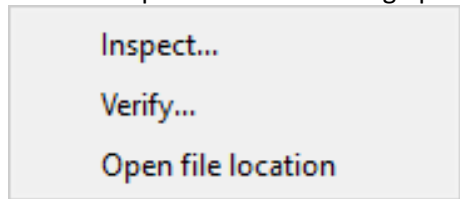
20170127-132111	
Axis M1125 - Driveway 27/01/2017 13:21:11	
anpr	
ANPR- Dahua 03/02/2017 10:20:17	
tecnoalarmfrontdoor	
Entrance - ONVIF 28/07/2017 08:49:05	

The archive file list displays information about the archives in the selected folder. This information includes:

- Archive file name.
 - Where no name is given at time of archive, date of archive is used instead.
- Name of camera from which archive originated.
- Date and time of archive.

Right-Click Options

Right-clicking on an archive in the archive file list will present the following options:






Inspect will display the meta-information of the archive. See the Archive Security section.

Verify will confirm whether the archive is authentic or not. See the Archive Security Section.


Open file location will open up the location of the selected archive file.

Description

Axis M1125 - Driveway 27/01/2017 13:21:11	
Suspect Arriving	
Axis M1125 - Driveway 27/01/2017 13:21:11	
Suspect Leaving	
video footage of suspect entering premises via front gate	

If a description for the archive was set during the archive process, it will appear in the field beneath the archive file list when the relevant archive file is selected.


4 Archive Properties

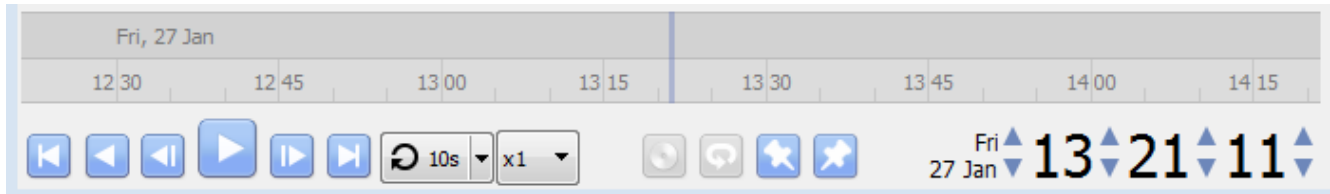
Camera	Start	End	
Axis M1125 - Driveway	20170127-132111	20170127-133905	

When an archive is selected, its properties will be listed in the Archive Properties field.

Column view may be changed by clicking on the  icon.

5 Timeline Controls

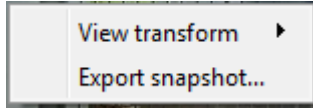
The timeline controls of the Archive interface are the same as those described in the **Cameras Tab** section, of this document. On the timeline itself, the blue line indicates an event/recorded video. The red dots  indicate the point that an event was triggered.



6 Archive Camera Panel

The selected archive will be available to view from within the camera panel.

Right-Click Options



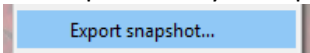
Select View Transform to transform the video.

Select Export snapshot to export a snapshot from the archived video. See below.

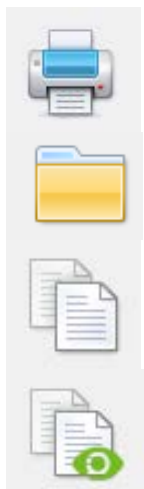
Export Snapshot

When reviewing archived video, video snapshots may be exported.

Right-click on the image and select



This will bring up the **Export snapshot** window, which provides the following options:



Print snapshot.

Save snapshot to folder

Copy to system clipboard.

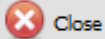
Copy to Cathexis clipboard.

☐ Overlay camera name

☐ Overlay time

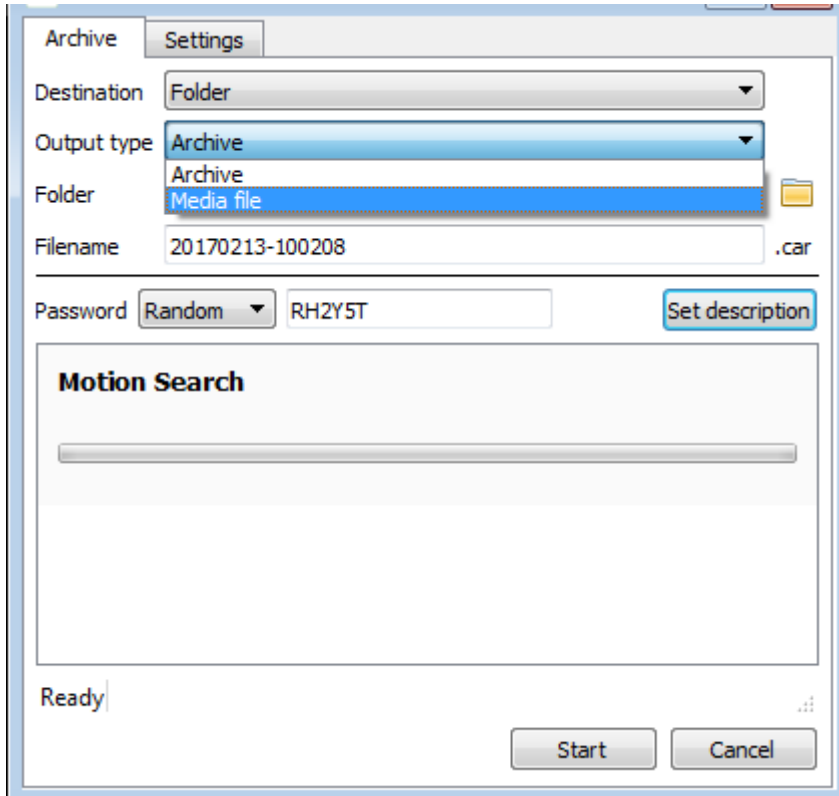
This will overlay the name of the camera in the top-left corner of the camera image.

This will overlay the time of the recording in the bottom-right corner of the camera.



Click once the snapshot as desired.

4.3.4. Export Archive



The dialog box has two tabs: 'Archive' and 'Settings'. Under the 'Archive' tab, there are several fields: 'Destination' (a dropdown menu set to 'Folder'), 'Output type' (a dropdown menu with 'Archive' selected and 'Media file' highlighted), 'Folder' (a text field), 'Filename' (a text field containing '20170213-100208' and a '.car' extension), 'Password' (a dropdown menu set to 'Random' and a text field containing 'RH2Y5T'), and a 'Set description' button. Below these fields is a 'Motion Search' section with a horizontal progress bar and a large empty text area. At the bottom left, it says 'Ready'. At the bottom right, there are 'Start' and 'Cancel' buttons.

Archives, or a selection of an archive, may be exported either as another archive, or as a media file.

To export the video as a media file, click on the dropdown menu for **Output Type**, and select **Media file**.

4.4. Archive Security

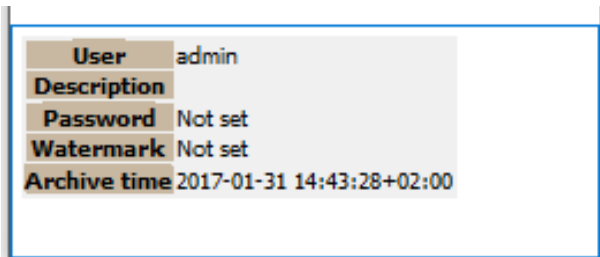
CathexisVision includes the following measures to ensure archive security:

- The overall signature of the archive is retained, linking it to the source NVR.
- Critical portions of video/audio can be independently signed and explicitly linked to the source NVR.
- Clients sourcing data from an NVR for archive are audit logged.
- Archives can be encrypted with a password during archiving process.
- Watermarks can be embedded in archive during archiving process.
- Archives can be inspected to reveal archive meta-data.
- Archives can be verified in order to determine the authenticity of an archive.

This section demonstrates how to inspect the meta-data of an archive, and how to verify the authenticity of an archive.

4.4.1. Inspect Archive

To inspect an archive for its meta-information, right-click on the archive in the archive file list and select **Inspect**. This will bring up the window below:



User will display the username of the operator who performed the archive.

Description will show the description of the archive (if set).

Password will show **Encrypted** if a password is set, and **Not set** if not.

Watermark will show the watermark of the archive (if set).

Archive time will show the time and date that the archive was performed.

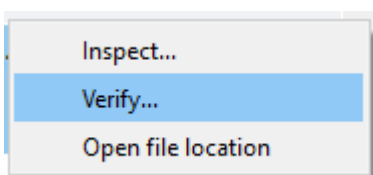
4.4.2. Verify Archive

From CathexisVision 2017, a new verification feature has been introduced, which provides a report on the authenticity of an archive for security reasons. Archives may be verified from the archive viewer in CathexisVision or from within the CathexisVision Archive Player.

Should there be a query regarding the verification, operators may copy the verification result and email it to Cathexis support for help.

Please note:

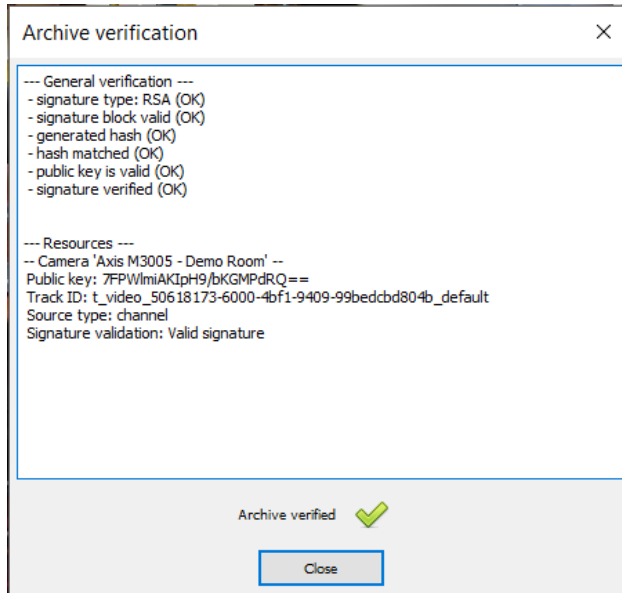
Sub-archives (archives of archives) do not contain any signatures generated by the original NVR that sourced the video data. The authenticity of these archives cannot be verified by Cathexis.



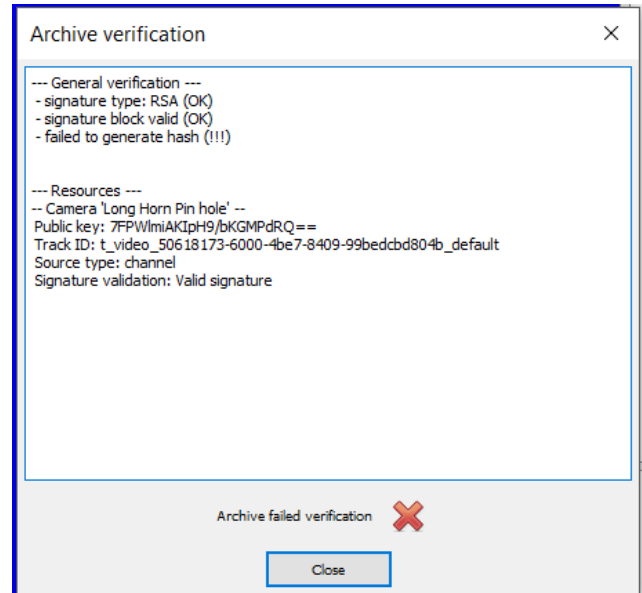
Once the file location of the archive is opened, in either the archive viewer or the CathexisVision Archive Player, right-click on the relevant archive. Select **Verify**.

Once **Verify** is clicked, the software will determine whether or not the archive is authentic by indicating an archive as **Archive Verified** or **Archive failed**.

Archive verified



Archive failed verification



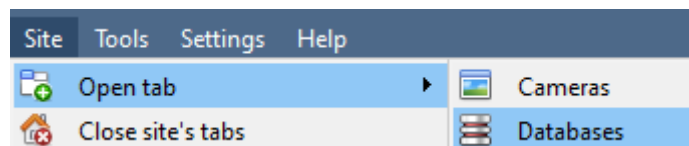
Note: Archive verification reports may be copied and emailed to support@cat.co.za.

5. Database Tab

In the database tab, both the general databases and the integration/metadatabases may be viewed.

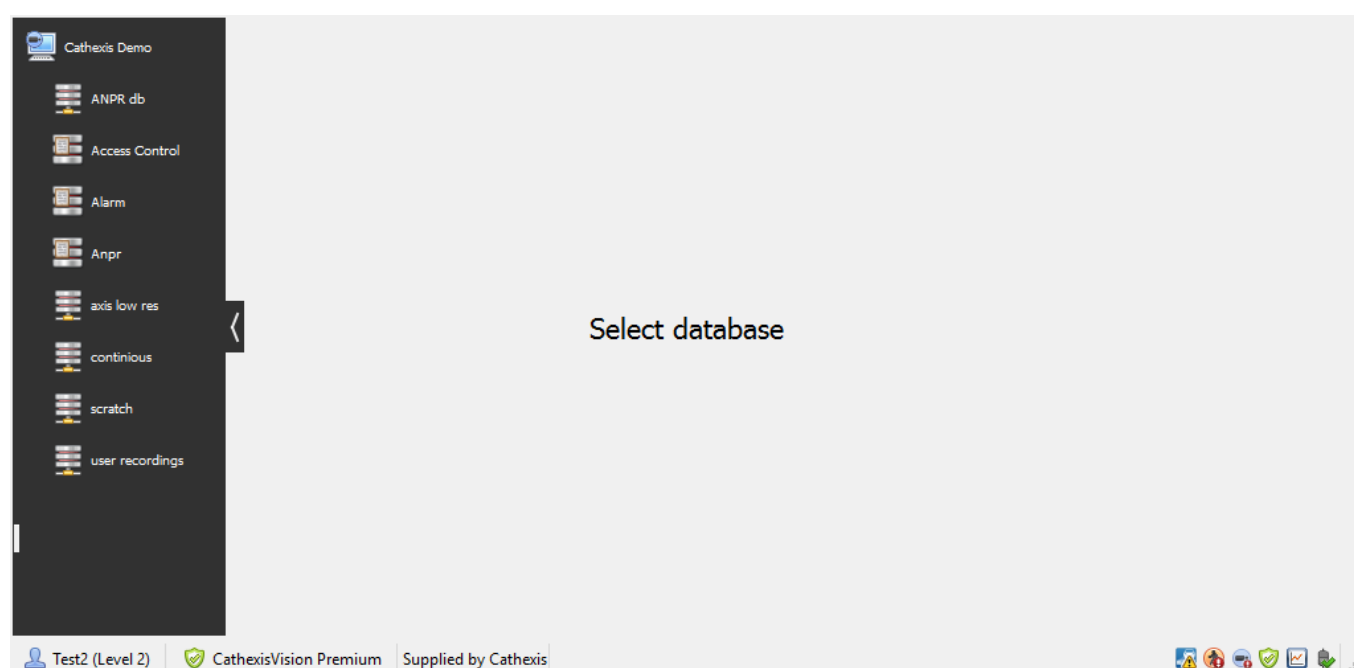
Note: Only users with correct access rights will be able to view database entries.

5.1. Navigate to Database Tab



To open the CathexisVision Database Tab select **Site**→**Open Tab** → **Databases**

Once the tab is open, select a database to view.



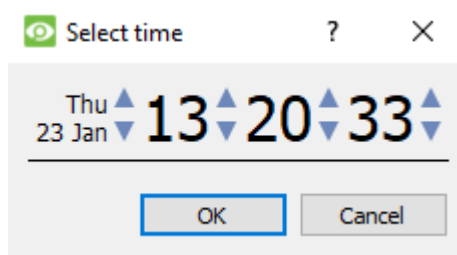
5.2. General Database

Select one of the general databases to view entries. If a Cathexis Events Database has been created, it will have the same interface as below.

Time	Event
2017/01/16 11:25:51	Axis Q1931-E - Perimeter acti
2017/01/16 11:26:04	ANPR Dahua
2017/01/16 11:26:22	Axis Q1931-E - Perimeter acti
2017/01/16 11:26:23	ANPR Dahua
2017/01/16 11:26:36	sunel motion
2017/01/16 11:26:40	sunel motion
2017/01/16 11:26:56	Axis Q1931-E - Perimeter acti
2017/01/16 11:26:57	Back Parking After Hours
2017/01/16 11:27:07	Axis Q1931-E - Perimeter acti
2017/01/16 11:28:18	demo room motion
2017/01/16 11:28:29	demo room motion
2017/01/16 11:28:43	ANPR Dahua
2017/01/16 11:28:46	ANPR Dahua
2017/01/16 11:28:52	Axis Q1931-E - Perimeter acti
2017/01/16 11:29:43	Back-door Exit - Dankang7082P timer
2017/01/16 11:29:50	ANPR Dahua
2017/01/16 11:30:12	Axis Q1931-E - Perimeter acti
2017/01/16 11:30:19	ANPR Dahua
2017/01/16 11:30:21	Back Parking After Hours
2017/01/16 11:30:37	Front PTZ - Truvision timer
2017/01/16 11:30:37	Axis F41 timer
2017/01/16 11:30:37	Entrance timer
2017/01/16 11:30:38	Vivotek 8332 Parking Cat timer
2017/01/16 11:30:38	Back parking - Vivotek timer

Entrance

5.2.1. Locate an Entry



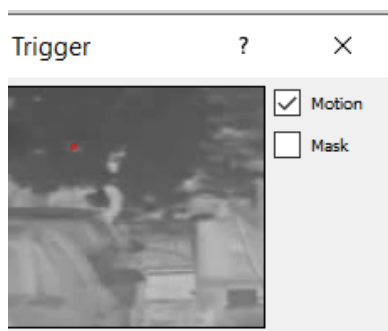
- In the Database Tab, click on the icon, located in the bottom right hand corner.
- Select the date and time:

The list of database entries will have been pared down to the beginning, with the event closest to the time selected, and a few subsequent entries.

5.2.2. Replay an Associated Recording

CathexisVision is capable of associating video footage and other data with database entries. When reviewing associated footage there are two options. The user may review the video clip associated, or they may view the video frame at the point that the event was triggered.

5.2.2.1. Review Trigger Frame




To review the trigger frame, left-click on an entry, and if the icon is present in the panel below, double-click on it. This will bring up the dialogue to the left.

Motion will show where the motion occurred in the image.

Mask will show what areas of the image are covered by the algorithm which triggered the database entry.

5.2.2.2. Review Event Video

To review the video associated with a database entry, either double click on that entry, or on the  icon in the entry's details.

5.2.2.3. CathexisVision Controls




CathexisVision database review uses the same control schema as the timeline review used in the **Cameras** Tab → **Review Controls** section.




5.3. Integration/Metadatabase

Select the relevant integration/metadatabase.


5.3.1. Interface



1 View	The user may change the way that the database is presented. Some integration databases have multiple view options.
2 Sorted By	Events can only be sorted by certain parameters.
3 Easy Search	The easy search option lets the user quickly search the database.
4 Filter 	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, the following filter options are available:</p> <ol style="list-style-type: none"> To enable filters check this box: <input checked="" type="checkbox"/> Enable filters To add a new filter click on . To delete an added filter click on . <p>It is possible to filter the same parameters more than once.</p> <p>To change a filter, click on the blue hyperlinked text. (For example, click on Timestamp to change the filter from Timestamp, to any of the other available options.)</p> <p>The filter options in this integration are:</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> Transaction Time Event Type Object ID Object Name Notification </div>

	Note: <ol style="list-style-type: none"> Multiple filters may be run simultaneously. The filter icon  will change to  when filters are active.
5 Export	Generate metadatabase reports in PDF or CSV format. See below.
6 Scheduled Reports	Click this to create and manage scheduled metadatabase reports. See below.
7 Go to Time	This navigates to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes, and then click on the  icon.

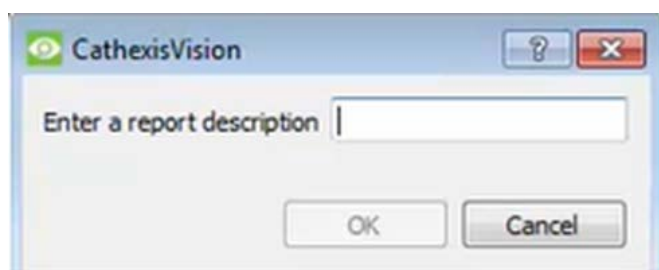
5.3.1.1. Scheduled Metadatabase Reports

Click the  icon to open the scheduled report window.

	<p>All created reports will be listed here.</p> <p>First, click Add to create a report. Then edit to define the reporting schedule. See below for more detail.</p> <p>To create, edit, or delete a report, select the entry and click on the corresponding button.</p>
--	--

5.3.1.1.1. New Scheduled Report

Click Add and give the report a description:

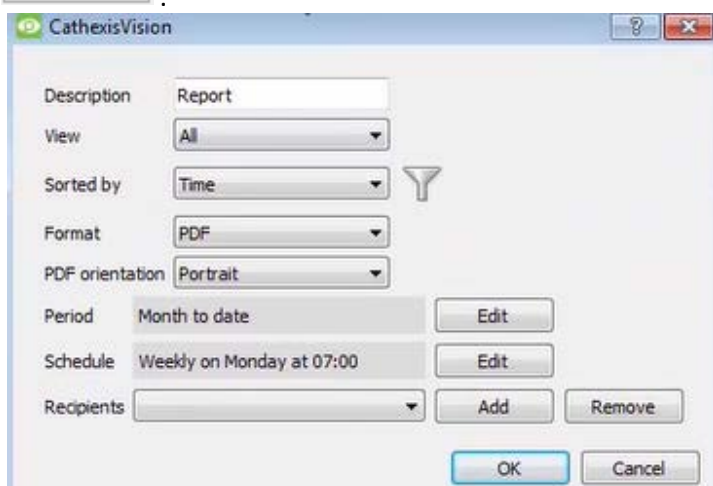


Click **OK** when done.

Once the new report is listed with the other reports, select it for editing to define the reporting schedule.

Either right-click the entry and select schedule or select the entry and click the schedule button at the bottom of the screen:

Schedule



Edit the **description** if needed.

Edit **Viewing** options.

Select the **Sorted by** option.

Select the **Format**.

Select the **orientation** of the Format.

Select the **period** to be reported on.

Define the **Schedule** for the report.

Add/remove recipients to whom reports will be sent.

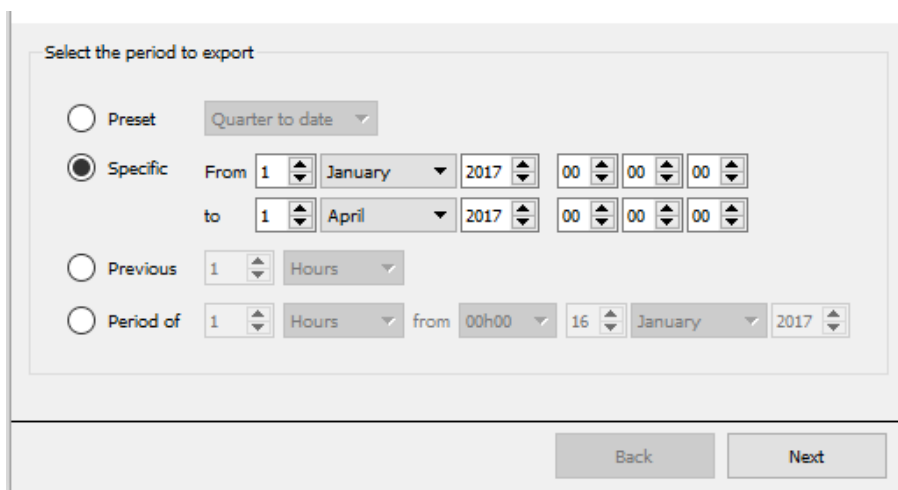
Add recipient: Click **Add** and enter the email address of the recipient. Multiple recipients may be added. All will receive emails.

Remove recipient: Select the recipient from the dropdown menu and click **Remove**.

5.3.1.2. *Generate Metadatabase Reports*



Click the icon to open the Export window.




Select the **Period** to export, and enter the required details.

Click **Next**.

Configure the report

Format

Filename 


Select the **Format** to export the report in; either CSV or PDF.

See below for the two options.


5.3.1.2.1. Export CSV

Configure the report

Format

Filename 

Select CSV **Format**.

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**), or click the  to choose a new save folder and filename.


5.3.1.2.2. Export PDF

Configure the report

Format

Heading


Orientation

Filename 

Select PDF **Format**.


Give the PDF a **Heading**.

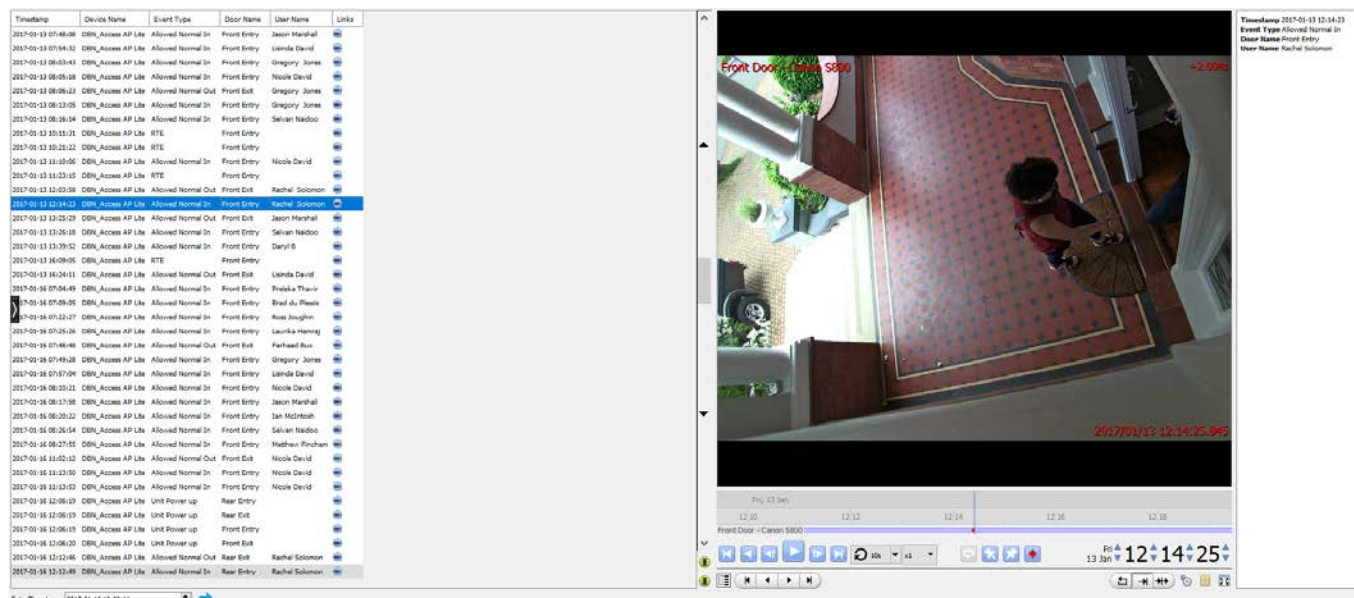
Select either Landscape or Portrait **Orientation** of the PDF.

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**), or click the  to choose a new save folder and filename.

5.3.2. Viewing an Entry's Associated Recording

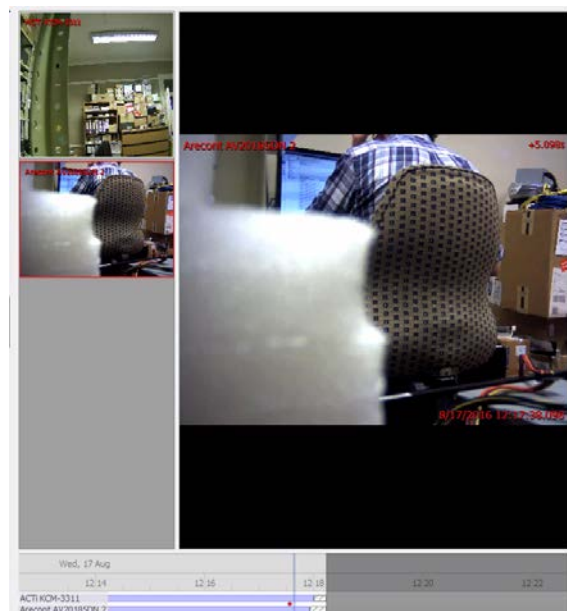
This integration uses the new video option, where the video player is embedded in the database view. This player uses the same timeline features as the CathexisVision Cameras Tab.

To view an associated recording, simply left-click on a database entry which has the  icon in the **Links** column. Then click play in the video player.



The screenshot displays the Cathexis database interface. On the left, a table lists access events with columns: Timestamp, Device Name, Event Type, Door Name, User Name, and Links. The 'Links' column contains video icons. The main area on the right shows a video player for the selected event. The video shows a person entering a room. The player includes a timeline at the bottom with a play button and other controls. The timestamp of the event is 2017-01-13 12:14:25.945.

5.3.2.1. Reviewing Multiple Cameras



If multiple cameras were added to the recorded object during the integration setup, these are displayed on the left of the video player screen as thumbnails.


Select a camera thumbnail to review it.

5.3.2.2. *Device Event Metadata*

When an integration database entry is selected, its event information will be displayed on the right of the video player.

Timestamp	2017-01-13 12:14:23
Event Type	Allowed Normal In
Door Name	Front Entry
User Name	Rachel Solomon

5.3.3. *Archive Selected Database Recordings*

Archiving video from the database follows the same process described above, in the **Archiving** section of this document. Note, however that when in the database tab, the archive button icon changes: .

Note: When archiving a video feed that has **Privacy Zones** enabled, the privacy zones will appear/not appear in the archived video, depending on whether they are enabled in the feed at the time of archiving. (They may be enabled/disabled by right-clicking on the feed of video being reviewed via the database tab).

5.4. Object Classification Database



The object classification database allows review of recordings associated with the tracking and classification of objects. It is an integration database and is navigated to, and operated, in the same way as the integration database described above. This section will only briefly overview the elements of the integration database that are unique to the object classification database. Please see the section above for more information.

Note:

1. Object classification database must be enabled in video analytics, and configured. Consult the setup manual.
2. Object classification analytics must be configured. Consult the setup manual.

5.4.1. Recordings List

Start time	Camera name	Classification
2018-11-21 15:16 Driveway		person
2018-11-21 15:56 Driveway		person
2018-11-21 16:35 Driveway		person
2018-11-21 17:15 Driveway		person
2018-11-21 17:55 Driveway		person
2018-11-21 18:34 Driveway		person

The recordings listed on the left-hand side of the database indicate the details of the recording, in particular the object classification that was made.

Clicking on one of the recordings in the list will play the video in the database video player, below.




5.4.2. Database Video Player



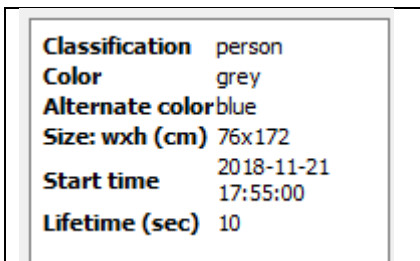
The video player will indicate recording information such as:

- Camera name.
- Overlays (if enabled and selected, see below).
- Recording start and end time. This refers to the times when the classified object enters and leaves the scene.

5.4.2.1. *Overlays*

	<p>To display overlays, hover over the left-side of the video player and click the arrow that appears. .</p> <p>Select the Overlays button  → the relevant camera → and then select desired overlays from the list of available overlays. Multiple overlays may be selected.</p>
---	---

5.4.2.2. *Recording Metadata*

	<p>On the right-hand side of the database, metadata about the recording will be displayed. Most of this is also displayed in overlays (if enabled) and in the recordings list information, but the metadata panel allows for quick review of object classification information.</p>
--	---

5.5. Pre-2015 Databases

Pre-2015 databases will allow for filtering when viewed from later CathexisVision clients. There are three major filter types: **Filters**, **Field Constraints**, and **Time Constraints**.

5.5.1. *Filters*



Note: All filtering is based on AND/OR options.

AND Applying Filter A AND Filter B, will provide results which contain only those Events where both Filter A and Filter B are true.

OR Applying Filter A OR Filter B, will provide results which contain any Event in which Filter A is true, plus any Event in which Filter B is true.

Note: Within a single filter, one cannot use both functions – so one cannot apply “Filter A AND Filter B OR Filter C”. (It must either be all AND filters or all OR filters.)

5.5.1.1. *Add/Remove a Filter*

Click on  to add a filter. Click on  to remove a filter.







5.5.1.2. *Enable a Filter*

☒ Filters ☒ Field constraints ☒ Time constraints

In order to have any of the Filters active, check the relevant filter box at the bottom of the filters dialogue.

Note: One may further constrain results, by making **Filters** and **Field Constraints** AND/OR dependent. For example, one may have a search that requires that the Event must match filters or field constraints, or have it set so that the Event must match filters and field constraints.

5.5.1.3. Filters Tab

If event has Camera	<p>These are the primary sorting lists. They have a blue, underlined style that indicates they are options. Click to see a pop-up list of the options. Choose from the following:</p> <p>Has camera > (then choose camera from Camera Name dropdown list).</p> <p>Has audio > (then choose audio input from Audio Input Name drop-down list).</p>
and	<p>This is a logical parameter for multiple filters. It may be “and” or “or”. It only appears if there is more than one filter. By default, it is “and”.</p>
	<p>The filter results must match <i>all</i> of the filters. For example,</p> <p> If event <u>is tagged</u> <u>and</u></p> <p> If event <u>has camera</u> <u>Cat Tech Sliding (Zone 7&8)</u> <u>and</u></p> <p> If event <u>has audio</u> <u>Cat Tech Sliding (Zone 7&8)</u></p> <p>Then the result is only those Events that are Tagged, that also include Camera 5 content, and that also include Audio Input 3 content – probably a short list.</p>
Or	<p>There are cases when it is “or”.</p>
	<p>The filter results must match <i>any</i> of the filters. For example:</p> <p> If event <u>has camera</u> <u>Cat Tech Sliding (Zone 7&8)</u> <u>or</u></p> <p> If event <u>is tagged</u> <u>or</u></p> <p> If event <u>has audio</u> <u>Cat Tech Sliding (Zone 7&8)</u></p> <p>Then the result is all events with Camera 5 content <i>plus</i> all Events that are tagged <i>plus</i> all events that have Audio Input 3 content – probably a long list</p>

5.5.1.4. *Field Constraints Tab*

This tab is only visible if there is a streaming text data application installed, in which case one sees these text data field filters. They include the fields that have been identified in the text data streaming setup. i.e. on this tab the fields customised for the text data application can be seen.

Examples of text data are the data streamed from till transactions (transaction number, purchase amount, time, number of purchased items, etc.), and data streamed from Access Control applications (name, time, employee number, etc.). This data is stored as different “fields”. It is possible to constrain filtered results based on various decisions with these fields.

The principle remains the same as the Filters tab, where a filter is created and then its parameters are changed using dropdown options (see above). The nature of these parameters depends entirely on custom application.

5.5.1.5. *Time Constraint Tab*

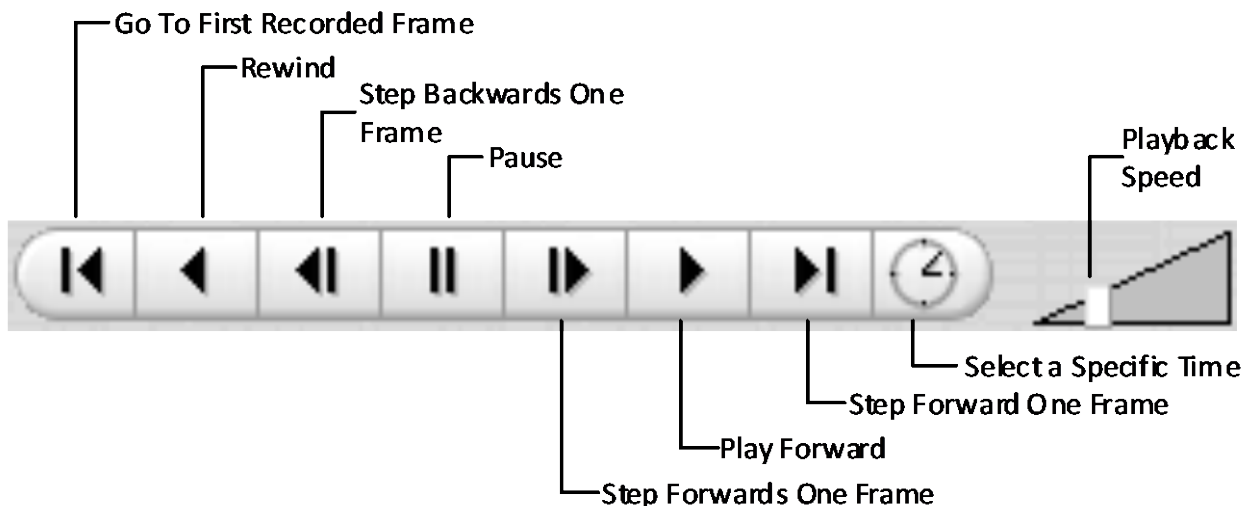
There are a number of different ways to constrain the time. These are:

equal to
greater than
greater than or equal to
less than
less than or equal to
between (inclusive)
between (exclusive)

Note: To modify the times, click on the **Date/Time hyperlink** and enter parameters in the dialogue that pops up.

5.5.2. *Pre-2015 Playback Controls*

When reviewing video from pre-CathexisVision 2015 Sites, the controls will be as follows:

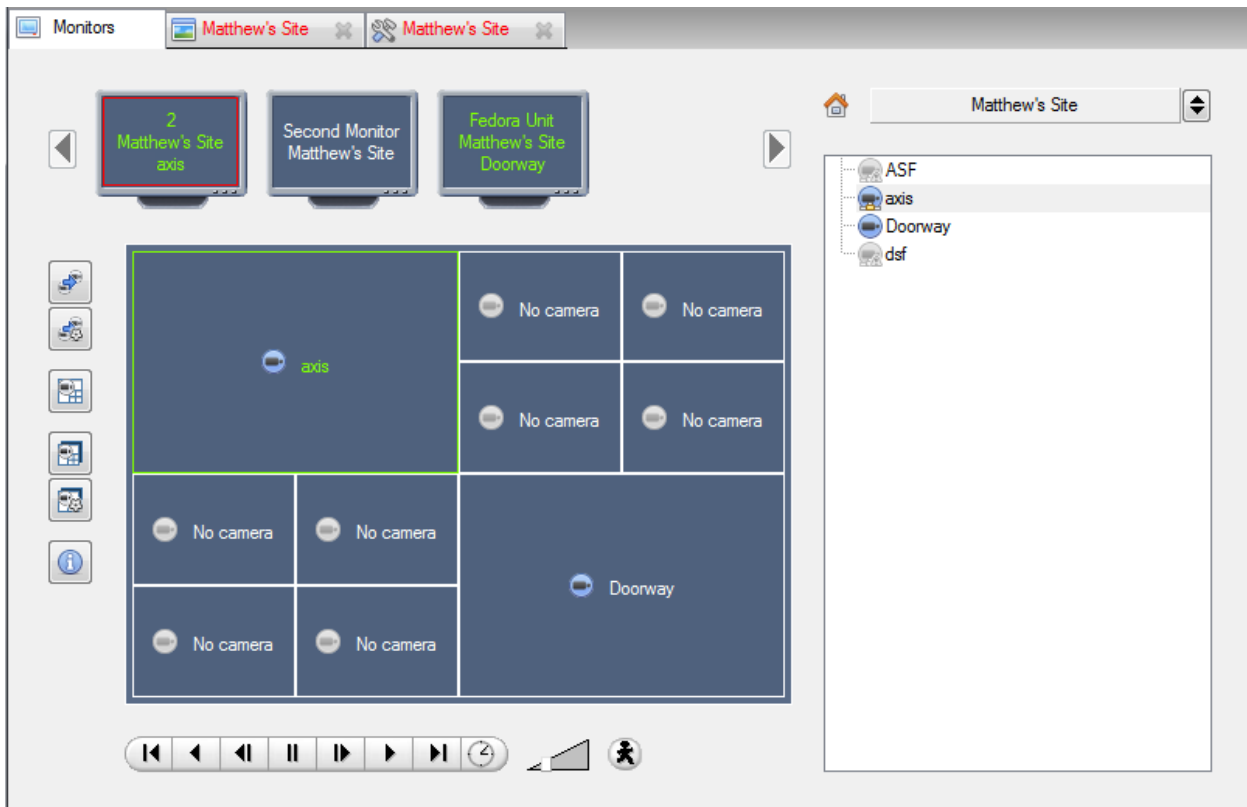


6. Monitors Tab

This tab will only be available if the user has been given monitor access rights by the system administrator. The monitors tab is a tab that gives full control over the Video Wall. Here one can change the layout, and define camera sequences, and salvos.

Because this tab deals only with the configuration of the Video Wall, there will be no video playing on the interface. Only the names of cameras, where they are placed in the layout, will be visible.

The next section deals with the Video Wall Software, in which the settings configured here will be reflected.



6.1.1. Open a Site on a Screen

The list of monitors will be representative of the number of monitors that have been added to servers on the Site.



To Open a monitor from a Site, select one of the available Monitors. Then click the Sites list:




Then select a Site.

The Monitor with a red border will be the Monitor whose camera Layout is displayed below it.

Layout

A layout defines how the cameras appear on the screen. This includes which cameras are present and how much of the screen an individual camera takes up.


Recall a Layout

To bring up a particular layout on a screen, click on the  icon, and select the layout name desired.

Sequence

A Sequence will run a set of cameras, on a single camera panel.


Run a Sequence

- Click on a camera panel.
- Click on .
- Select the relevant Sequence from the drop-down menu.

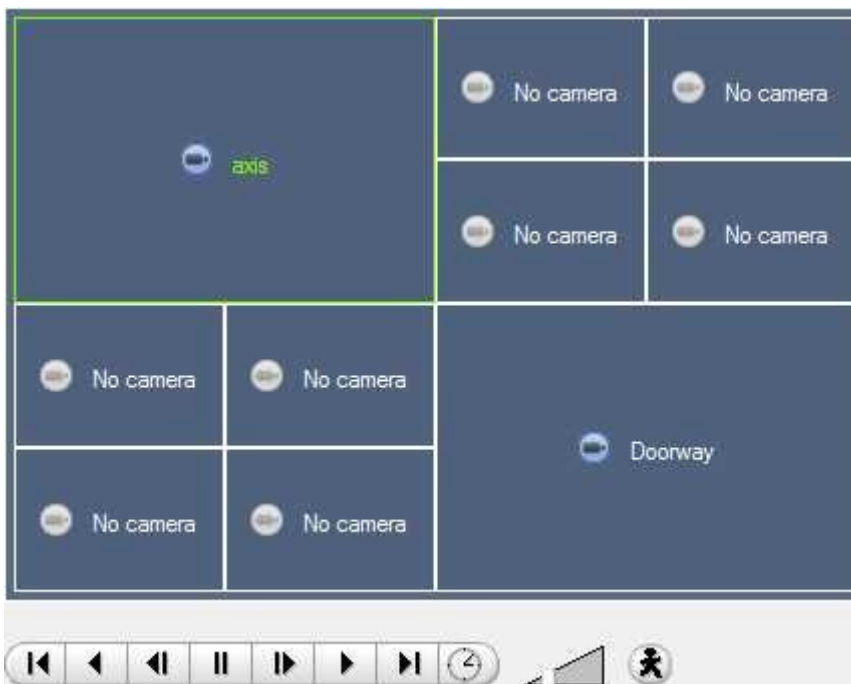
6.1.2. Salvo

A Salvo is a set of Layouts. This means that the Layout of cameras on the monitor will change, running through a set order, using the pre-defined Layouts.

Run a Salvo

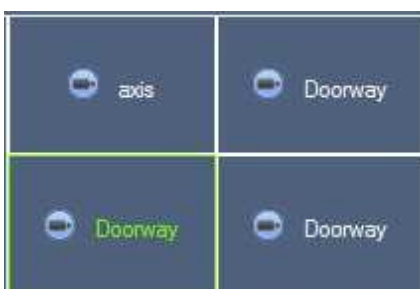
- Click on a Layout panel.
- Click on .
- Select the relevant Salvo from the drop-down menu.

6.1.3. Virtual Cameras interface



The virtual cameras interface is the interface where one can:

- See the Layout that the cameras will take on the Monitor selected.
- See what cameras are in which panels.
- Control the overlays on each camera.
- Use the Playback controls to review video on the Monitor.



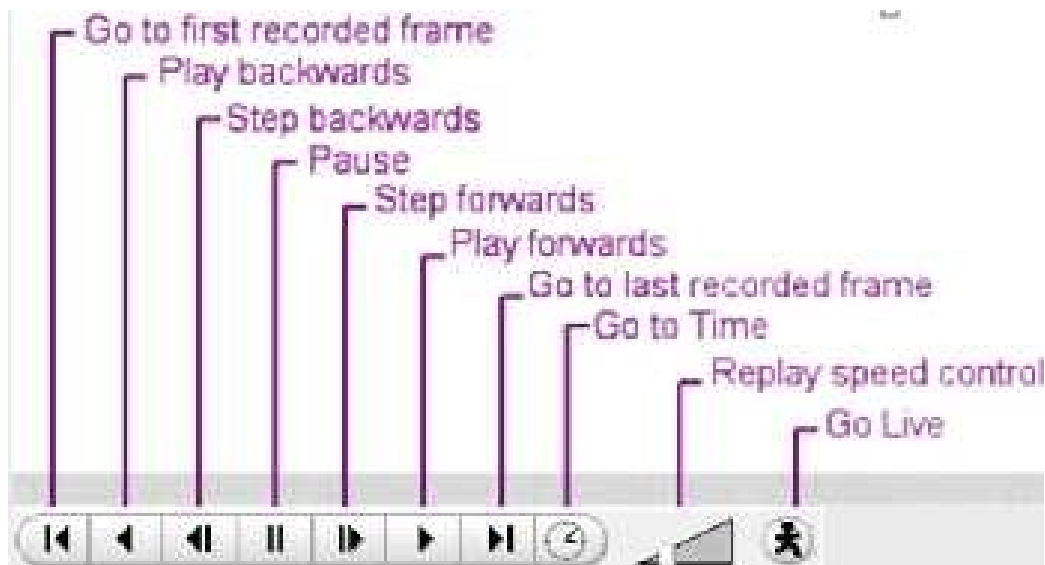
Note: When a camera has been selected, its border and camera name will become green.

6.1.3.1. Individual Panel Settings

To change the settings of an individual panel, middle-click on the panel, this will bring up the following menu:

- Set no camera** **Set No Camera** will make this panel blank
- Review camera** This will bring up the recordings of the selected camera. For information on reviewing the Camera, see the section below, on **Review Controls**.
- Next video format** This will cycle through the available video feeds that are available on the selected camera.

6.1.3.2. Review Controls



7. System Alerts and Alarms

Technical alarms and alerts will be received either via the Alarm Gateway (see Alarm Management Gateway Document) and/or the main CathexisVision interface in the event that there is a system error.

This section details the kinds of technical alarms and alerts that may be received, and an explanation of what a sample alarm looks like in the interface.

Note: This does **not** deal with receiving alarms to the Alarm Gateway. Please consult the Alarm Management Gateway Document for information on this aspect of technical alarms.

7.1. Types of Technical Alarms

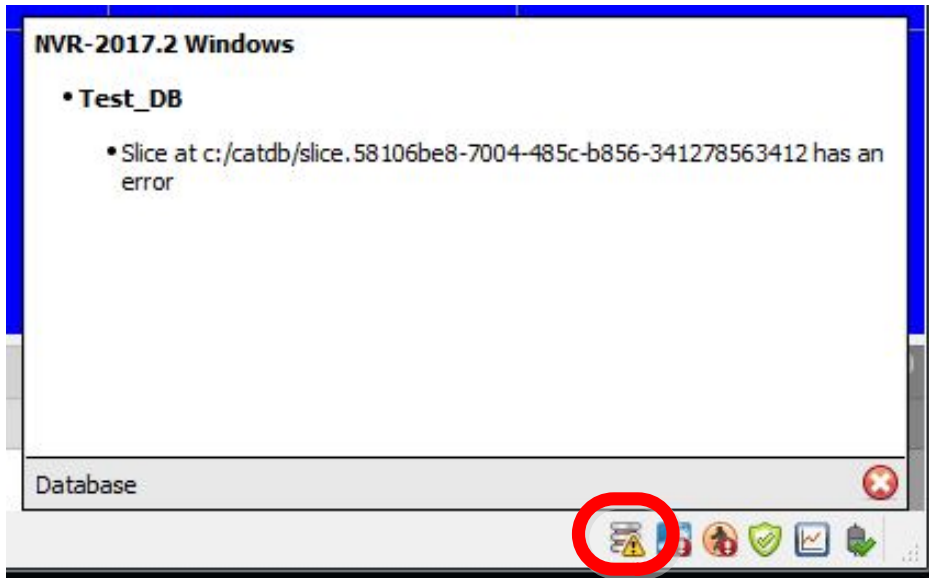
A single **Technical Alarm** can send multiple different errors. The table below provides some examples of the kinds of errors that will send a technical alarm:

Technical Alarm	Error/s
Test	Triggers an alarm at a set frequency. This is intended to test the system, to see if it will receive alarms.
Camera Faults	Will generate based on cameras being up for a certain percent of the time, or cameras failing a certain number of times in a given period.
Frame-Grabber	Will generate if a frame-grabber has a problem, such as frame-grabber reboot, card stalled.
Scheduled Archive	Will generate if a scheduled archive encounters a problem, such as the archive destination being inaccessible.
Disk	Will generate when disk errors occur.
Environment	Will generate if environment warnings are received, such as high CPU temperature and fans running at low RPM. (NetBSD only).
Software Failure	Will generate if a software module fails.
Database	Will generate if the database encounters an error, such as failing to write data to the database.
File-System	Will generate if file-systems become full (NetBSD only).
Metadatabase	Will generate if the metadatabase (typically used in integrations) encounters a problem, such as running out of disk space.
Base-Station Alarms	Will generate if a base-station has been configured to send alarms via a capture station. The base-station can generate alarms such as software failures.
Reboots	Will generate if a unit reboots frequently, or has a watchdog, or hard-reboots (configurable, NetBSD only).
Server Monitoring	Will generate if a unit on the Site goes down.
Recording failure	Will generate if a recording should be taking place, but for some reason isn't.
Recording Period	Will generate if a database stops recording before its predefined period is complete. E.g. If a database is set to record for 30 days, but it only records for 25.
Gateway alarm	Only applies to gateway systems , and triggers when the gateway experiences a problem, such as an error connecting to the alarm database.
Integration Database	Will generate if the integration database is down.
Network I/O	Will generate if an EIO is down.
Failover	Will generate if any of the failover servers are down.

7.2. Example: Database Technical Alarm

This is an example of the way a database technical alarm looks in the software, as well as when an email is sent and/or a base-station is called.

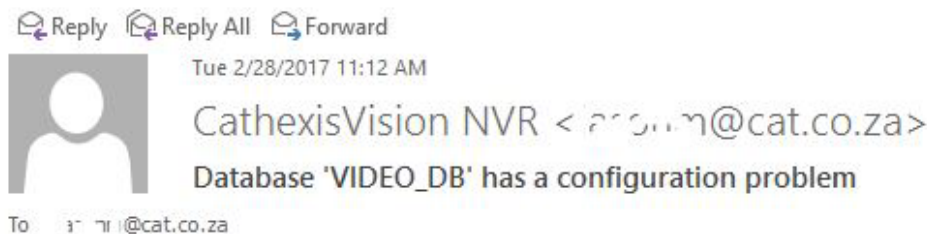
7.2.1. Notification Icon



If a database technical alarm is sent, a database error icon will appear in the Status Bar at the bottom of the interface.

Click on the icon to display information about the error.

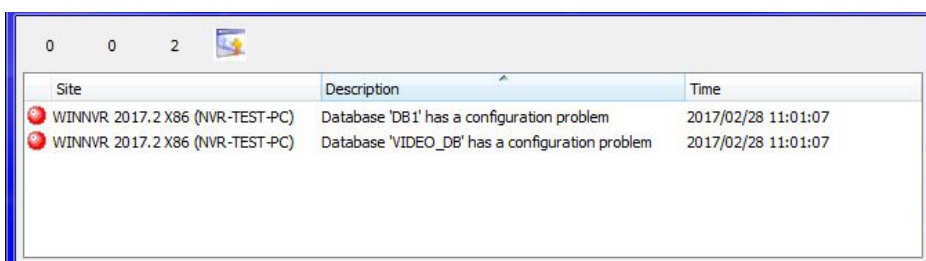
7.2.2. Send Email



If an email address has been set up to receive an email when a database technical alarm is sent, this is an example of what will be received.

Alarm name: Database Error
Alarm time: 2017/02/28 11:11:40
Server: NVR-TEST-PC

7.2.3. Call Base-Station



Site	Description	Time
WINNVR 2017.2 X86 (NVR-TEST-PC)	Database 'DB1' has a configuration problem	2017/02/28 11:01:07
WINNVR 2017.2 X86 (NVR-TEST-PC)	Database 'VIDEO_DB' has a configuration problem	2017/02/28 11:01:07

If the unit has been configured as a base-station, and a database technical alarm is sent to it, an alarm window will open.

8. Audio procedures



A microphone and speaker on the menu bar (at the top right of the screen) represent the two local audio hardware resources, local audio input and local audio output.

These two icons represent the *state* of the local microphone and speaker - when a resource is being used, its icon is bright **green** in colour, and when the resource is inactive, its icon is grey.

Look at these icons to see the current state of audio interaction, and run the mouse cursor over a **green** icon for information on the activity. However, the actual control of audio is from icons in the Resource Panel and Live remote cameras:

8.1. Stop/Listen to a Remote Site

8.1.1.1. *Listen Via Resource Panel*

Open the Resource Panel for the remote Site, and double-click the remote microphone to listen to. The local speaker goes green, indicating that listening is in progress. Move the cursor over the speaker, to see a tool-tip describing the remote audio input that is being listened to. One should hear sound from the remote Site.

8.1.1.2. *Stop Listening via Resource Panel*

Right-click the local speaker, and choose **Stop**.

The local speaker goes grey, indicating that listening is no longer in progress.

8.2. Stop/Listen to Remote Live MPEG

8.2.1.1. *Listen via Middle-click Camera Menu*

A Live remote MPEG camera with audio, will display a small microphone icon before the name on the camera display:

Middle-click the camera image, and select **Listen** from the menu.

The icon will change from grey to green, to indicate activity. One should also hear sound on the local speaker.

8.2.1.2. *Stop Listening via Middle-click Camera Menu*

Middle-click the camera image, and select **Stop listening** from the menu.

The icon will change from green to grey, to indicate inactivity. Sound should stop on the local speaker

8.3. Stop/Speak to a Remote Site

8.3.1.1. *Speak to a Remote Site*

Open the Resource Panel for the remote Site, and double-click the remote speaker to speak through. The local microphone goes green, indicating that speaking is in progress.

8.3.1.2. *To Stop Speaking to a Remote Site*

Right-click the local microphone, and choose **Stop call**. The local microphone goes grey, indicating that speaking is no longer in progress.



9. Other procedures

9.1. Switch a Relay Output

E.g. unlock a door, activate a siren.


Relay outputs can also be switched from the Map (**right-click>Set Output / Clear Output**).

The action performed when double-clicking a relay in the CathexisVision Resource Panel is configurable. The setting is in CathexisVision **menu->Settings->General**

- 1  Left double-click to toggle the relay between set and clear, **or** Right-click the relay.
 - a. A popup menu offers the choice of Set output (activate it) or Pulse Output.
 - b. Select an option and click OK.
 - c. The relay changes state, and the output changes colour . While active, the play/ pause image in the middle of the Output icon will change from black to white.
- 2 To clear a set relay, left double-click or right-click >Clear Output.

9.2. Pulse a Relay Output

E.g. unlock a door for a defined 4-second period.

Relay outputs can also be pulsed from the Map (right-click>Pulse Output).  Right-click the output and select **Pulse Output**.

- This pulses the output for the time that has been set at the unit. While the output is pulsed, the play/pause image in the middle of the Output icon will change from black to white, when it resets it will return to black.

9.3. Manually Trigger a Site Action



Right-click the Site Action in the Resources Panel and then click Execute.

Note: This requires 1) Site action setup 2) Assignment of Site action to resources panel 3) Appropriate access rights.

10. Video Wall Software

The Video Wall software is automatically installed when installing CathexisVision. A shortcut to the Video Wall is created by default on the desktop.

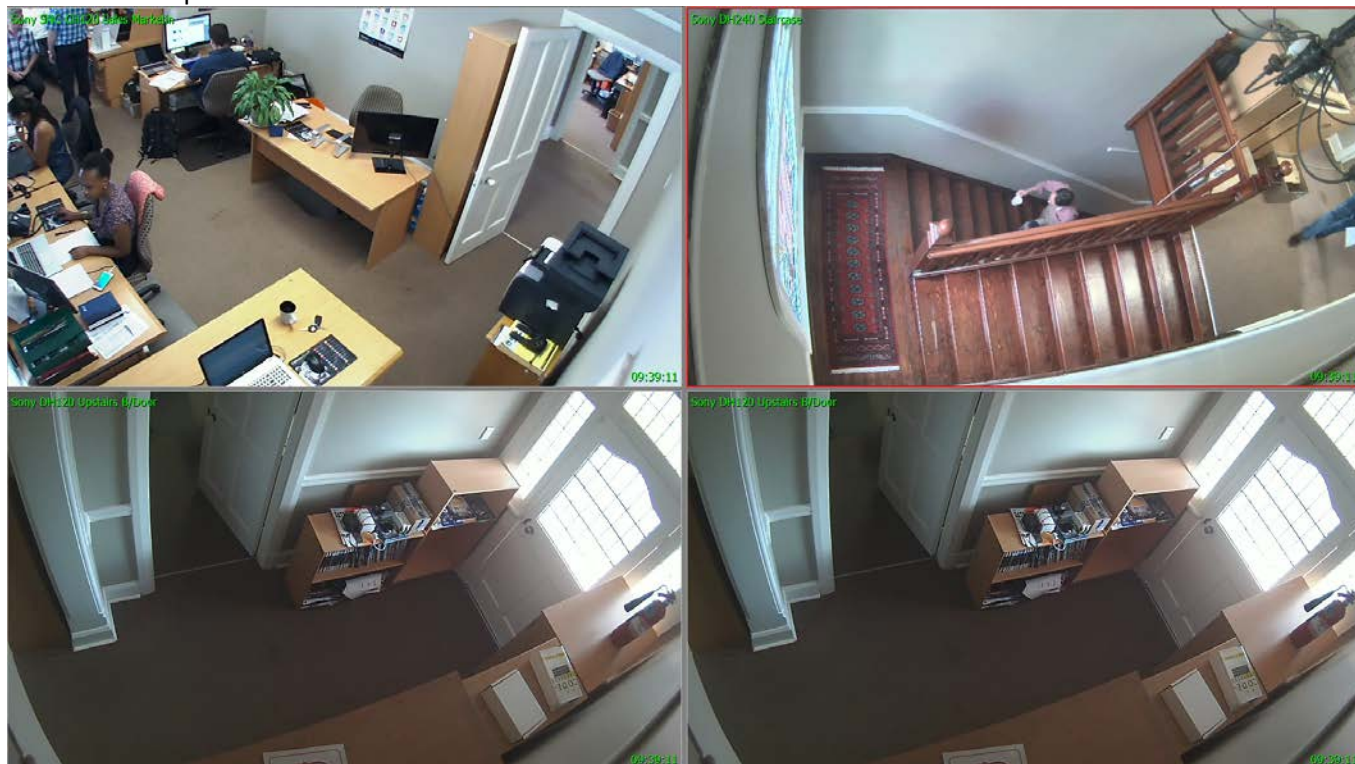
10.1. Open Video Wall

To open the Video Wall, double click the Video Wall shortcut.



10.2. Interface

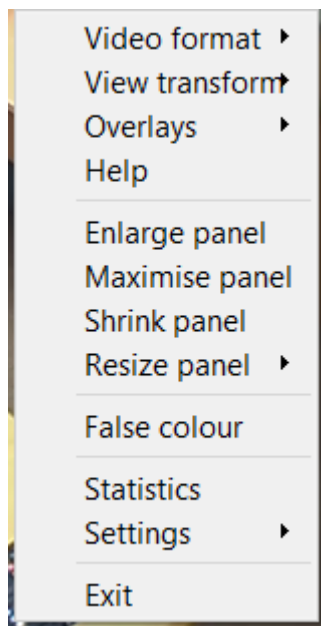
Panels configured in the Monitors Tab of CathexisVision (above section), will be immediately visible when the Video Wall is opened:



10.3. Right-Click

Right-clicking anywhere in the Video Wall will bring up the menu below.

- Video format** → Select video format for camera in selected panel.
- View transform** → Transform video for camera in selected panel.



Overlays →

Select overlay to display from available overlays, enable default overlays, or disable overlays for the selected panel.

Help

Display help screen for basic camera controls.

Enlarge panel

Enlarge selected panel by one panel size.

Maximise panel

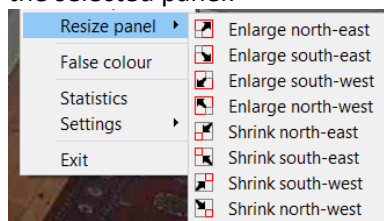
Make selected panel fullscreen.

Shrink panel

Shrink selected panel by one panel size.

Resize panel →

Depending on current size of panel, resize and orientate the selected panel:



False colour

Enable false colour on selected panel.

Statistics

View overall statistics for Video Wall.

Settings →

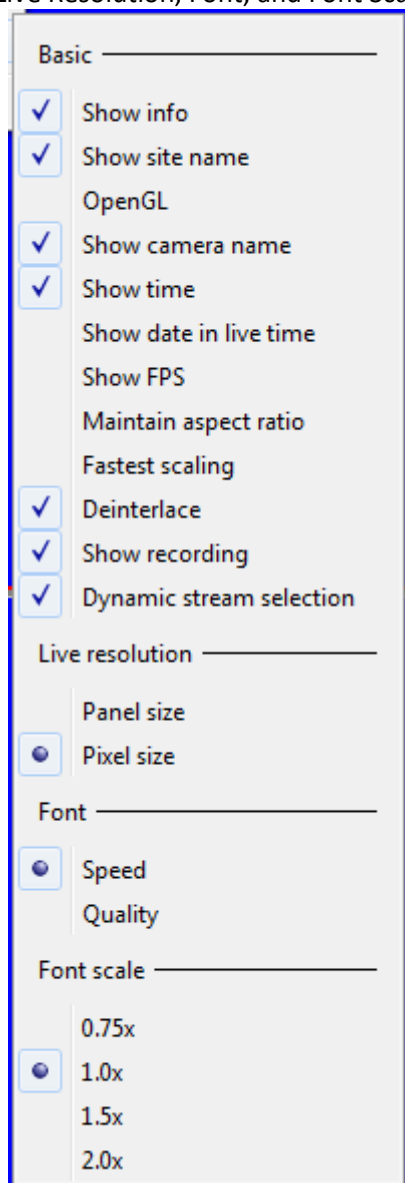
Configure settings for all panels on Video Wall. See below for details.

Exit

Close the Video Wall.

10.3.1. Settings

Right-click anywhere in the Video Wall and select **Settings**. The settings menu is divided into four sections: Basic, Live Resolution, Font, and Font Scale.



Basic Settings

Show info	Will display information about all panels as an Overlay.
Show Site name	Will show the name of the connected Site above Video Wall panels.
OpenGL	Uses OpenGL.
Show camera name	Displays camera names for all panels.
Show time	Displays time for all panels.
Show date in live time	Includes the date when time is displayed on live video.
Show FPS	Displays frames per second for all panels.
Maintain aspect ratio	Keeps aspect ratio of cameras for all panels.
Fastest scaling	Uses fastest scaling for all panels (non-OpenGL setting).
Deinterlace	Uses deinterlace for all panels.
Show recording	Shows recording icon in panel for all cameras which are recording.
Dynamic stream selection	Enabled by default. This selects the correct stream based on the display size/resolution when a camera has multiple streams.

Live Resolution Settings

Panel size	Select whether live video resolution is based on Panel size or Pixel size .
Pixel size	

Font Settings

Speed	Select whether OpenGL settings should optimise fonts for Speed or Quality .
Quality	

Font Scale Settings

Select the size to which all Video Wall fonts will be scaled.

11. Conclusion

Note that this appnote was designed to deal specifically with this feature. For further information about the CathexisVision software please consult the main manual (<http://cathexisvideo.com/>).

For support please contact support@cat.co.za