



KNOWLEDGE BASE ARTICLE

CONNECTING MILESTONE TO AN EDGEVIS SERVER

VERSION 1.6 – APRIL 18

This article explains how to configure a Milestone system to connect to an EdgeVis server.

This is an updated article to support the latest Milestone XProtect Device Pack 9.6 and details on configuring different versions of Milestone XProtect.

Contents

Prerequisite Hardware and Minimum Software Versions..... 3

- About Milestone versions3
- Installing or Upgrading an EdgeVis Server3
- Installing Milestone XProtect and XProtect Device Pack.....3

Adding an EdgeVis Encoder to Milestone XProtect (All versions except XProtect Enterprise & Professional).....4

Adding an EdgeVis Encoder to Milestone XProtect Enterprise & Professional.....9

- Configuring XProtect Enterprise and Professional with IP address.....12

Configuring capture codec..... 14

- Settings14

Configuring triggers and Rules.....16

- Adding hardware events16
- Adding input events.....17
- Supported Events18

Adding an Alarm Definition in Milestone 19

Adding a Rule to Milestone..... 21

Setting up Milestone XProtect Smart Client (Video Wall) 23

Troubleshooting..... 26

Version	Date	Device pack version	Notes
1.2	Dec 16	8.9	Now a single encoder per milestone camera input
1.3	July 17	9.2	New trigger inputs added
1.4	August 17	9.2	Updated KB to include Milestone Enterprise details
1.5	March 18	9.6	New h-264 encoding into milestone. Additional events added. Support for MSR server
1.6	April 18	9.6	New section added titled Adding an Alarm Definition in Milestone

Prerequisite Hardware and Minimum Software Versions

The minimum recommended PC specification for running Milestone XProtect with EdgeVis Integration is:

- Windows 7 64-bit.
- Intel 4th generation Core-i5 CPU.
- 8GB RAM.

The following minimum software versions are required:

- **Digital Barriers EdgeVis Server 6.5.0**
- **Milestone XProtect**
- A **license file** is required to use Milestone XProtect. Contact Milestone to obtain this or request a trial license from their website.
- **Milestone XProtect Device Pack 9.6**

About Milestone versions

Essential, Express, Professional, Expert & Corporate are the current versions of Milestone XProtect. Not all features may be available on all Milestone products.

Milestone Enterprise is no longer developed by Milestone and has been discontinued.

The process to add cameras to Milestone Enterprise & Professional is not the same as the other versions of XProtect. This process is explained in its own section of this article.

Installing or Upgrading an EdgeVis Server

Refer to the **EdgeVis Server – Quick Start Guide** for instructions on how to install or upgrade an EdgeVis Server. The guide is available on the TVI Support site <https://tvi-support.digitalbarriers.com/live/documentation/>

The latest Digital Barriers software is available from <https://tvi-support.digitalbarriers.com/live/>

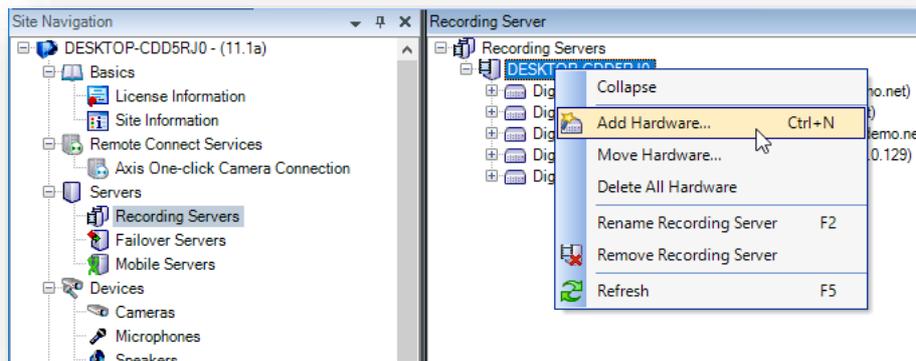
Installing Milestone XProtect and XProtect Device Pack

Refer to the Milestone software instructions for your installation. Milestone XProtect software and the latest device packs can be downloaded from <https://www.milestonesys.com/>

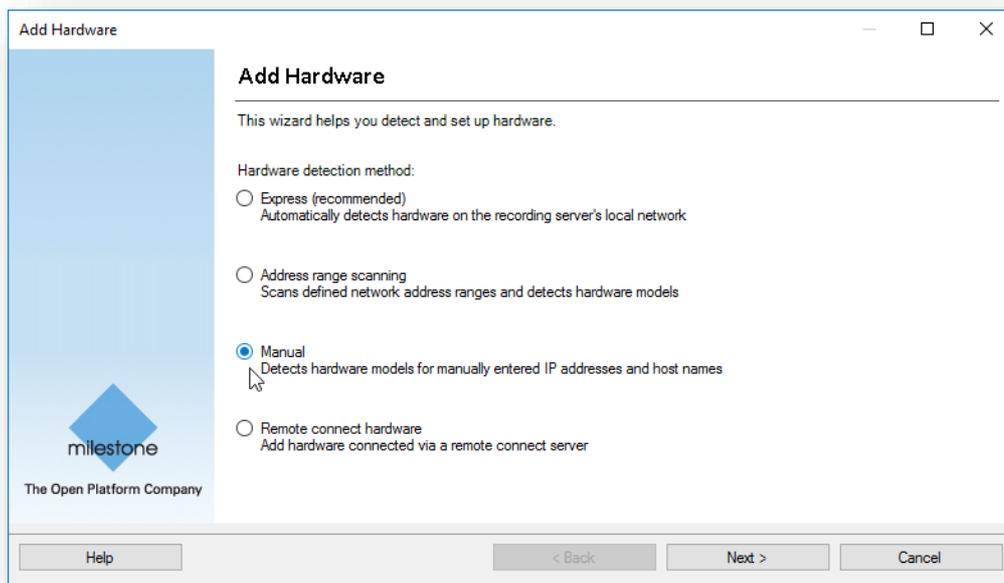
Refer to the Milestone Release notes to check if the latest device pack is compatible with your version of Milestone.

Adding an EdgeVis Encoder to Milestone XProtect (All versions except XProtect Enterprise & Professional)

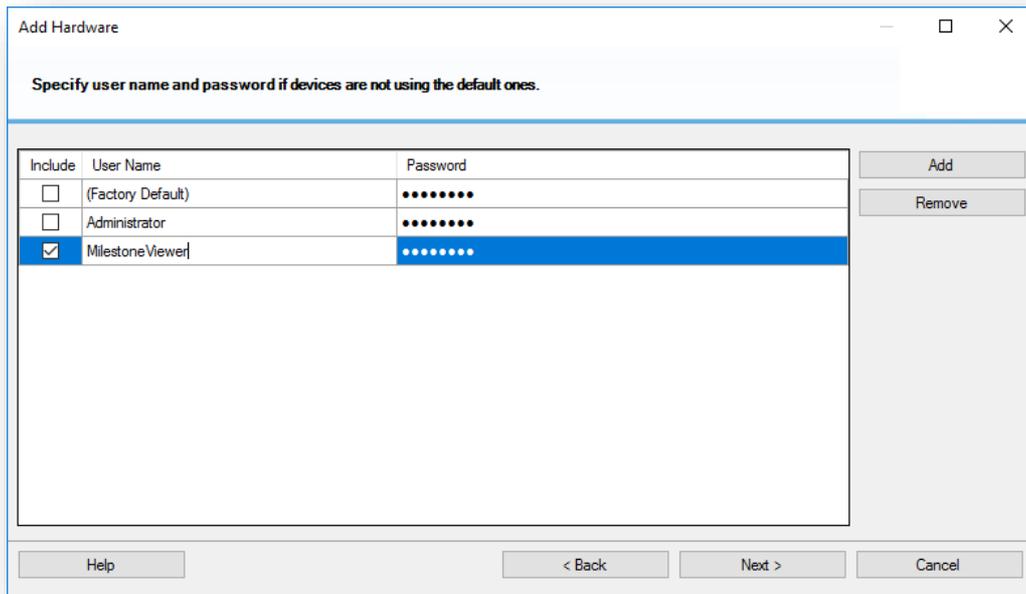
1. Open the XProtect Management Client
2. Under the **Site Navigation** panel on the left of the screen, select **Servers** then select **Recording Servers**.



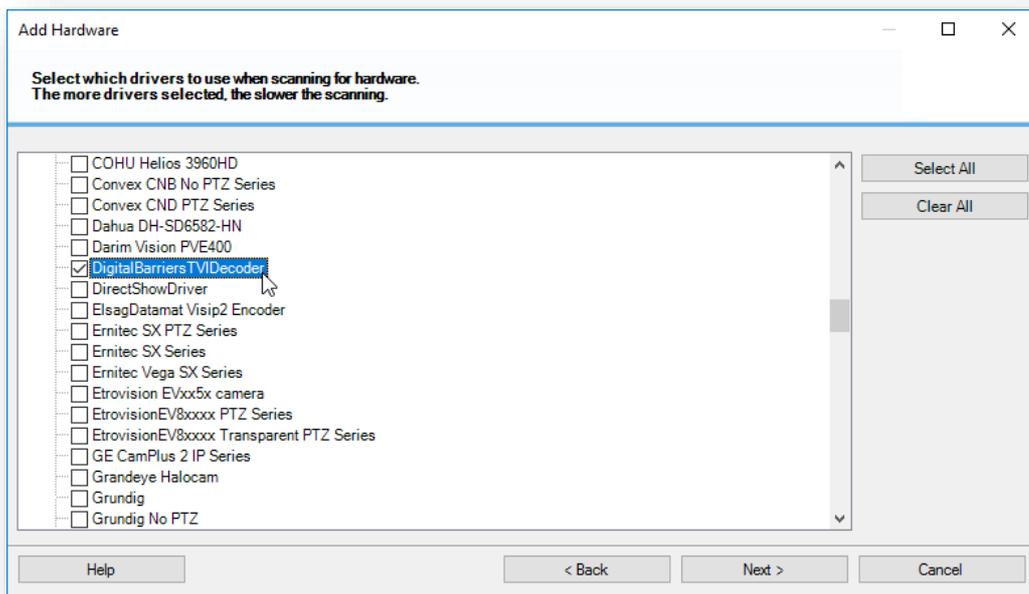
3. Right click on a recording server and select **Add Hardware**.
4. Select **Manual** for the Hardware detection method then press **Next**.



5. Add the EdgeVis server user credentials. Create a milestone specific user on the EdgeVis server that has access to the encoders.



6. Press the **Clear All** button on the driver select page.
7. Scroll down; select **other**, then select **DigitalBarriersTVIDecoder**. Press **Next**.



8. Specify the details of the EdgeVis Encoder in the address field in this format:

encoder.server

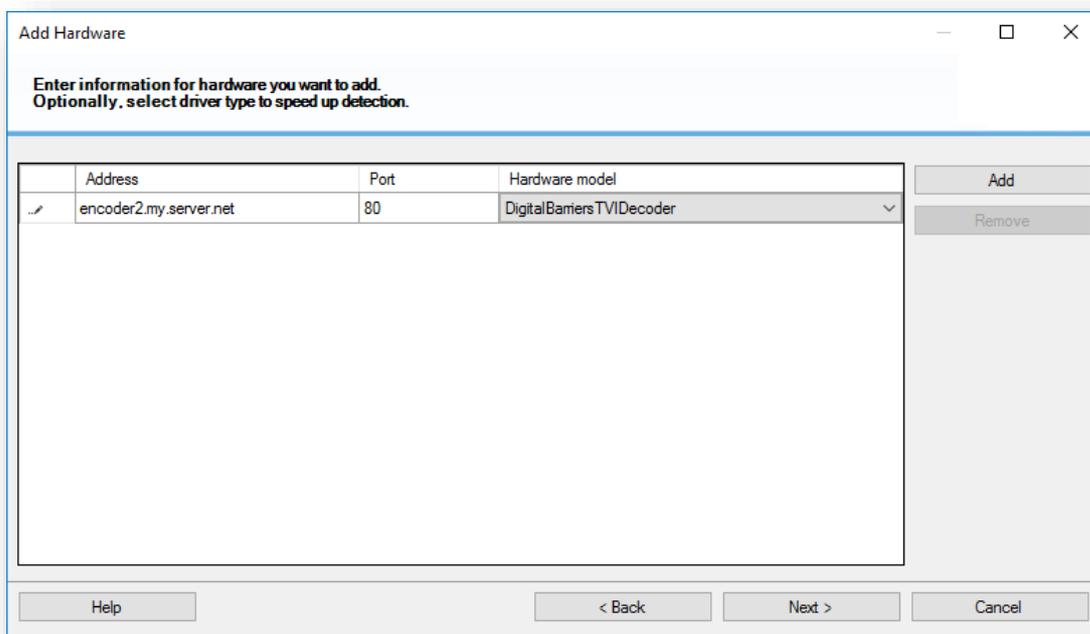
e.g., to add an encoder called "camera-1" on server "my.server.com", you would enter:

camera-1.my.server.com

With a full stop (.) between encoder name and server name.

Note: Encoder names can only have A-Z, a-z, 0-9 and – (dash) in their name. Underscores (_) are not supported in Milestone XProtect)

Ensure the user credentials entered in step 5 have permission to access the encoder account.

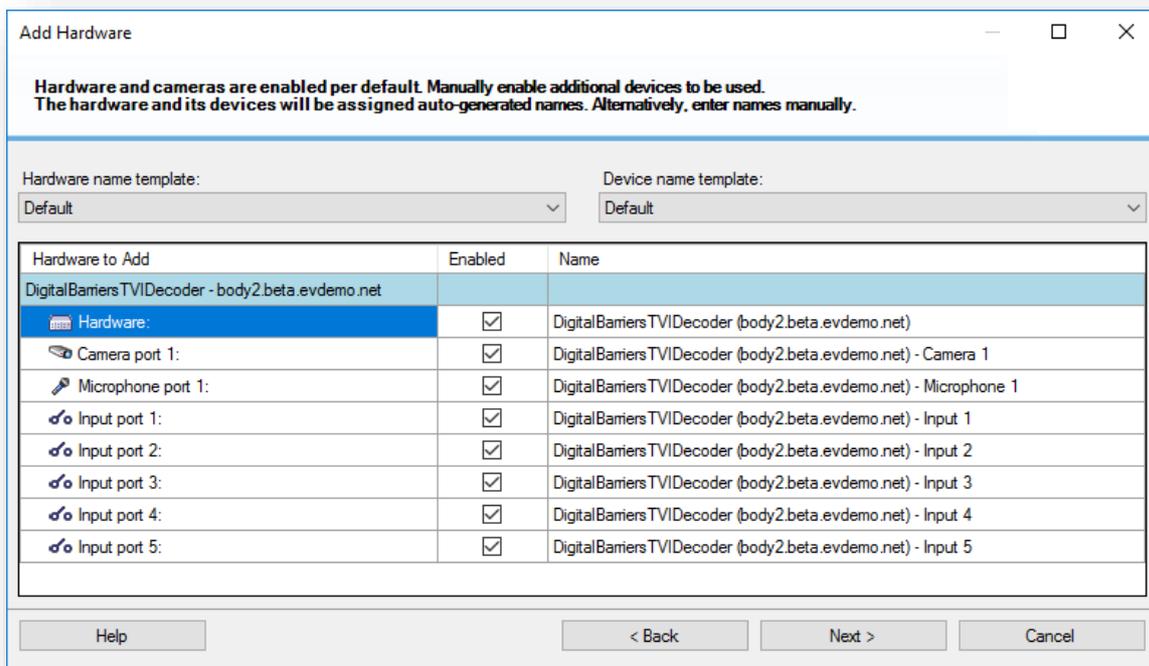


9. Set the **Hardware Driver** to **DigitalBarriersTVIDecoder**. Leave the port setting as 80. Then press **Next**.

10. Milestone XProtect will attempt to connect to the EdgeVis Server. The encoder is added if the status displays **Success**. Common reasons for failure are:

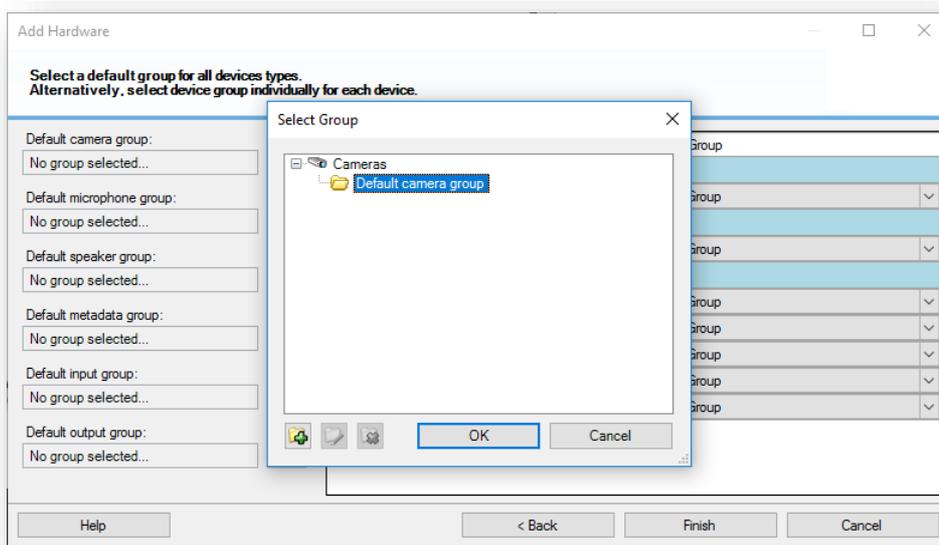
- **Incorrect username and password specified.** Go back to the username and password entries and ensure a valid login is specified for the EdgeVis Server.
- **The EdgeVis Server is not accessible.** Check that the EdgeVis Server is running and verify that you can access the server from the same PC by using EdgeVis Server Web Manager.
- The **EdgeVis Server version** needs to be **at least 6.5.0**. Milestone XProtect will not connect to any earlier Server versions.
- The Encoder name and server name has been entered in the correct format of *encoder-name.server-name*

- 11. If the connection to the EdgeVis Server was successful, then **press Next** until the templates page is shown.

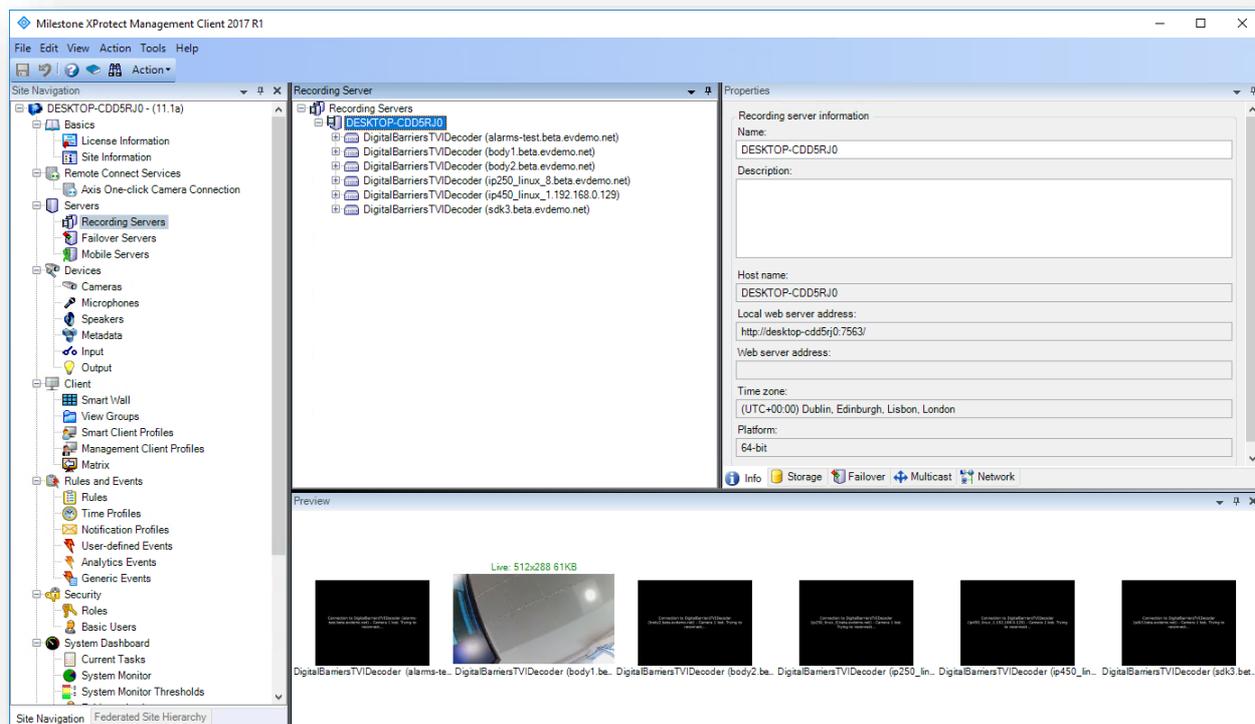


Enable the hardware elements to add to Milestone. Audio and trigger inputs can be enabled here if required

- 12. Add the hardware to groups as set-up on your milestone system. If not required then add the hardware elements to the default groups.



13. Press **Finish** to complete the setup. The EdgeVis Encoder is listed under the Recording Server.



14. Additional encoders can be added by repeating these steps

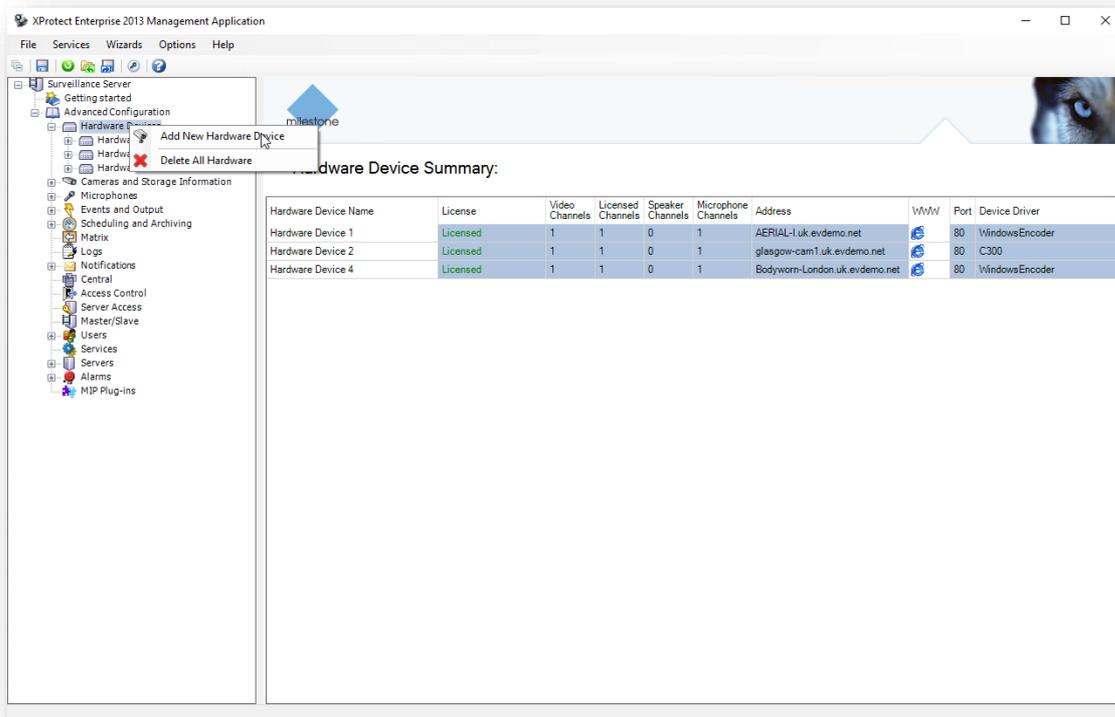
- The preview window at the bottom of the screen will show thumbnails of all the cameras that are online.
- If the EdgeVis Encoder has an audio input, has audio enabled and audio streaming has been enabled on the EdgeVis Server then the audio can be received in by enabling the relevant Microphone input. Audio cannot be played in Milestone XProtect Management Client. It will only play in Milestone XProtect Smart Client.
- The icon next to each camera in the list shows its current state:
 - **Yellow warning sign:** Camera is offline.
 - **Green play sign:** Camera is online and streaming.
 - **Red square sign:** Camera is recording.
- **PTZ** is enabled on all cameras by default. There are no settings within Milestone XProtect Management Client for this.
- Camera **recording state** can be changed by **selecting the camera** then selecting the **Record tab** on the **Properties window** on the right of the screen.

Adding an EdgeVis Encoder to Milestone XProtect Enterprise & Professional

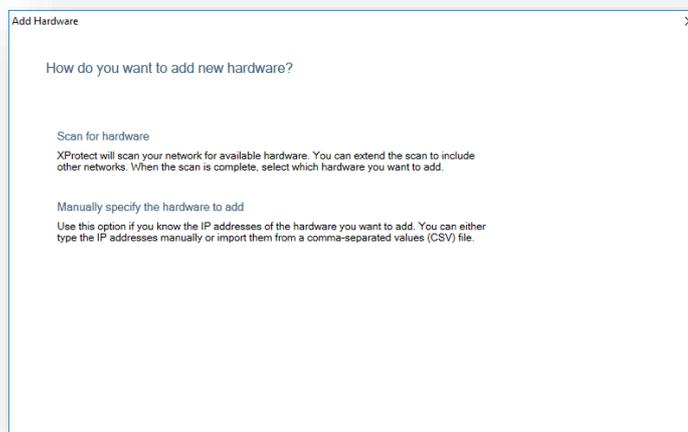
The procedure for adding an encoder to Milestone XProtect Enterprise and Professional is different.

There is a known issue adding encoders where the EdgeVis server can only be accessed by a domain name and not by IP Address. There is a simple workaround detailed below.

1. From the Milestone management application, right-click on **Hardware Devices** and select **Add New Hardware Device**



2. Select **Manually Specify the hardware to add**



3. Enter the address of the camera.
Use the format

encoder.server

e.g., to add an encoder called "camera-1" on server "my.server.com", you would enter:

camera-1.my.server.com

With a full stop (.) between encoder name and server name.

Note: Encoder names can only have A-Z, a-z, 0-9 and – (dash) in their name. Underscores (_) are not supported in Milestone XProtect)

If the EdgeVis server is only accessible with an IP Address and not by a domain name then a domain name must be assigned locally for the server. Refer to the *Configuring XProtect Enterprise & Professional with IP Address for more details.*

Enter the details as follows

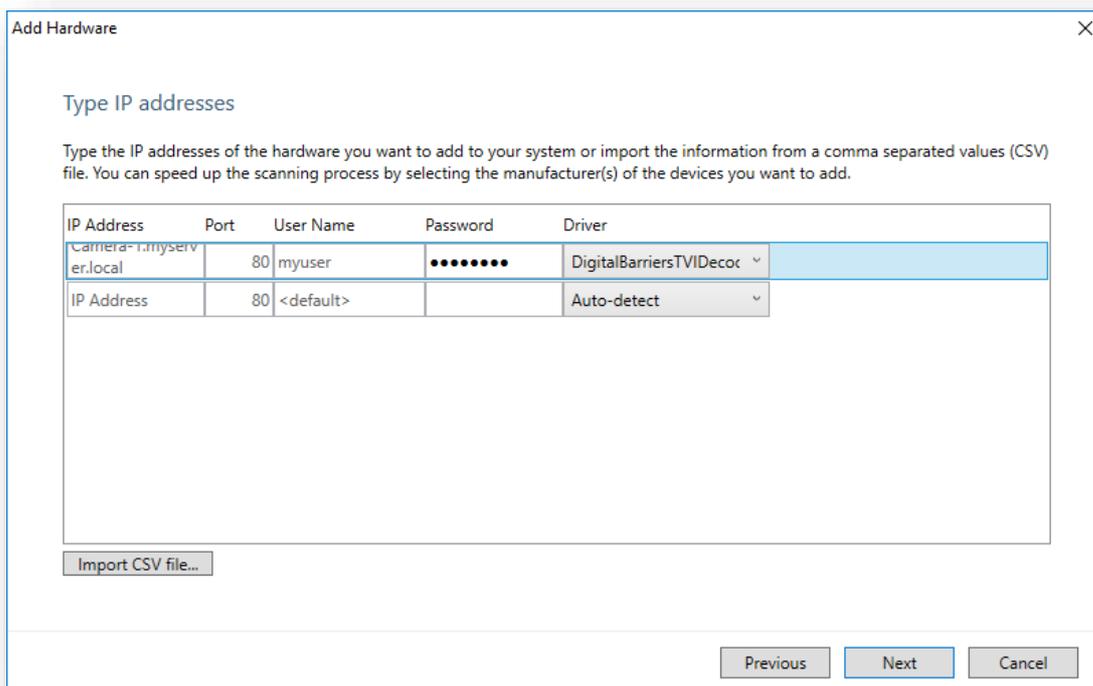
IP Address: Camera-1.my.server.com

Port: Is not required. Leave set to 80

User Name: An account on the EdgeVis server that has access to the encoder.

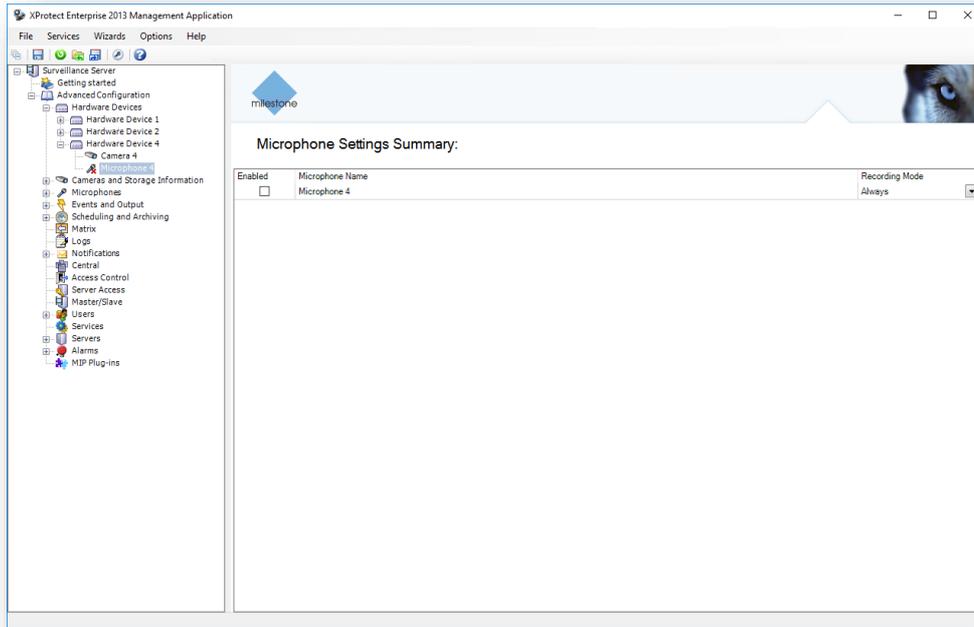
Password: The password of the account

Driver: From the dropdown select **DigitalBarriersTVIDecoder**



Select **Next** – the EdgeVis Encoder is now be added to the system

Note: If the EdgeVis encoder is not enabled for audio, it must be disabled within Milestone. Select the Hardware device, then Microphone. Un-tick the enabled box.



Configuring XProtect Enterprise and Professional with IP address

Milestone XProtect Enterprise and Professional does not accept an EdgeVis server that is only accessible using an IP address. To resolve this issue, add the EdgeVis server to the windows hosts file.

1. Add the server to the hosts file

On the Milestone recording server, open the Windows **hosts** file from the following location.

```
C:\Windows\System32\drivers\etc\
```

Open the file with an application running with Administrator privileges.

To configure an EdgeVis server with an IP address of 192.168.0.63, add the following to the file:

```
192.168.0.63 my.server.local
```

Note: You only have to add the server once.

Use a domain name that is not in currently in use

Below is the sample hosts file in Windows. Once edited, Save the file.

```
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97      rhino.acme.com          # source server
#       38.25.63.10     x.acme.com              # x client host
#
#       192.168.0.63    my.server.local

# localhost name resolution is handled within DNS itself.
#       127.0.0.1      localhost
#       ::1            localhost
```

2. Test the hosts file

To test the host file has been configured correctly, from the Milestone recording server attempt to **ping** the new domain name you have created

```
ping my.server.local
```

```
Pinging my.server.local [192.168.0.63] with 32 bytes of data:  
Reply from 192.168.0.63: bytes=32 time<1ms TTL=128  
Reply from 192.168.0.63: bytes=32 time<1ms TTL=128  
Reply from 192.168.0.63: bytes=32 time<1ms TTL=128  
Reply from 192.168.0.63: bytes=32 time<1ms TTL=128
```

The domain name should resolve to the IP address

3. Add the encoder to the system

Using the procedure above, add the encoder as you normally would.

In the example above, to add Camera-1 to a server with IP Address 192.168.0.63

Add the IP Address to the hosts file as follows

```
192.168.063      my.server.local
```

Add the encoder as:

```
Camera-1.my.server.local
```

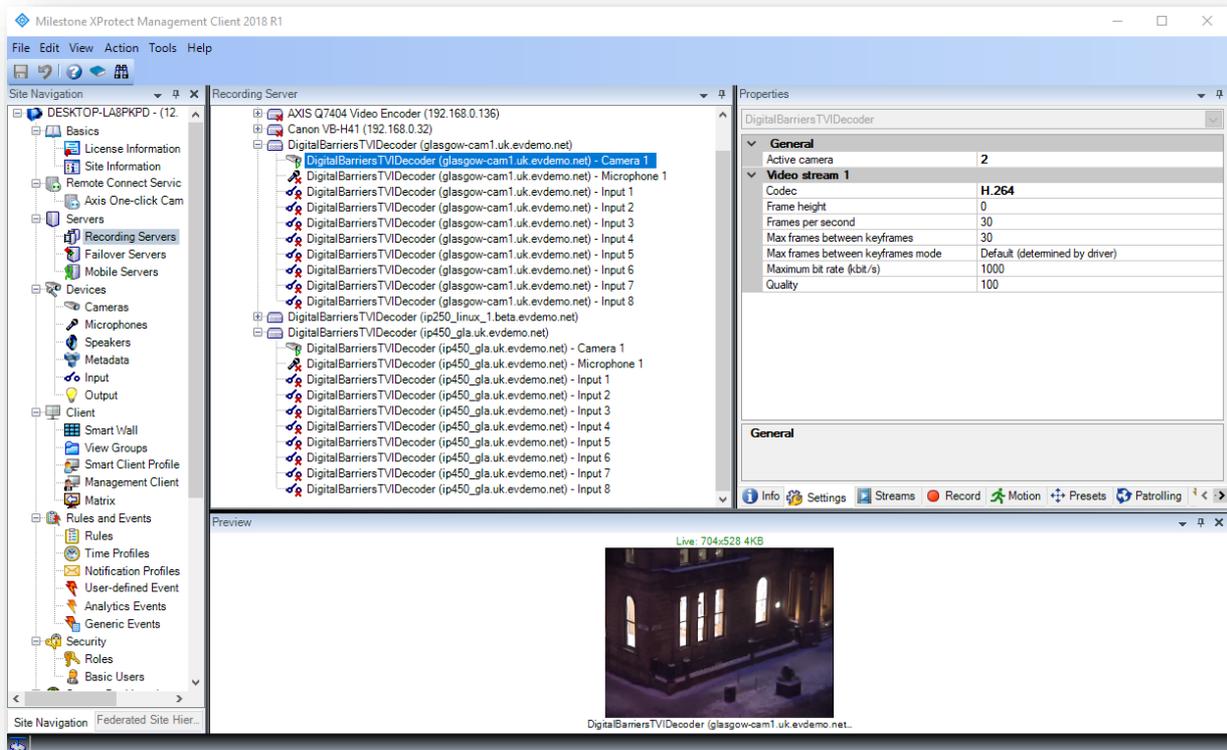
Configuring capture codec

New in Milestone XProtect Device Pack 9.6

The recording codec used by Milestone (for EdgeVis encoders) is now configurable between JPEG and H.264. This can be configured within the management client. H.264 will use considerably less disk space than JPEG but may have a slightly higher CPU requirement depending on frame size and the complexity of the video scene

Settings

From the management client, open the Recording server. Expand the EdgeVis encoder and select the camera. Open the Settings to access the available settings.



DigitalBarriersTVIDecoder	
General	
Active camera	2
Video stream 1	
Codec	H.264
Frame height	0
Frames per second	30
Max frames between keyframes	30
Max frames between keyframes mode	Default (determined by driver)
Maximum bit rate (kbit/s)	1000
Quality	100

	JPEG	H.264
Frame Height	Set to 0 for the frame size to match incoming EdgeVis encoder frame size. Any other value and incoming image will be scaled up/down to match	
Frames per second	Maximum frame rate. Frame rate will not exceed incoming frame rate	
Maximum frames between keyframes mode	Not used	Set to 'custom' to use the value set below
Maximum frames between keyframes	Not used	If keyframe mode if set to custom this will be the maximum number of frames between keyframes. Default is 30
Maximum bit rate	Not used	Maximum bitrate of recording
Quality	Set from 5 to 100	Not Used

Configuring triggers and Rules

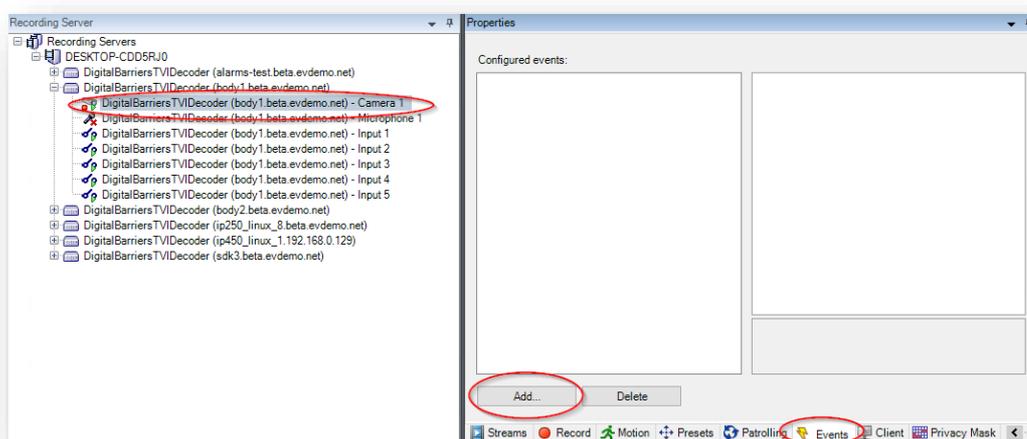
Added in Milestone XProtect Device Pack 9.2, additional events added in version 9.5

Triggers and events from EdgeVis encoders can be configured to trigger rules in a Milestone system.

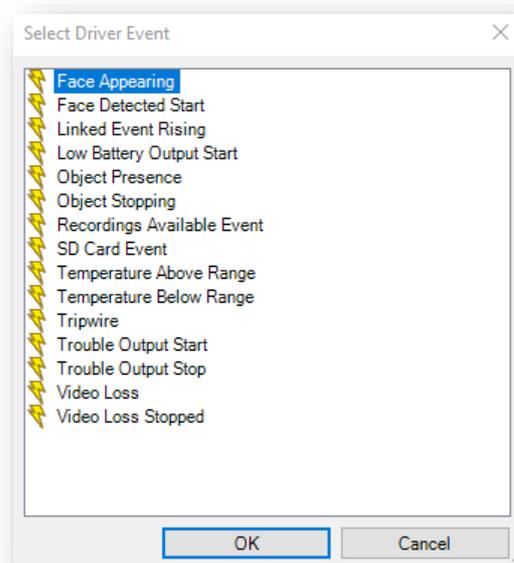
Adding hardware events

Add the Events to the **hardware device**

1. Select the device
2. On the right hand pane select 'Events'
3. Click 'ADD'



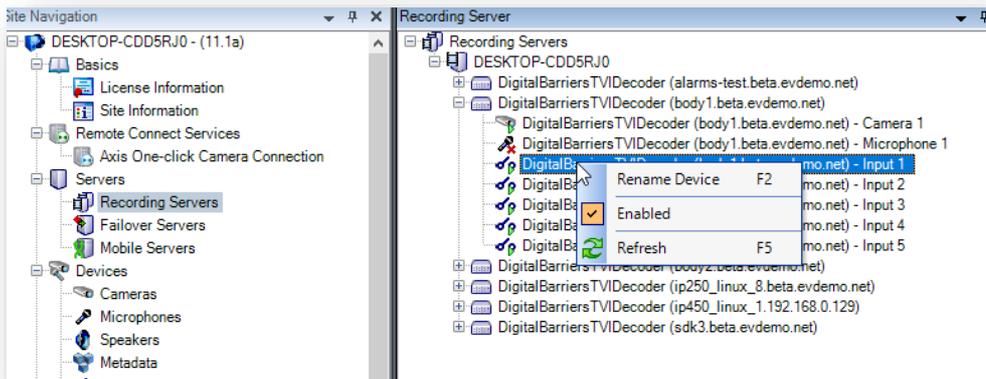
4. Pick the event to add to the hardware device
5. Once all the device events are added, click the 'Save' icon on the menu.



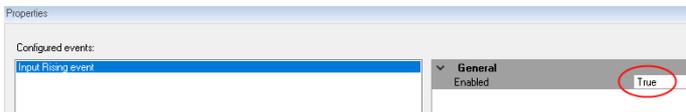
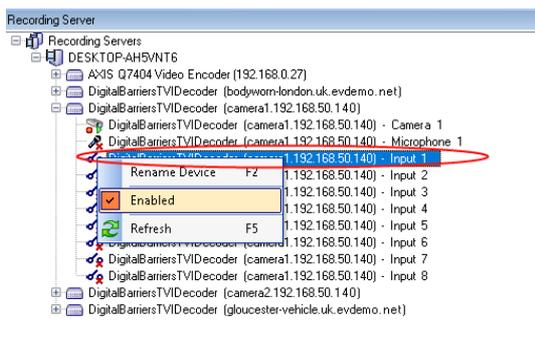
Adding input events

Add the trigger Events to the **Input device**

1. Enable the input to be configured by right-clicking on it.



2. On the right hand pane select 'Events'
3. Click 'ADD'
4. Add the Input Rising event on the 'Events Tab'
5. Once added, the events can be previewed as shown below by activating the input on the device. Note that the preview may only activate on the first trigger and may not show subsequent triggers. This is normal.



Supported Events

Milestone support the following EdgeVis encoder events

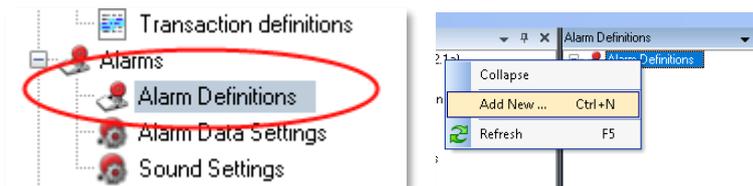
EdgeVis encoder event	Milestone Event name	Notes
Low Battery	Low Battery output event	
High temperature	Temperature above range	
Low temperature	Temperature below range	
Camera disconnected	Video Loss	Triggered when a camera is disconnected from an encoder
Camera connected	Video Loss Stopped	Triggered when a camera is connected to an encoder
Trigger input changed*	Input rising event	Triggered when an input is activated on an encoder
Alarm rule triggered on the encoder	Linked Event Rising	Triggered when any alarm rule set-up on the encoder has triggered
Safezone 2D object detected	Object Presence	Triggered when the SafeZone 2d analytics running on the encoder trigger.
Safezone 2D object detection finished	Object Stopping	
Encoder disk is nearly full	SD Card Event	Triggered when the disk nearly full threshold hit on the encoder.
RDC event has been triggered	Tripwire	Triggered when any RDC event is triggered on the encoder
	Face Appearing	Future use
	Face Detected Start	Future use
	Recordings Available Event	Future use

Note*: Not all events are available on all models of EdgeVis Encoders

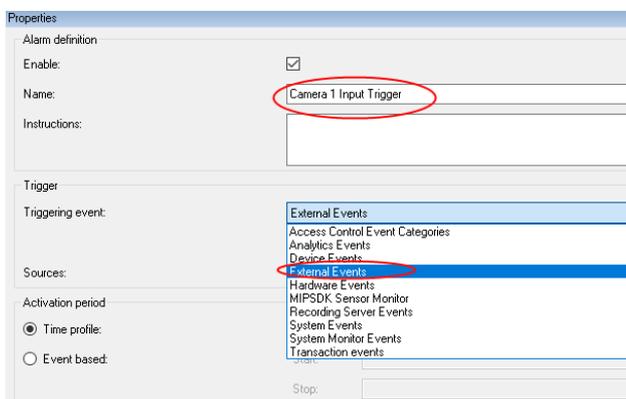
Adding an Alarm Definition in Milestone

The supported events can be used as trigger sources for alarms in Milestone. Alarms, when triggered, will appear in Milestone Smart Client. These steps use a Trigger input changed event as an example of how to create an alarm definition:

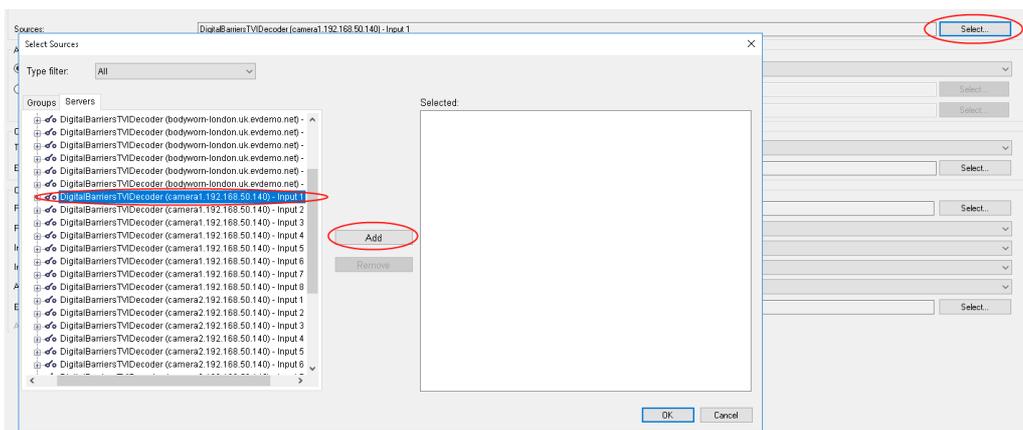
1. From the **Site Navigation**, Select **Alarms**, then select **Alarm Definitions**.



2. Right click **Alarm Definitions** and select **Add New...**
3. Set the **Name** of the alarm definition.
4. Set the **Triggering event** to **External Events**



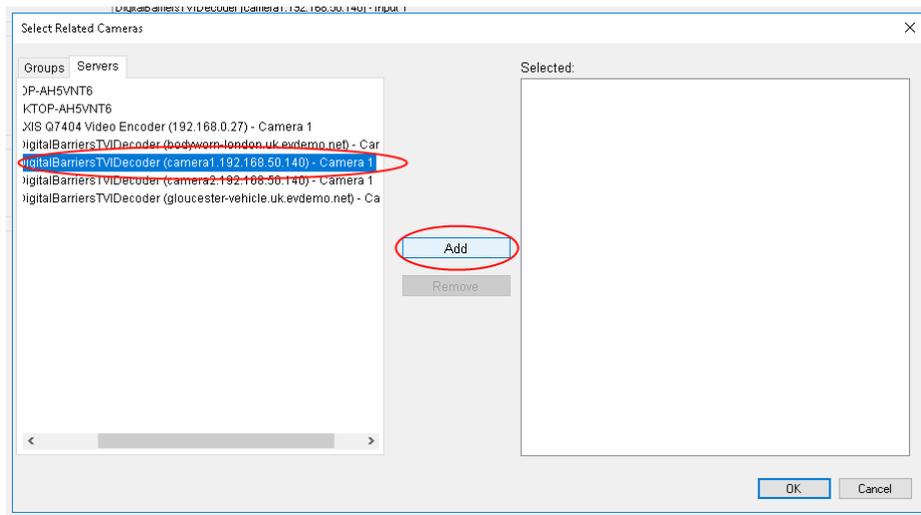
5. Under **Trigger Sources** press the **Select** button.



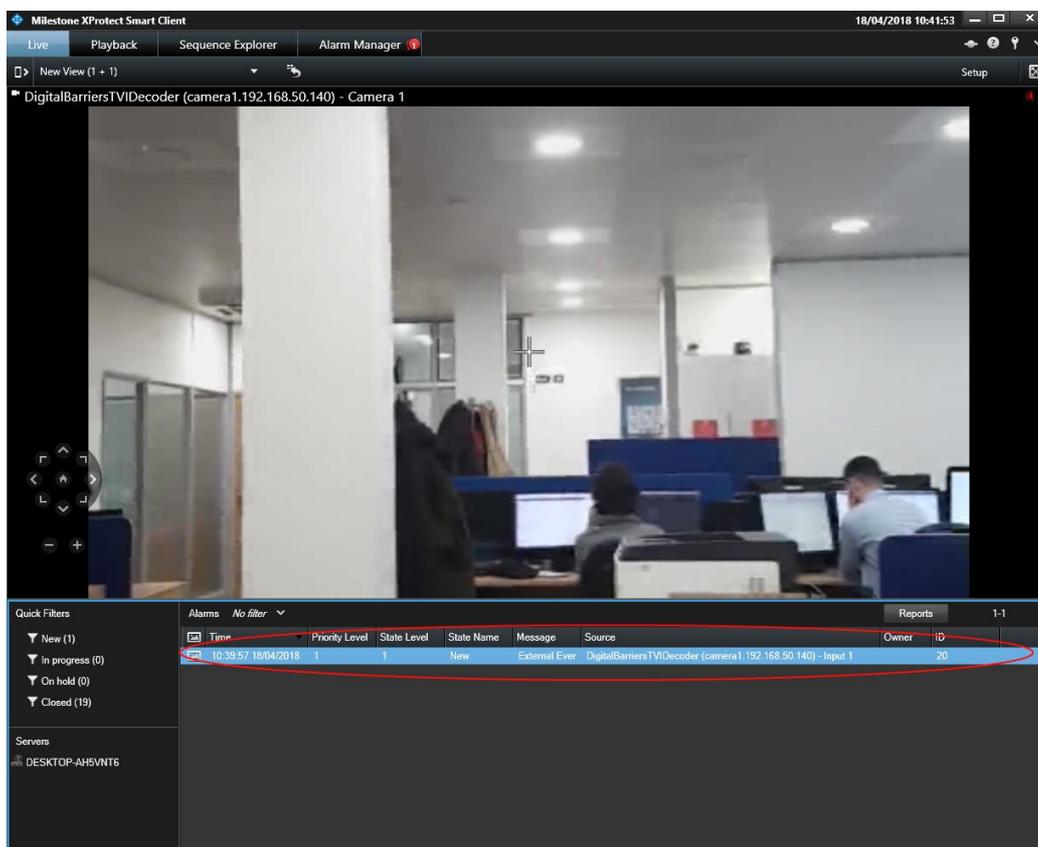
6. Select the **Servers** tab then find the **Input event** for the Camera. Select the input and press **Add**. Then press **OK**.
7. Under **Related cameras** press the **Select** button.



8. Select the Servers tab then find the Camera that should be associated with the event. Select the camera and press Add. Then press OK.



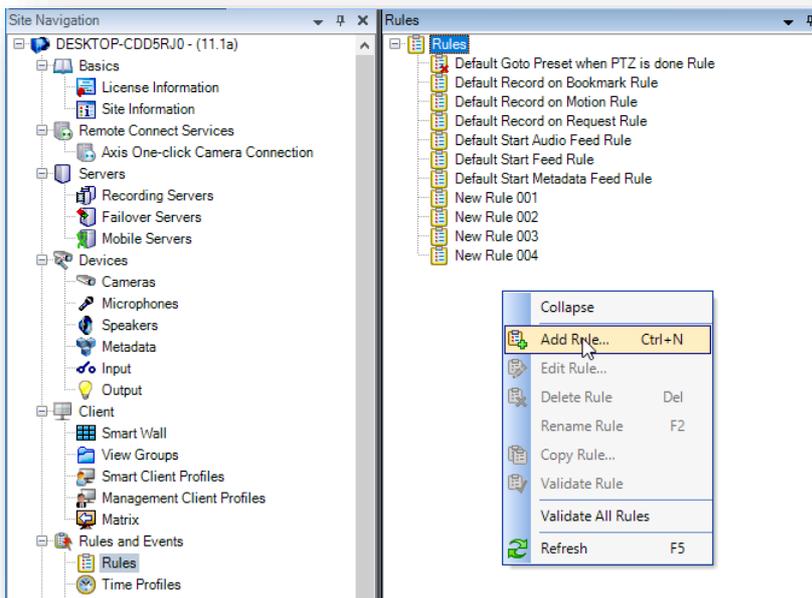
9. Save the changes using the Save  button on the top left menu bar.
10. Test that the alarm is not listed in Milestone Smart Client when the input event is triggered.



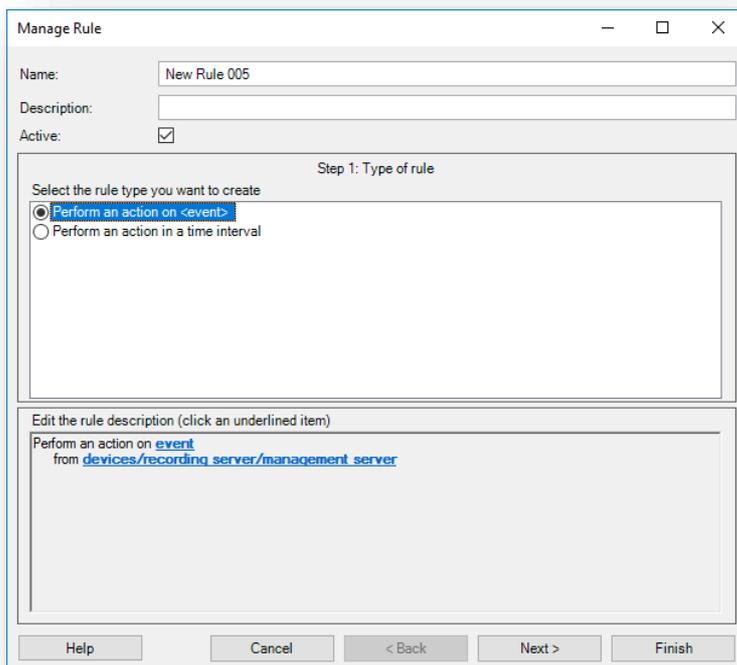
Adding a Rule to Milestone

Supported events can be added to a Rule in Milestone to enable more complex alarm processing rules. For example, a rule could be set up to, on event trigger, send an email notification and display the video stream on the Milestone video wall.

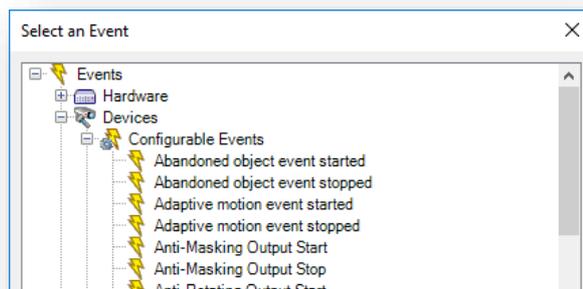
1. From the site navigation, select Rules.
2. Right click and pick 'Add Rule'



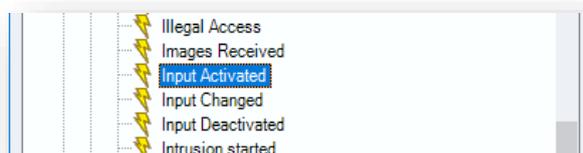
3. Select "perform an action on <event>"



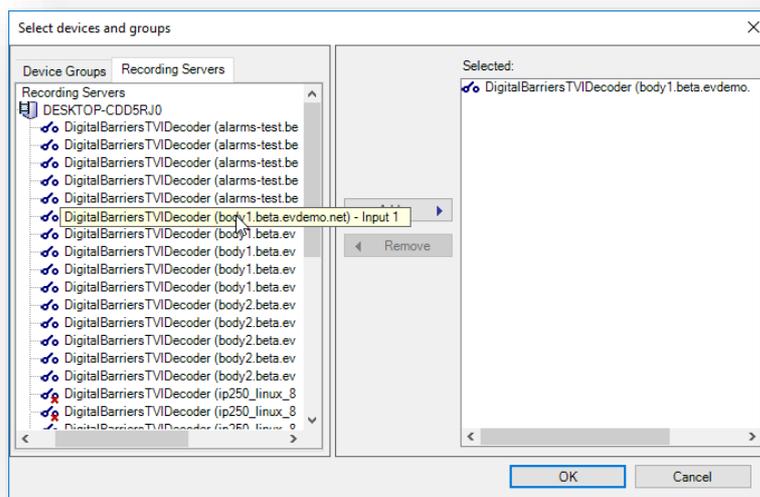
- Click on the [event](#) option in the edit rule. From the dialog, select the event to trigger this rule.



- For example to trigger a rule on a trigger event, select Input activated.



- Click on the [devices/recording server/management server](#) in edit rule.
- Select the input device to trigger this rule. In this example we are using trigger input 1 from the EdgeVis encoder



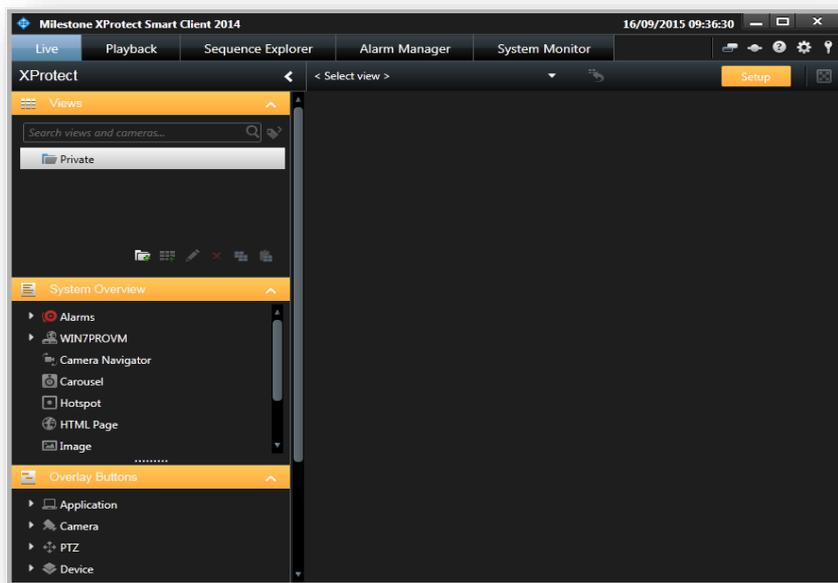
- Set-up the rest of the rule as per the Milestone user guide.

Setting up Milestone XProtect Smart Client (Video Wall)

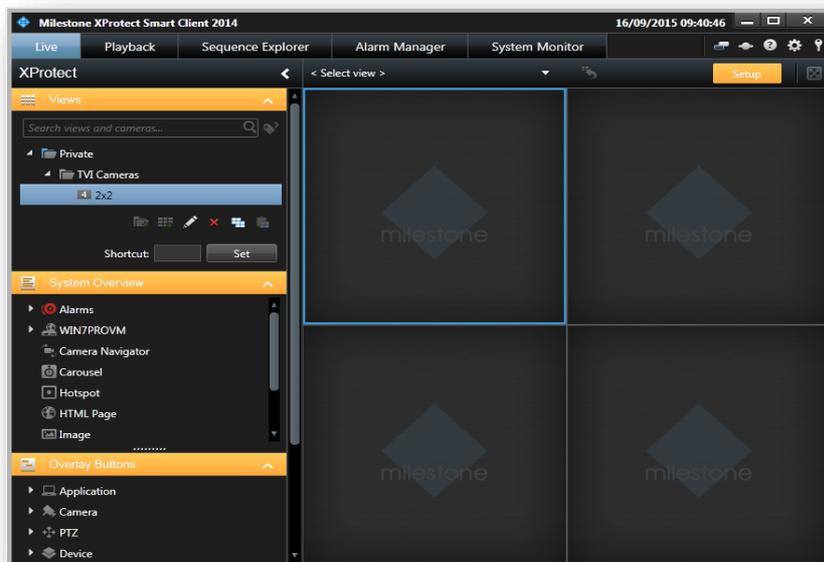
Milestone XProtect Smart Client is the main way to view video streams on a video wall.

To set up a new video wall in Milestone XProtect Smart Client:

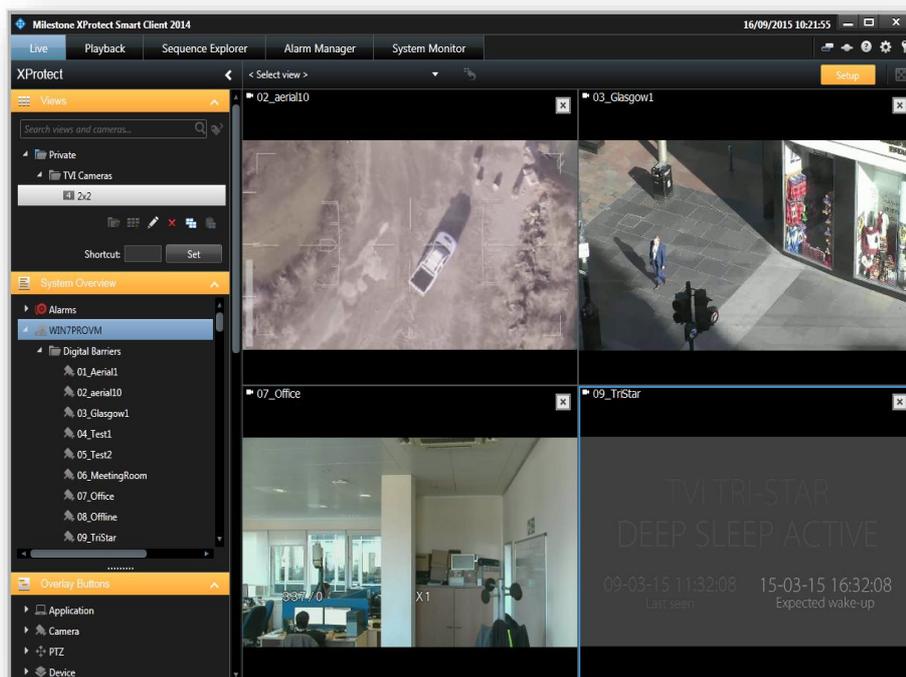
1. Open **XProtect Smart Client**
2. Press the **Setup** button near the top right of the screen. This will put the application into Setup mode.



3. Under the **Views** section on the left select Private then select the **Create New Group** button. Give the group a name.
4. Select the newly created group then press the **Create New View** button. Select the type of view you want from the menus presented. In this article a 2x2 grid view was selected from the 4:3 menu. Give the view a name.
5. You should now be presented with a view similar to the one shown below.



- To add cameras to the view select the recording server from the **System Overview** menu on the left. Then select the name of the camera group on the recording server that contains the cameras from the EdgeVis Server. Select a camera from the list then drag it onto one of the video windows.



- When all the required cameras have been added to the video wall press the **Setup** button again to exit setup mode and return to normal operation. The video streams will begin streaming in each of the video windows.

8. Whenever you restart Milestone XProtect Smart Client and select the view that has been set up from the Views section the same video streams will start.
9. **PTZ** can be used by moving the mouse over the video window and clicking or holding the mouse button down in the direction of camera movement.
10. If a camera is showing **PTZ** controls but it is not a PTZ camera then the controls can be changed to **Digital Zoom** mode instead by:
 - Move the mouse over the **Video Window** then select **More** from the popup menu on the bottom right.
 - Select **Digital Zoom**.
11. If a camera has an audio input enabled then audio can be heard by selecting the video window for the camera.

Troubleshooting

Milestone XProtect Management Client is failing to connect to an EdgeVis Server

Incorrect username and password specified. Go back to the username and password entries and ensure a valid login is specified for the EdgeVis Server.

The EdgeVis Server is not accessible. Check that the EdgeVis Server is running and verify that you can access the server from the same PC by using EdgeVis Web Manager.

The **EdgeVis Server version** needs to be at least **6.5.0**. Milestone XProtect will not connect to any earlier EdgeVis Server versions.

Username and password does not have permission to access the encoder. Check the User account has permission to access the encoder

The Encoder name and server name has been entered in the correct format of "encoder-name.server-name". Enter the encoder name in the correct format

PTZ camera control does not work in Milestone XProtect Smart Client

The PTZ connection may be in use by another user. Try again in a few seconds.

Ensure that Digital Zoom is not enabled for the camera in XProtect Smart Client by selecting the video window, selecting the More popup menu and checking that the Digital Zoom option is not ticked.

Check that PTZ control works by using EdgeVis Client.

Ensure you have the most up to date version of Milestone XProtect. The tested version is Milestone XProtect Corporate 2014 (7.0d).

The camera window keeps reporting "*The server has lost connection to the camera*" in Milestone XProtect Smart Client

The performance of the PC running Milestone may be causing the video loss. Check in Windows Task Manager and ensure that the PC has enough CPU processing power and RAM memory in reserve.

It is also recommended that both the Milestone and EdgeVis Server PCs are set to synchronise their time clock with a time server such as an NTP server (e.g. time.windows.com).

I can't hear any audio from the Camera

Audio can only be played back in Milestone XProtect Smart Client by selecting the video window for the camera. Audio cannot be played in Milestone XProtect Management Client.

Check that the EdgeVis Encoder has an audio device connected and configured.

Ensure that audio streaming is enabled for the encoder on the EdgeVis Server using EdgeVis Web Manager.

Ensure that the correct Microphone device is enabled in Milestone XProtect Management Client.