

# **Pelco VideoXpert 3.X – Lenel OnGuard 7.4**

## **Integration**

### **User Guide**

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# 1. Introduction

This document is the user guide for VideoXpert Integration with Lenel OnGuard 7.4. The objective of this document is to provide information about the system usage, functions, configurations and known issues.

## 2. Abbreviations

#	Abbreviation	Definition
1	VMS	Video Management System
2	VX	VideoXpert
3	VxSDK	VideoXpert Software Development Kit
4	PTZ	Pan Tilt Zoom

Table 1: Abbreviations

## 3. Version Information

### 3.1. Integration Component Version

#	Component Name	Version	Description
1	PelcoLenelIntegration-4.0.74.4.exe	5.0.74.1	VideoXpert integration driver for OnGuard 7.4.

Table 2: Integration Component Version

### 3.2. OnGuard Version

#	Component Name	Version	Remarks
1	Lenel OnGuard	7.4.457.0	Nil

Table 5: OnGuard Version

## 4. System Configurations

**Hardware:** The minimum hardware requirements for the client machine to use for completing the steps outlined in this document are the following:

- CPU: Intel Core i7 2.4GHz Quad Core (or greater)
- Memory: 4 GB (or greater)
- Hard disk: 1 GB available hard disk space

**Software:** The software requirements for completing the steps outlined in this document are the following:

- Lenel OnGuard 7.4
- Windows 10, Windows 8.1, Windows Server 2008 R2, Windows Server 2012
- The latest version of DirectX 9.0c must be installed even if DirectX 10 or 11 is already installed as part of Windows Vista or higher (refer to <http://www.microsoft.com/en-us/download/details.aspx?id=8109>)
- Visual Studio C++ Runtime

## 5. System Overview

**VideoXpert** – VideoXpert is a complete video management solution from Pelco.

**OnGuard** – OnGuard from Lenel is an integrated access control and alarm monitoring system.

Integration between Pelco systems and Lenel's OnGuard application allows an operator to easily view and control all video from the OnGuard user interface and simplifies investigations by associating recorded video with events. For real-time monitoring, an operator is presented with video in response to events that OnGuard is managing. Single- and multi-camera views can be displayed manually or automatically. Direct control of a camera's pan, tilt and zoom capabilities allows an operator to closely monitor an incident or to follow a suspect. Pan/Tilt control also can be automated by using pre-set positions to position cameras in response to an event.

## 6. Installation Manual

Follow the directions during the install process.

## 7. System Operations

Integration of VideoXpert server to OnGuard does two things:

- 1) Connects the VideoXpert server to Lenel OnGuard and
- 2) Imports VideoXpert cameras and its capabilities to Lenel OnGuard.

**Software Applications** – The Pelco Lenel integration uses the following applications:

- System Administration
- VideoViewer
- Alarm Monitoring
- LoggingSetupLenel
- OnGuardDiagnostics

Of these, the first three are OnGuard applications and will get deployed as part of OnGuard 7.4 installation. The last two are utility applications provided as part of VideoXpert integration.

To access OnGuard applications, go to **Start → All Programs → OnGuard 7.4**.

The other two VideoXpert integration utility applications are available in the install path of the VideoXpert integration driver.

### 7.1. OnGuardDiagnostics

This is a utility application specific to VideoXpert. It helps in diagnosing installation components and connection with VideoXpert system. User can run this application on the machine that you are testing. It cannot be run remotely from another computer.

## 7.2. System Administration

System Administration, as the name says is to do the management activities for OnGuard system. In order to have VideoXpert features available in OnGuard system, first we have to add/import VideoXpert system to OnGuard.

Login to 'System Administrator' using the credentials configured for OnGuard.

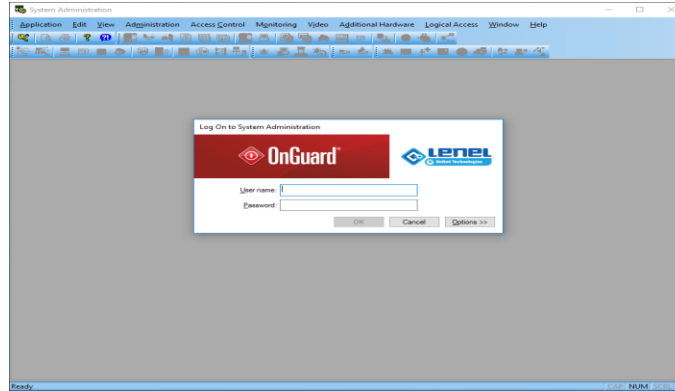


Figure 1: 'System Administration' – Login Screen

### 7.2.1. Adding VideoXpert Recorder

- 1) From the application menu, go to '**Video** → **Digital Video**' (refer Figure 2) to import 'Pelco VideoXpert' system to OnGuard.

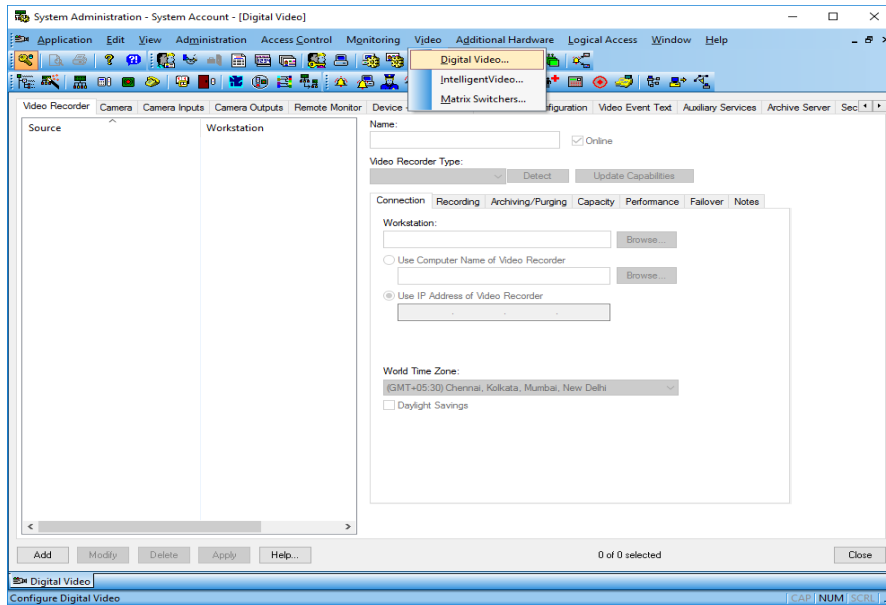


Figure 2: 'Digital Video' – Menu Option

An alternative to the Digital Video menu item is to click the camera icon from toolbar (refer Figure 3).

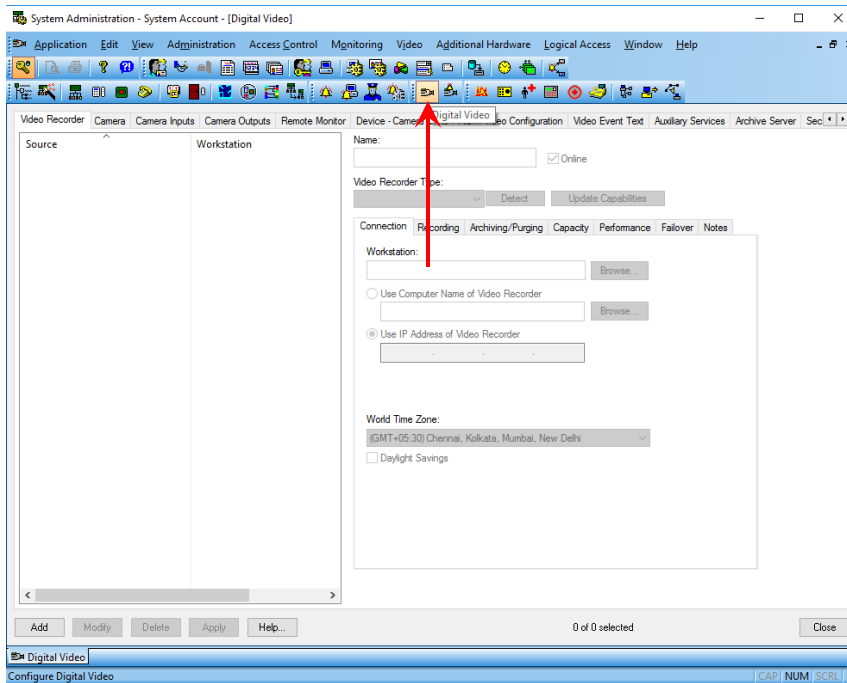


Figure 3: 'Digital Video' – Toolbar Option

This screen provides options to import a **video recorder** and do all the configurations for the recorder. Pelco's VideoXpert is a video recorder system that can be added from here.

- 2) Click **'Add'** button in the bottom of 'Digital Video' screen. You will get a screen to select from the available list of video recorders and fields to configure the recorder type selected.

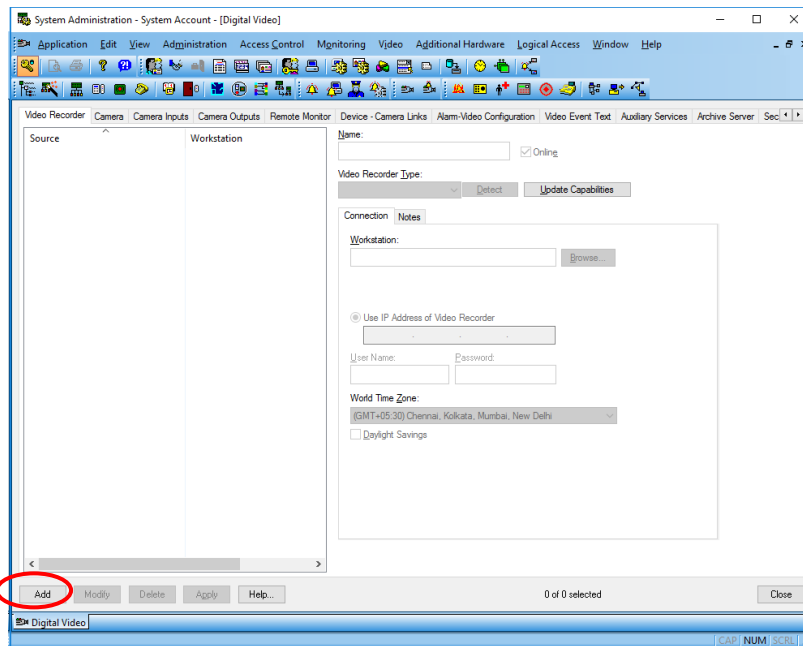


Figure 4: 'Digital Video' to add video recorders

3) From 'Video Recorder Type' drop-down list select 'Pelco VideoXpert'.

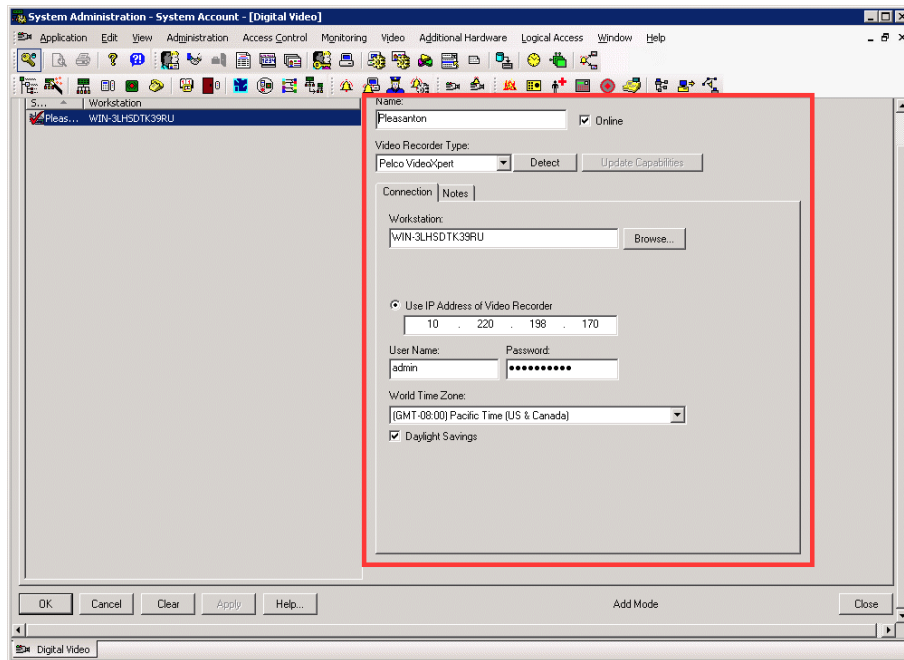


Figure 5: 'Pelco VideoXpert' configuration screen

4) Add the details of the recorder to be added and click 'OK'.

The following describes the General Settings fields:

- **Name:** The VideoXpert server's friendly name.
- **Video Recorder Type:** Select Pelco VideoXpert.
- **Workstation:** This is the computer that is the Lenel server. It is where the Lenel database resides and also where the Lenel communications server runs. To select the proper machine, click the Browse button.
- **IP Address of Video Recorder:** This is the VideoXpert server's network location. In the case of a client-only install, this is the IP address or computer name of the server.
- **User Name:** This must match the VideoXpert server authentication credentials (user name and password) set in the VideoXpert system, otherwise the connection will fail.
- **Password:** This must match the VideoXpert server authentication credentials (user name and password) set in the VideoXpert system, otherwise the connection will fail.
- **Online:** This check box determines whether or not the VideoXpert server is currently available

After the required VideoXpert server settings have been successfully entered, click the OK button (on the bottom left of Lenel OnGuard) to verify the validity of your setting values, to connect the Lenel OnGuard to your VideoXpert server, and to save your new VideoXpert server settings.

You will get a screen prompting for a full download if everything went well so far. If you are at this screen that means, the integration driver was able to correctly deploy all the components required for VideoXpert integration, the information supplied by user in this screen are correct and the recorder

specified here is online. And, if you are not at this screen means, something is missing or something went wrong. Recheck the points mentioned above to resolve your problem.

- 5) Click 'OK' in this dialog. A 'Monitor Zone Assignments' dialog will appear. Select 'Default Zone' and click 'OK'.

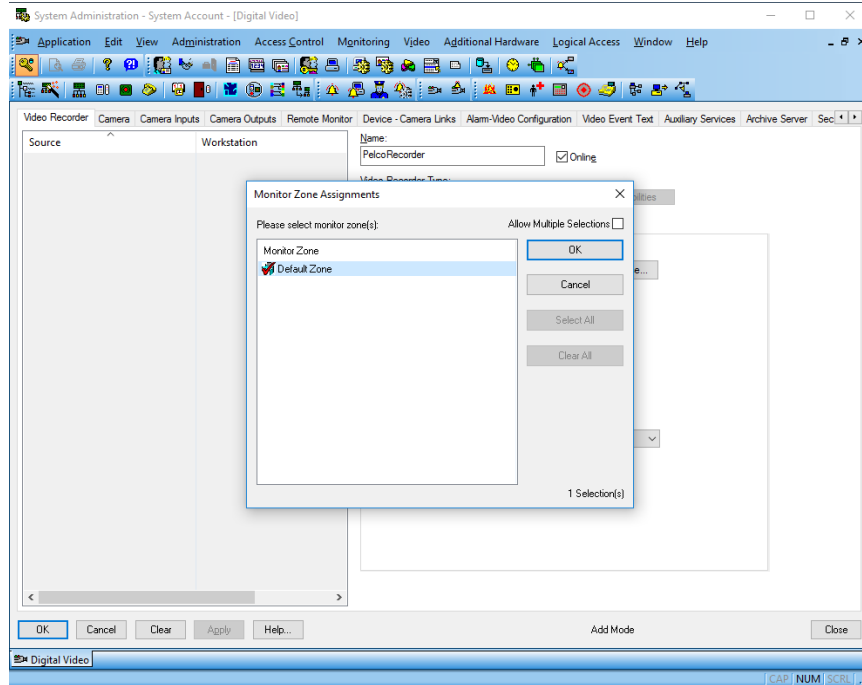


Figure 6: Adding VideoXpert Recorder – Screen 2

Now you will get your recorder added to a list in the left of the same screen.

## 7.2.2. Editing a VideoXpert Recorder

This section describes how to edit an existing VideoXpert server.

- 1) Click on the VideoXpert server to edit.
- 2) Click the Modify button in the bottom left of the Lenel OnGuard application.

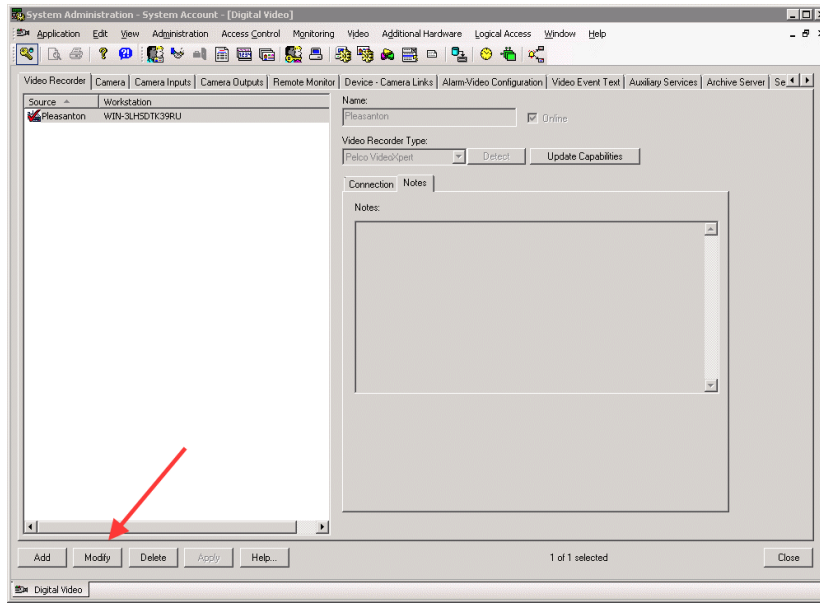


Figure 7: Editing a VideoXpert Recorder

- 3) Observe a dialog box displaying the VideoXpert server's saved settings. This dialog box should contain forms regarding general VideoXpert server configuration settings, as well as settings for alarms (that is, events).
- 4) Make the required changes and click 'OK'.

### 7.2.3. Deleting a VideoXpert Recorder

This section describes how to delete an existing VideoXpert recorder.

- 1) Click on the VideoXpert server to delete.
- 2) Click the 'Delete' button in the bottom-left of the Lenel OnGuard application and confirm the delete by clicking 'OK'.

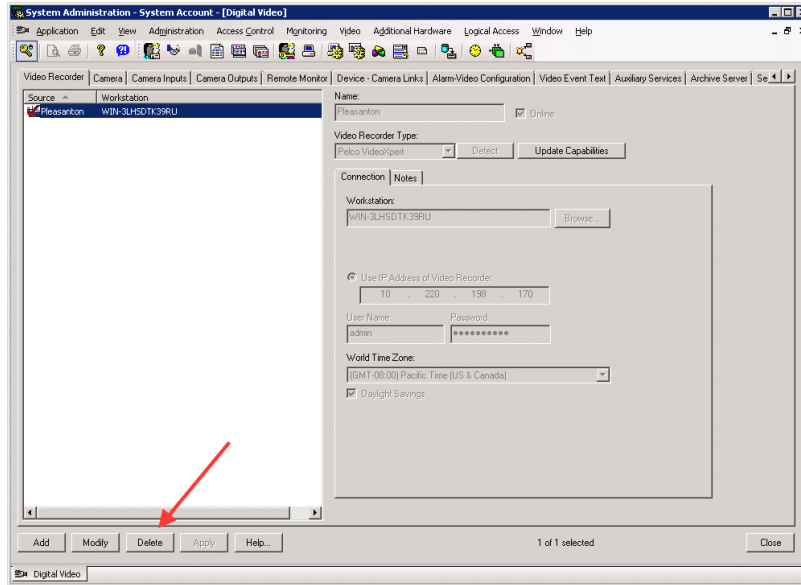


Figure 8: Delete a VideoXpert Recorder

## 7.2.4. Adding VideoXpert Cameras

This can be done in one of two ways:

- Using the Import Camera menu option, as described in the Importing Cameras entry below.
- Adding a single camera at a time, as described in the Adding a VideoXpert Camera entry below.

### 7.2.4.1 Import Camera Option

Right click on the recorder name in the list. → Select 'Import From Recorder' (refer Figure )

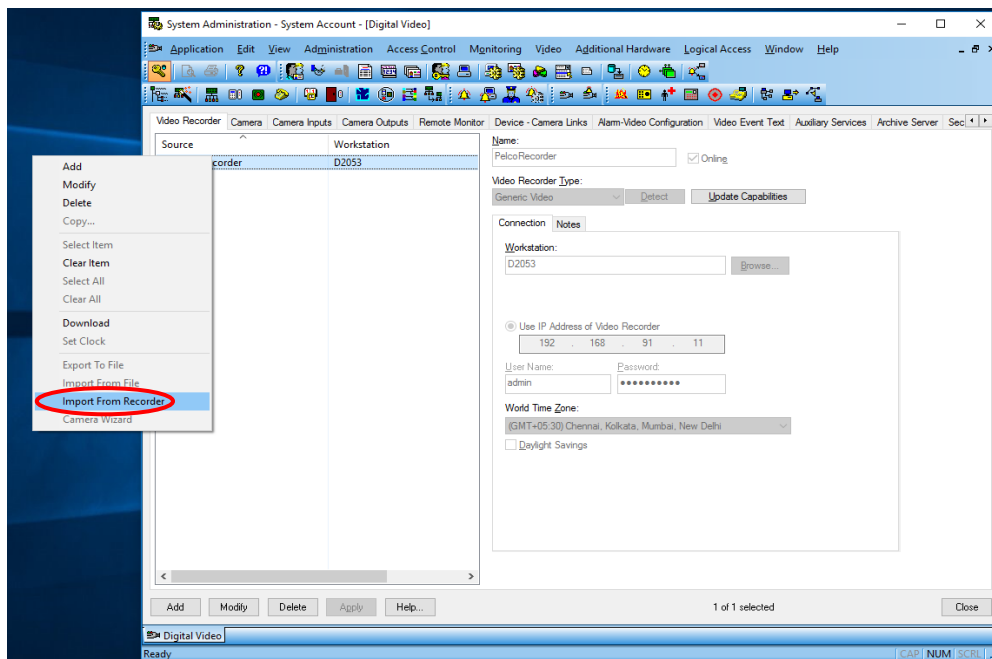


Figure 9: Select 'Import From Recorder'

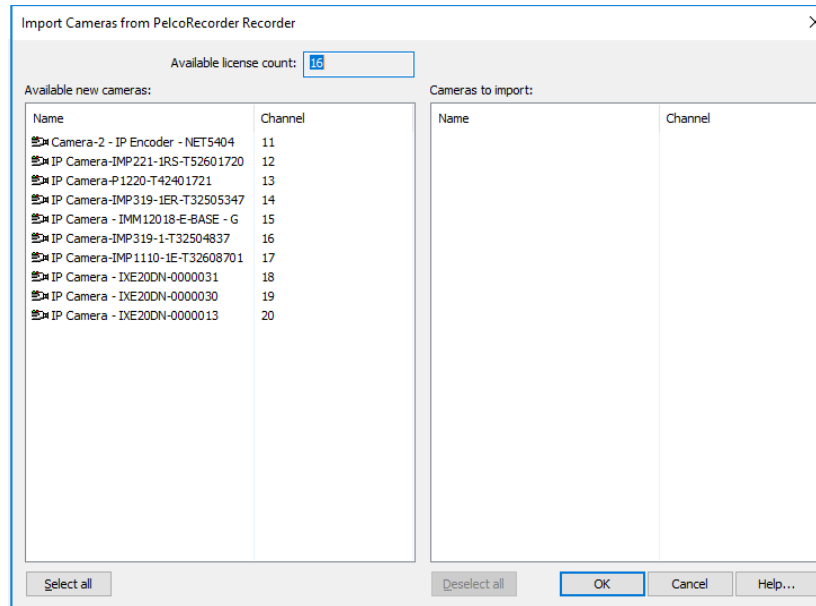


Figure 10: Import Camera screen

The 'import camera from recorder' screen will list all the **numbered cameras** from the recorder. User can select the cameras to be imported from this list. Click 'Select all' to select all the cameras, or click on the required cameras. The selected cameras will be moved to 'Cameras to import' list. Then click 'OK'.

**NOTE:**

- Each camera must have a unique number and the number must be different from '0'.
- Each camera must have a unique friendly name.

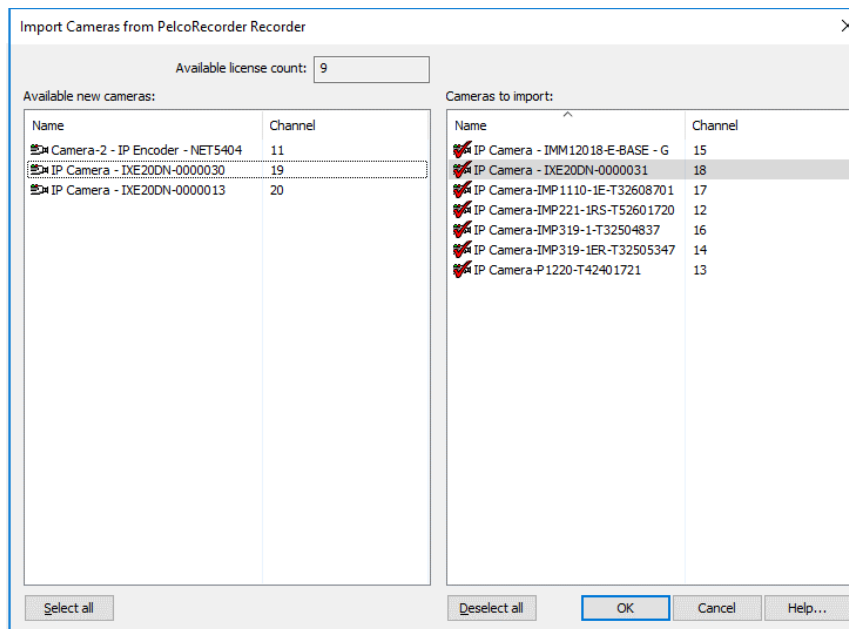


Figure 11: Import Camera screen (1)

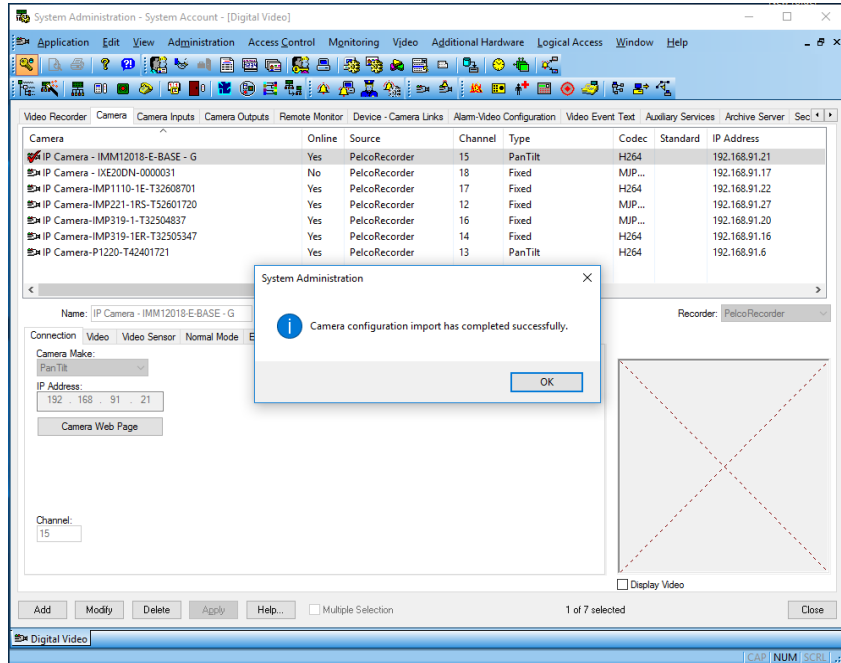


Figure 12: Camera configuration import successfully completed

If the camera import is successfully completed, the cameras will get listed in the Camera tab.

### 7.2.4.2 Manually Add Camera

This section describes how to add a VideoXpert camera.

- 1) From the Video menu, select Digital Video.
- 2) The Digital Video folder opens. Click the Camera tab.
- 3) Click 'Add'.

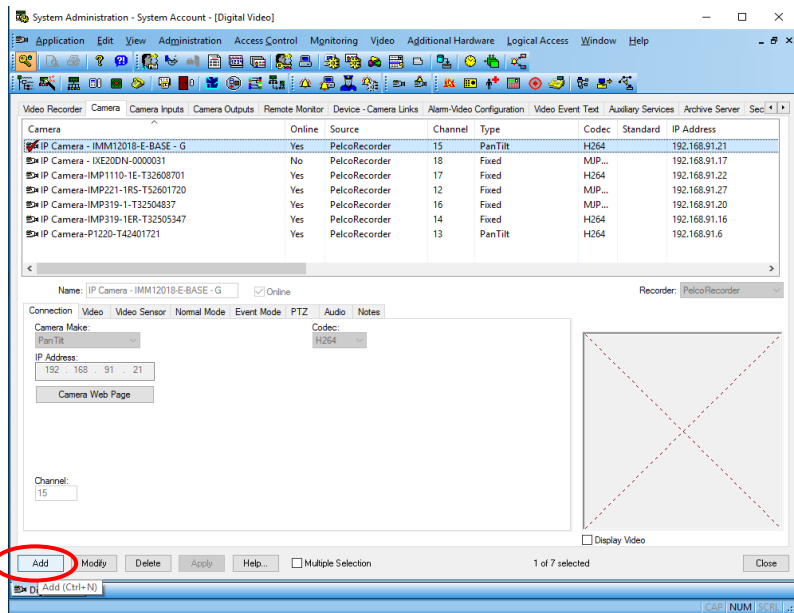


Figure 13: Manually add camera (1)

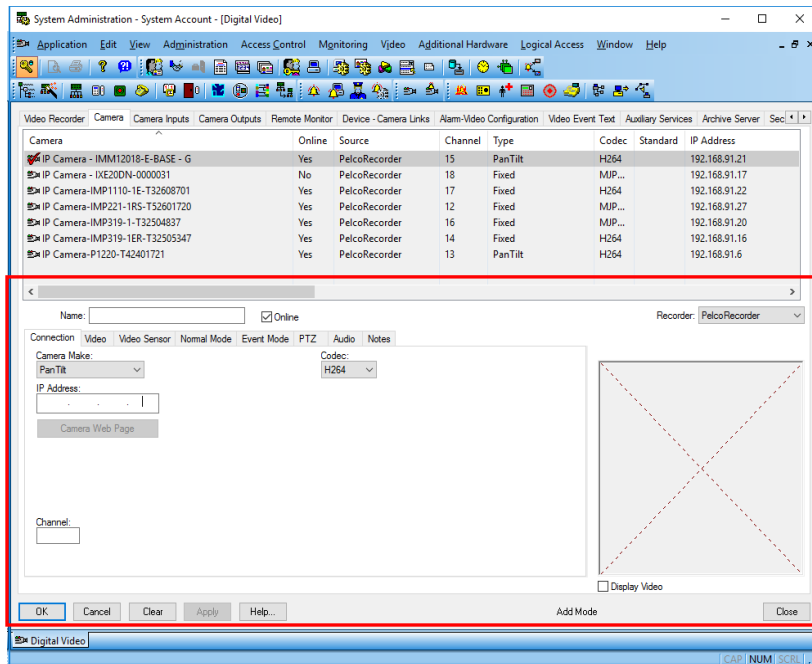


Figure 14: Manually add camera (2)

- 4) In the Name field, enter a unique, descriptive name for the camera.
- 5) Select the Online check box to place the camera online.
- 6) From the Recorder drop-down, select the recorder that this camera communicates with.
- 7) On the Connection sub-tab:
  - a. Select the camera type from the drop-down.
  - b. Enter an IP address and port. The camera itself must have the same IP address as what you enter in this field. Once you enter the camera's IP address, you can click 'Camera Web Page' to open the selected camera's configuration Web page.
  - c. If the camera is configured to require authentication, then enter the valid username/password. Otherwise, leave these fields blank.
- 8) Select the Display Video check box to preview the camera image.

Enter these details and click 'OK'.

### 7.3. VideoViewer

To view live video, run the VideoViewer application and select a camera – Either double click on camera name or click the Play button. Video will be displayed on the right portion of the screen.

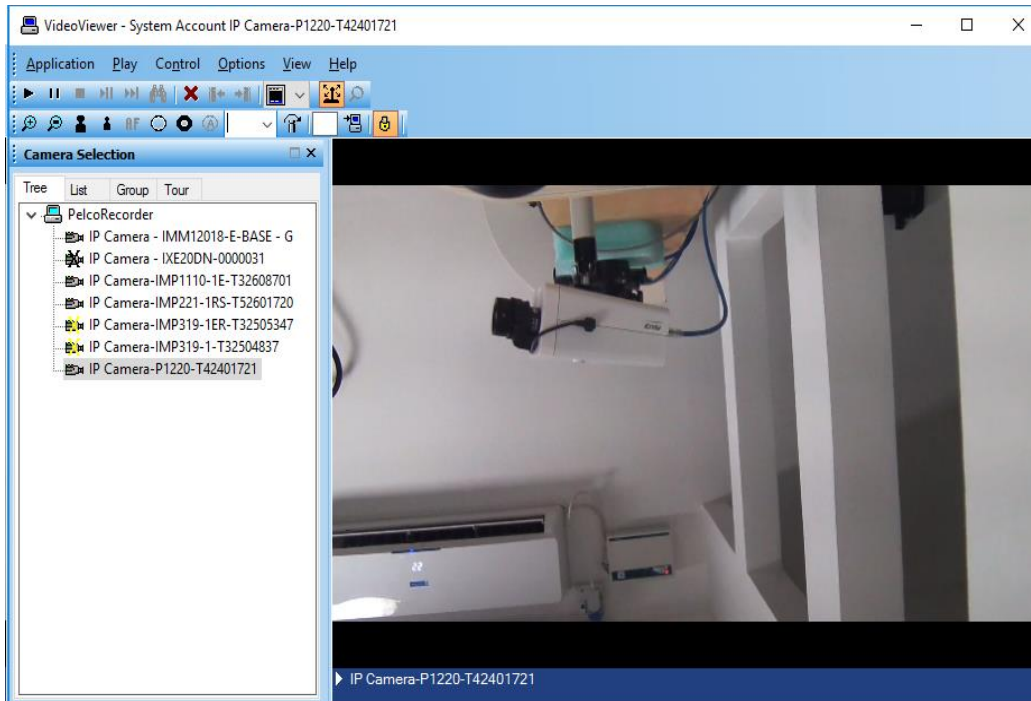


Figure 15: Video Viewer playing Live Video

### 7.3.1. Take Snapshot of Current Video Frame

- 1) Open 'VideoViewer' application and select a video as mention in the previous section. This is required before a screenshot of the VideoXpert camera's currently displayed stream can be saved.
- 2) Select Options → Capture Image to display the image capture dialog.

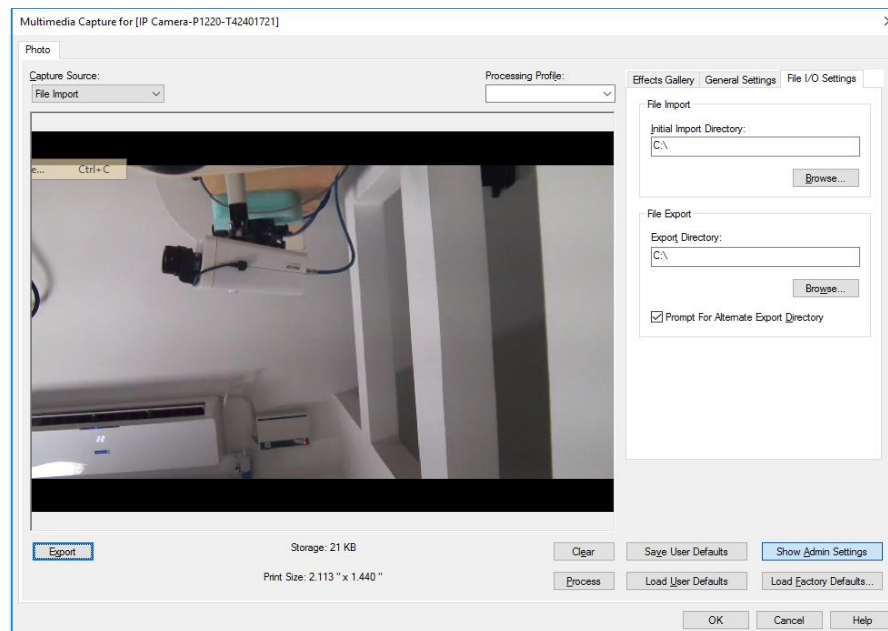


Figure 16: VideoViewer – Capture Image

- 3) Select the appropriate Processing Profile and Export Directory options and click the Export button. This saves the image.
- 4) Click OK to dismiss the dialog.

### 7.3.2. Controlling Playback for a Previously Recorded Stream

- 1) Open 'VideoViewer' application and select a video as mention in the previous section. This is required before a screenshot of the VideoXpert camera's currently displayed stream can be saved.
- 2) Select from menu, Play → Recorded.

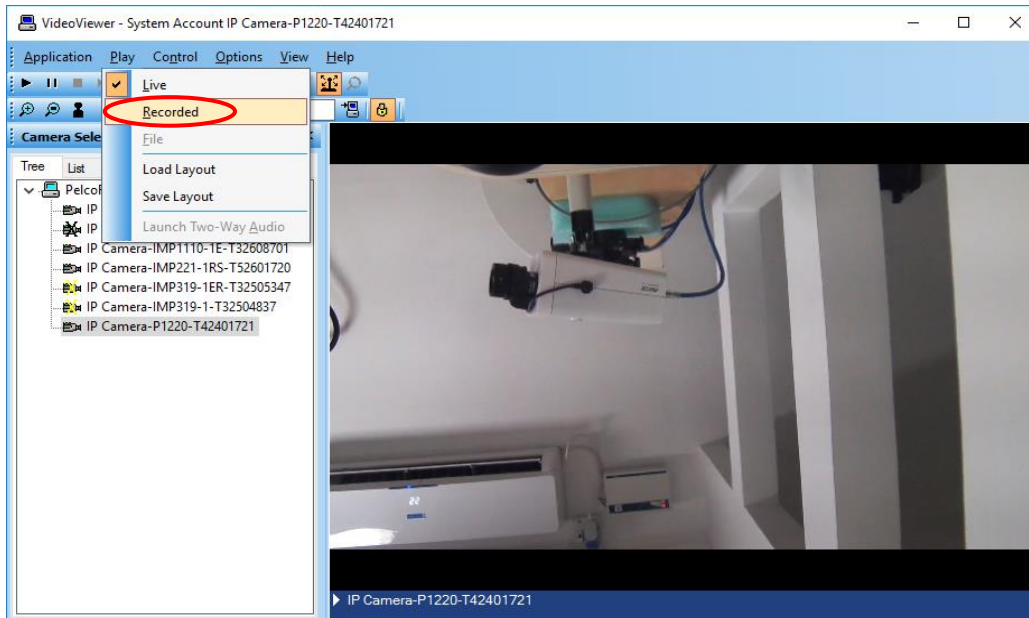


Figure 17: ViideoViewer – Selecting Recorded Video

Controls now appear near the bottom of the stream dialog box as shown in Figure 186.

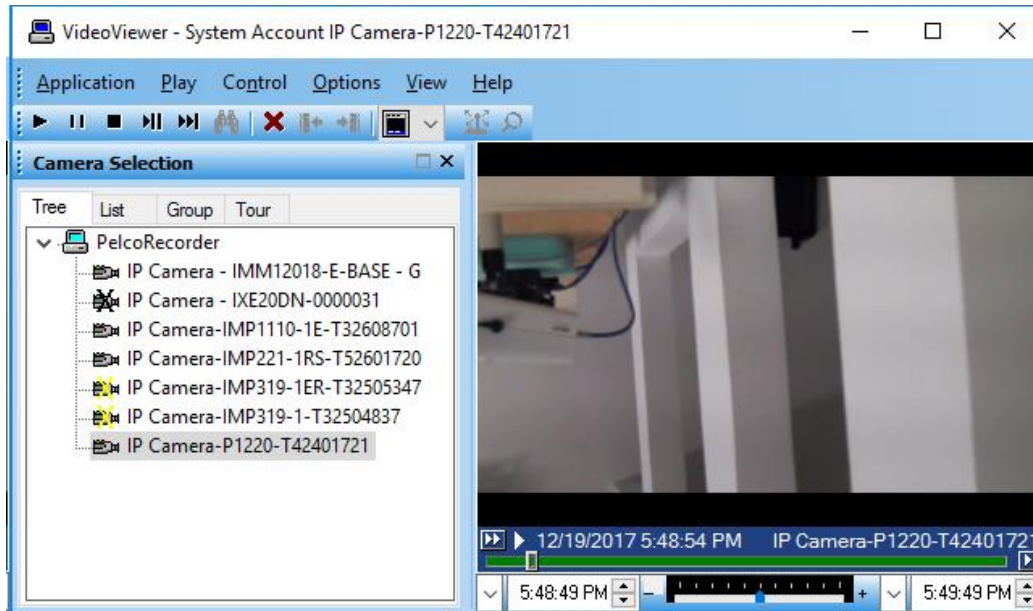


Figure 186: VideoViewer – Showing recorded video

- 3) Select Options → Set Start/End Date menu item to input the desired time range of recorded video to retrieve.

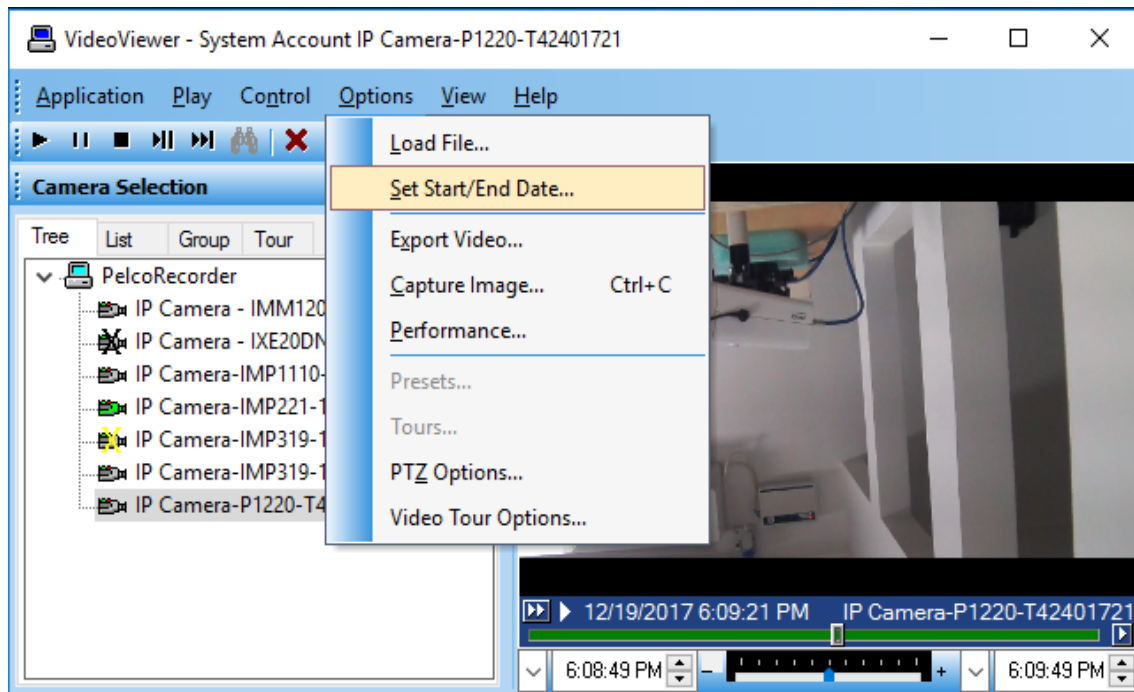


Figure 19: VideoViewer – Setting the start and end points for recorded video

Select your time range to filter recorded video by entering your own custom date time span. Once finished, click the OK button. If results are available, the clip will start playing. Controls should now appear near the bottom of the stream dialog box.

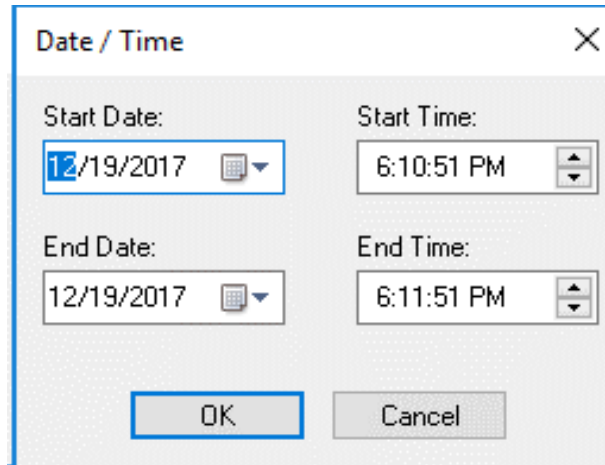


Figure 20: VideoViewer – Setting the start and end points for recorded video (1)

### 7.3.3. Exporting a Recorded Stream from VideoViewer

**Note:** Export of video can be accomplished using the VideoViewer or Alarm Monitoring applications.

- 1) Launch the VideoViewer application to begin exporting a VideoXpert camera's stream from the VideoViewer.
- 2) When in Play/Recorded mode for a particular camera, adjust the playback time for the desired clip. Then select Options → Export Video.

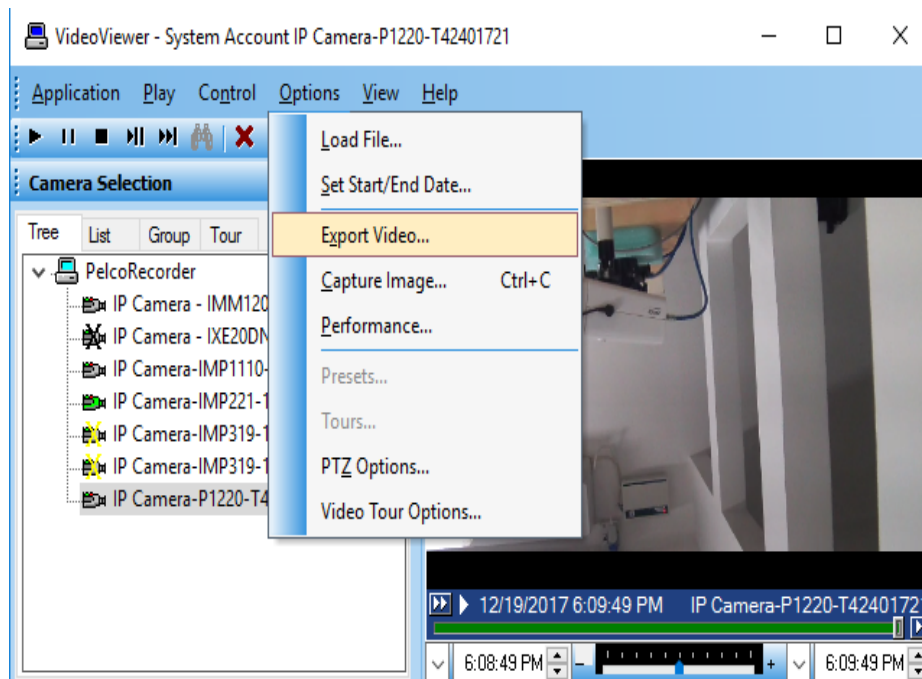


Figure 7: VideoViewer – Export Video option

The video export begins immediately, and displays a progress bar.

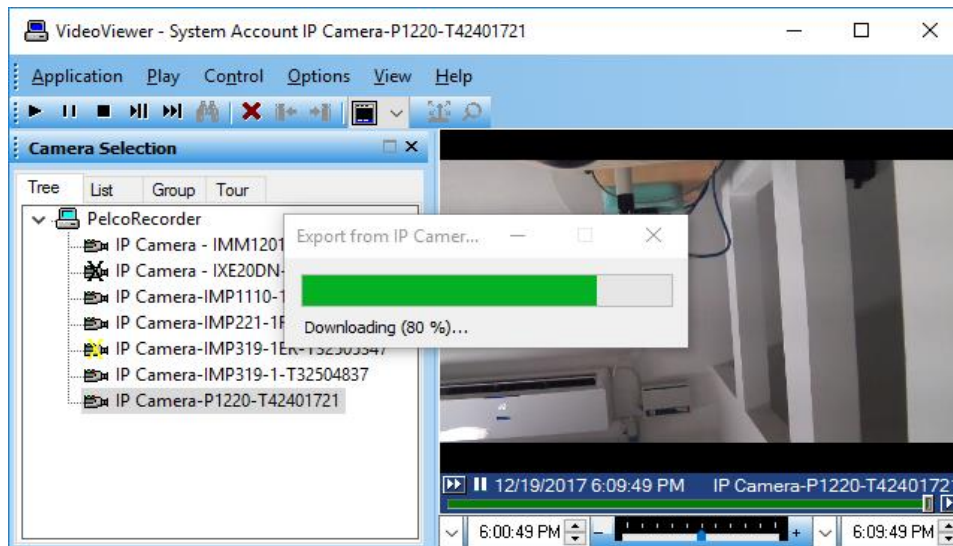


Figure 8: VideoViewer – Exporting Video

The exported file can be found in the '[Program Files]\Pelco\Lenel\Export' folder.

### 7.3.4. Controlling Pan and Tilt

**Note:** Pan and tilt controls only apply for VideoXpert cameras that support PTZ functionality. If the VideoXpert camera does not support PTZ, then PTZ controls will not be visible in the VideoXpert camera view dialog. PTZ functionality only exists in Single View mode.

- 1) Open the VideoXpert camera's view. The camera's view must be opened before panning and tilting can be controlled.
- 2) Select the Options → PTZ Options menu item to access PTZ configuration options.

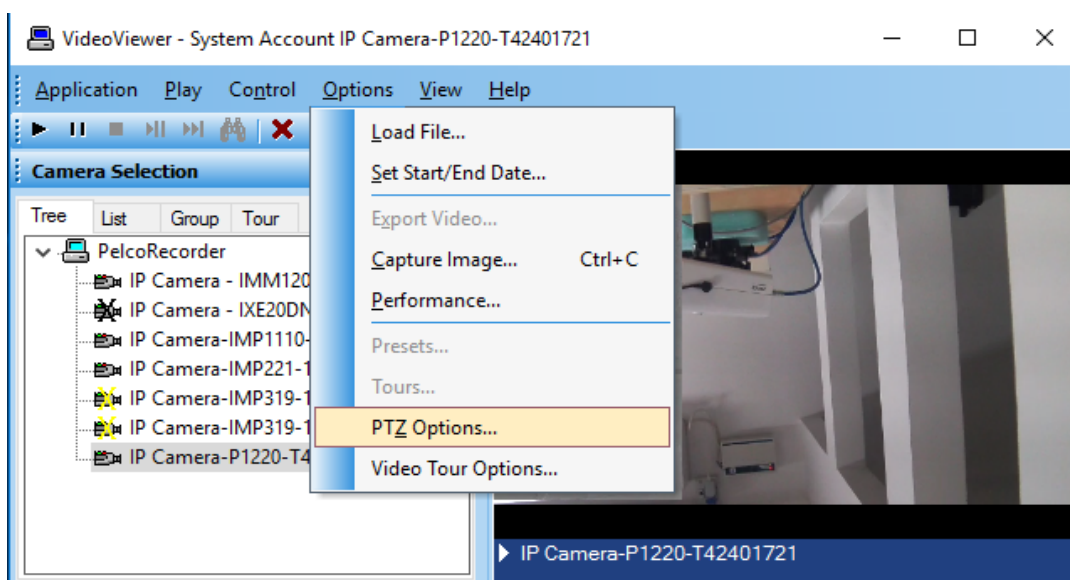


Figure 9: VideoViewer – Pan/Tilt option

- 3) Set PTZ configuration options as needed.

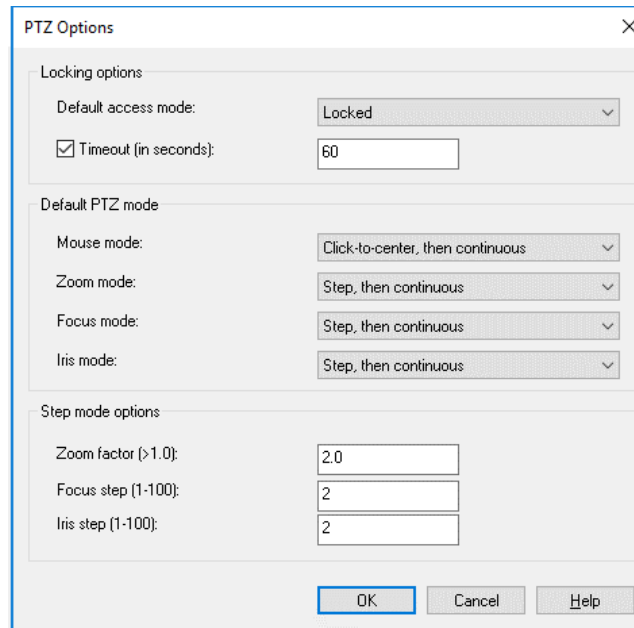


Figure 10: VideoViewer – Plan/Tilt configuration

- 4) Click on the Activate PTZ icon, as shown in the screenshot below, to activate PTZ functionality

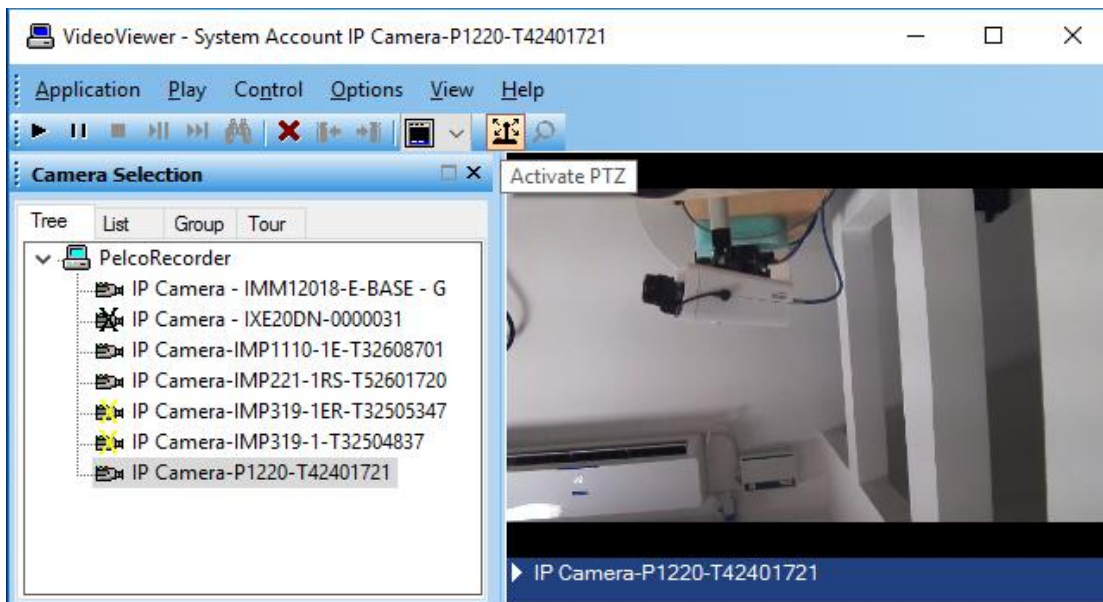


Figure 11: VideoViewer – Activating PTZ

To control an IP camera’s panning and tilting functionality (1), click the left mouse button in the camera window, and then hold the mouse button down (for continuous motion) when the displayed arrow points in the desired direction for a particular camera.

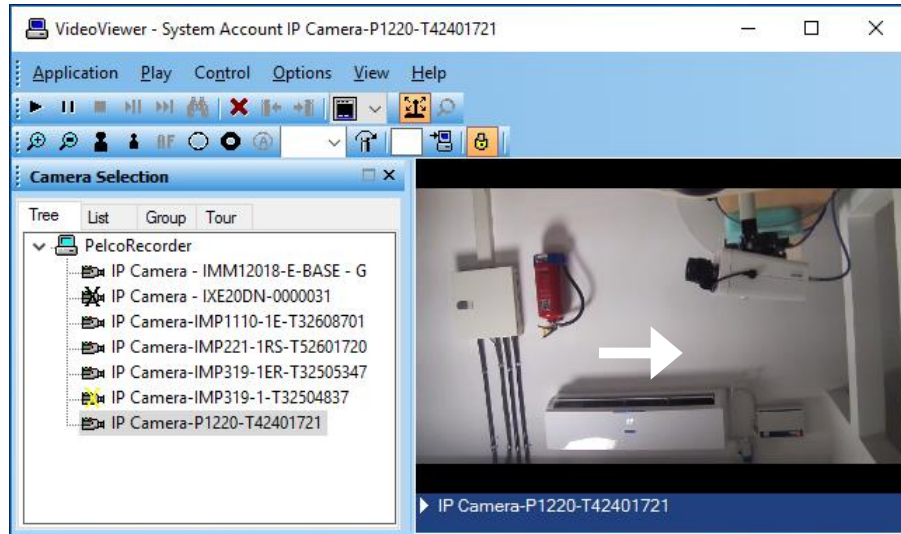


Figure 12: VideoViewer – Pan/Tilt functionality

### 7.3.5. Controlling Zoom

**Note:** Zoom controls only apply for VideoXpert cameras that support zoom functionality. If the VideoXpert camera does not support zoom, then zoom controls will not be visible in the VideoXpert camera view dialog.

- 1) Open the VideoXpert camera's view. The camera's view must be opened before zoom can be controlled. Zoom, iris control, and focus controls can now be found above the 'Camera Selection' header; as shown in the screenshot below.

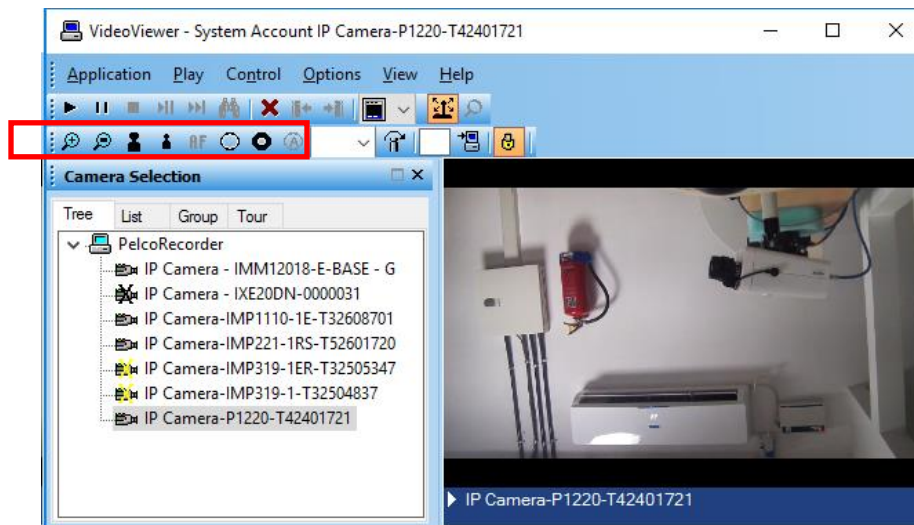


Figure 27: VideoViewer – Zoom controls

- 2) To control an IP camera's zoom functionality, use the control buttons in the top left portion of the dialog. The icon with the plus (+) represent zooming in, while the icon with the minus (-) represents zooming out. The mouse scroll wheel can also be used to be used to zoom in and out as appropriate.

### 7.3.6. Configuring PTZ Presets

A preset is a script that allows users to save a camera's position, zoom, and other settings such as auto iris and autofocus collectively as a 'bookmark'. Users can save multiple presets per camera. For example, if a user uses the same camera to monitor a door near the camera and a window that is some distance from the door, the user can configure one preset for the door with a moderate zoom value. Additionally, a second preset can be configured with a higher zoom value and a specific position for the distant window.

NOTE: Pan and tilting controls only apply for VideoXpert cameras that support PTZ functionality. If the VideoXpert camera does not support PTZ, then PTZ controls will not be visible in the VideoXpert camera view dialog. PTZ functionality only exists in Single View mode.

- 1) Open the VideoXpert camera's view. The camera's view must be opened before panning and tilting can be controlled.
- 2) Open the VideoViewer application and select the Goto or Set Preset button to configure a PTZ Preset. The button is identified by the red arrow in the figure below.

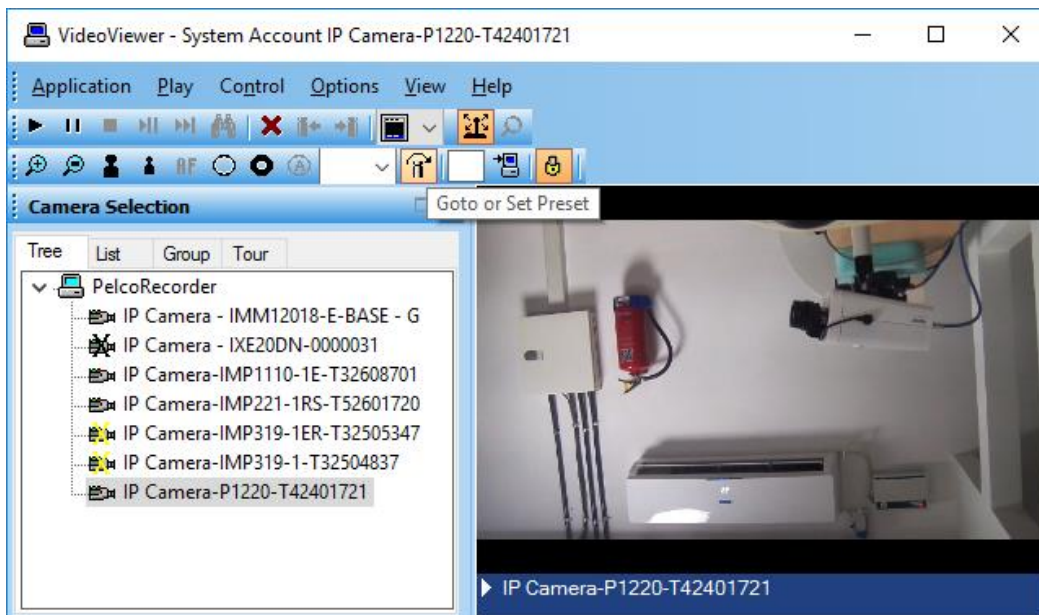


Figure 28: VideoViewer – Goto Preset option

A dialog box will be displayed allowing you to define a preset.

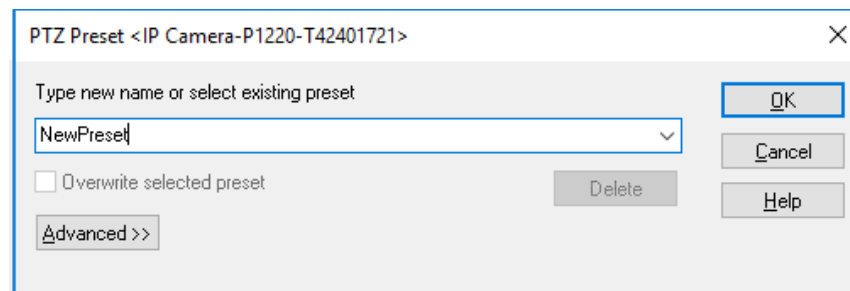


Figure 29: VideoViewer – Configuring Preset

3) Click the Advanced button to expand the dialog box, showing all the available options.

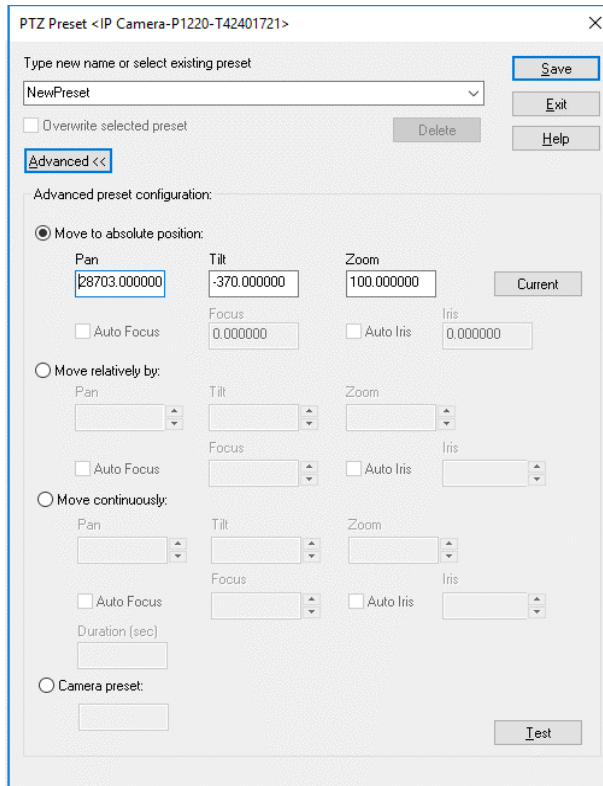


Figure 13: VideoViewer – Configuring Preset (Advanced)

There are several ways to specify a preset, but any unsupported options will be unavailable. Internal camera presets can be configured/identified by specific numbered presets.

4) Provide a name for the preset and provide the preset number, then click Test. The name is arbitrary, and will be stored in the Lenel database for later use when calling the preset.

The newly defined preset is now listed in the preset drop-down window.

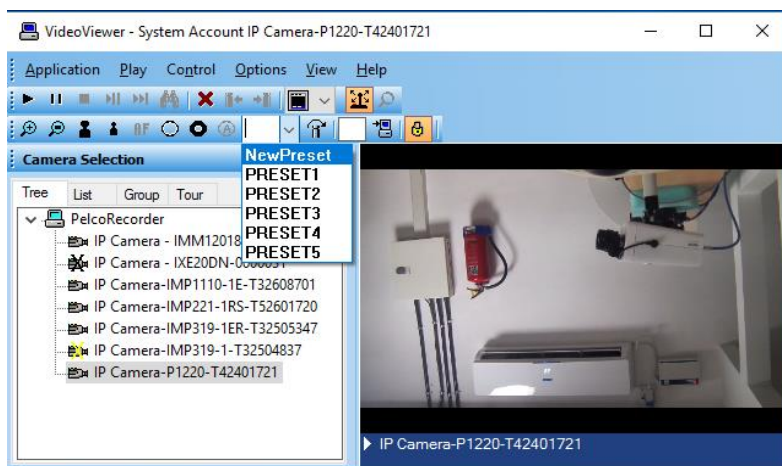


Figure 14: VideoViewer – Preset List

## 7.4. Alarm Monitoring

To configure or view alarms, launch the Alarm Monitoring application.

### 7.4.1. Viewing Triggered Events in Alarm Monitoring

- 1) Access the Alarm Monitoring application. Trigger events will be seen as they are triggered in real time. Real time alarm can be viewed in 'Main Alarm Monitor' screen. This screen can be accessed from toolbar (Refer Figure 15).

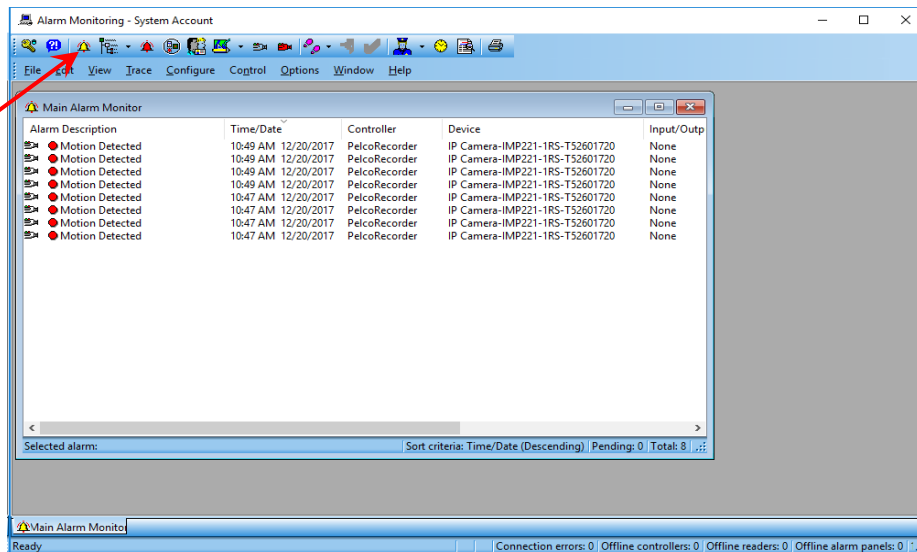


Figure 15: Alarm Monitoring – Main Alarm Monitor

- 2) Select an alarm from the window, then right-click and select Launch Video to display the video associated with that alarm.

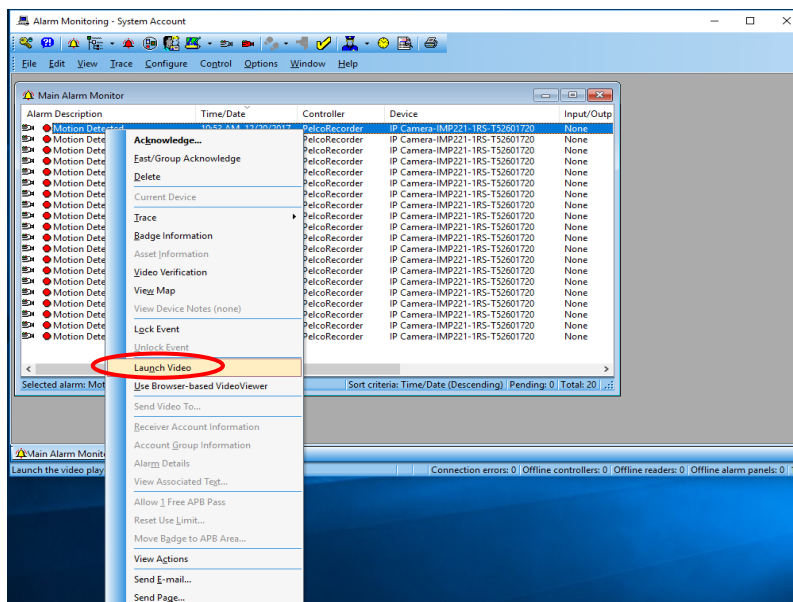


Figure 16: Alarm Monitoring – Launch Alarm Video

3) The video plays in a new window.

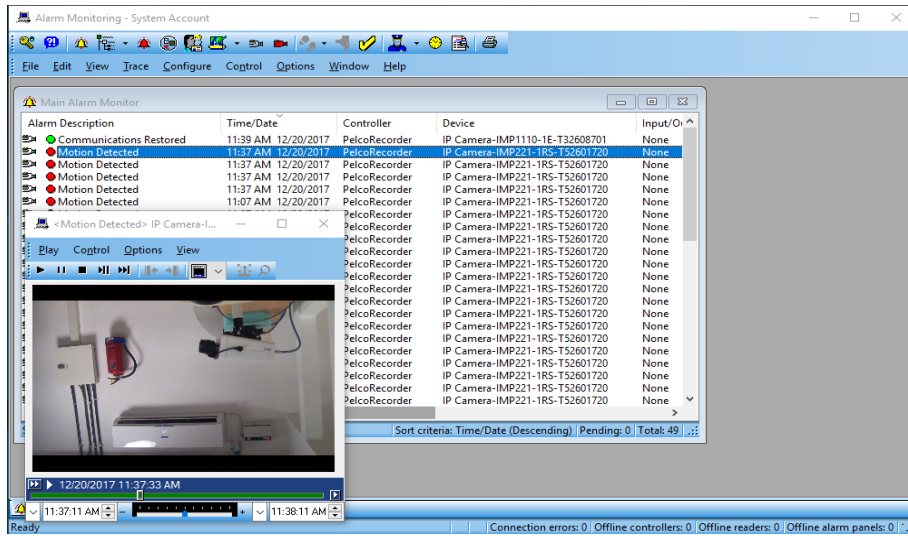


Figure 17: Alarm Monitor – Launch Alarm Video

Any Pelco product supporting a listed web service below should support most events associated with the supported web service. The general categories of events include (by service):

**DiagnosticReporting**

- "Diagnostic"

**VideoAnalytics**

- "Video Analytic Detected"
- "Video Analytic Restored"

**7.4.2. Exporting a Stream**

1) Launch the Alarm Monitoring application to begin exporting a VideoXpert camera’s stream.

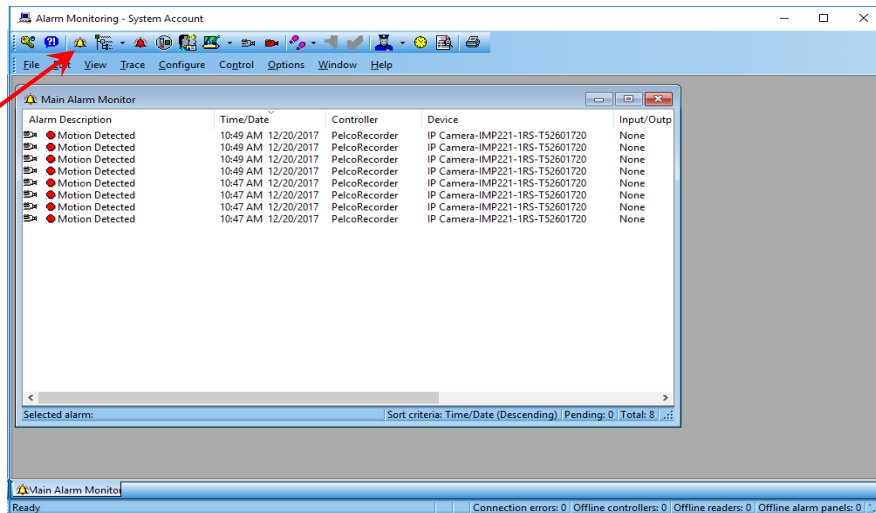


Figure 18: Alarm Monitoring – Main Alarm Monitor

- 2) Select an event, right-click and select Launch Video. A window opens with the selected video.
- 3) Select the Options → Export Video menu item. The video export begins immediately.

The exported file can be found in the [Program Files]\Pelco\Lenel\Export folder.

### 7.4.3. Triggering a PTZ Preset from an Event

The PTZ action can be used on the same camera, but this example demonstrates the action on a second camera.

- 1) To configure a connection between an event and an action, launch the System Administration application, and select Access Control → Global I/O.

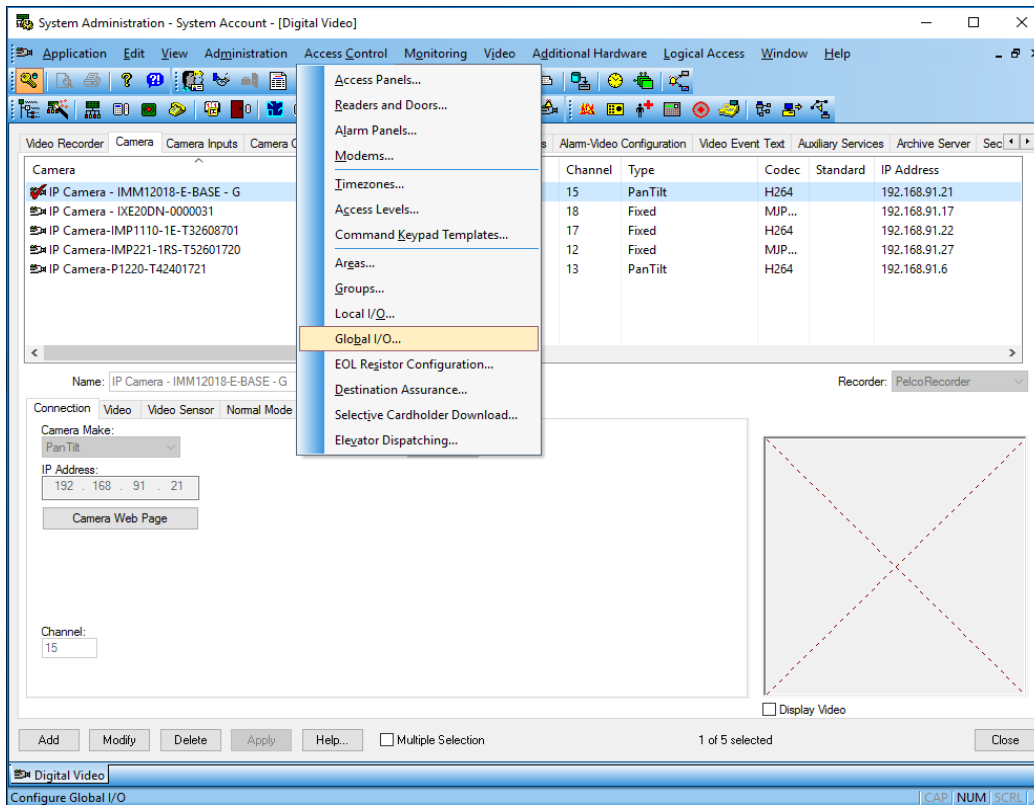


Figure 19: Triggering a PTZ Preset from an Event – Step 1

There are three tabs in the Global Input/Output dialog.

- Global Linkage
- Input Event
- Output Action

- 2) Select the Global Linkage tab, and then click the Add button.

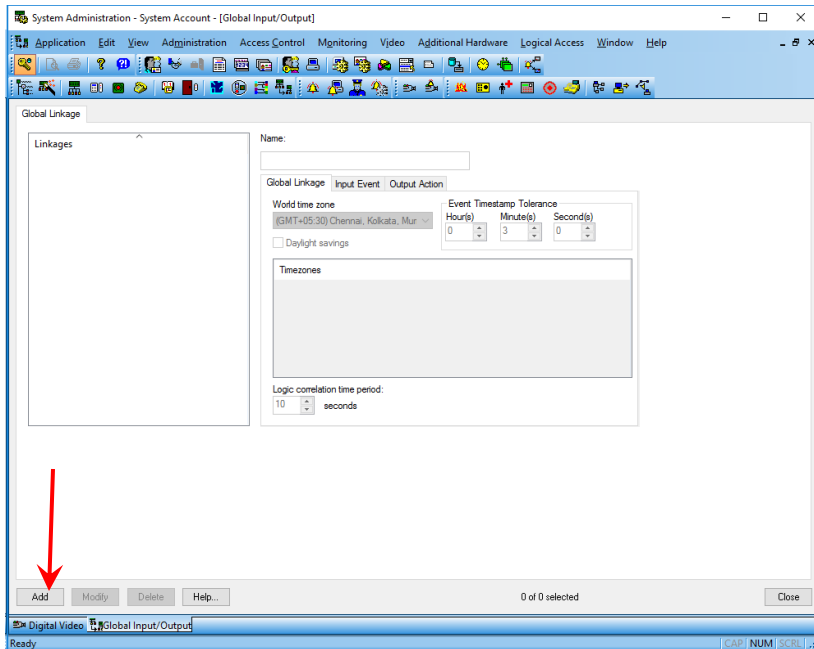


Figure 37: Triggering a PTZ Preset from an Event – Step 2 (Global Linkage)

3) Assign a name to the linkage in the Name box.

Note: Select Always in the Time zones window.

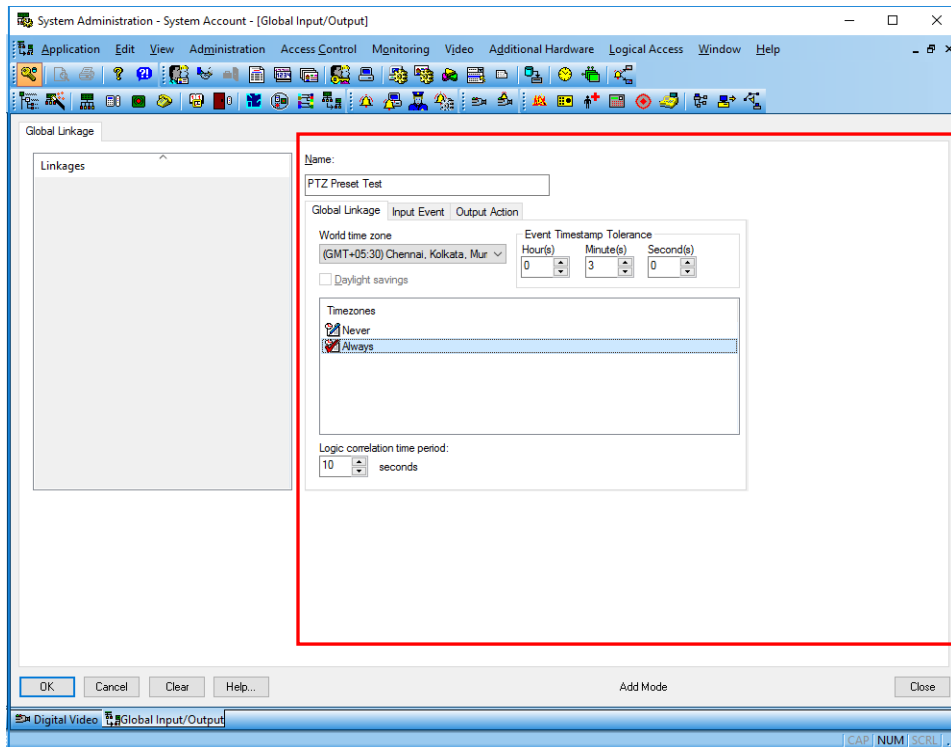


Figure 38: Triggering a PTZ Preset from an Event – Step 3 (Add New Linkage)

- 4) Select the Input Event tab and select an event and a device and click the Add button to add a triggering event.

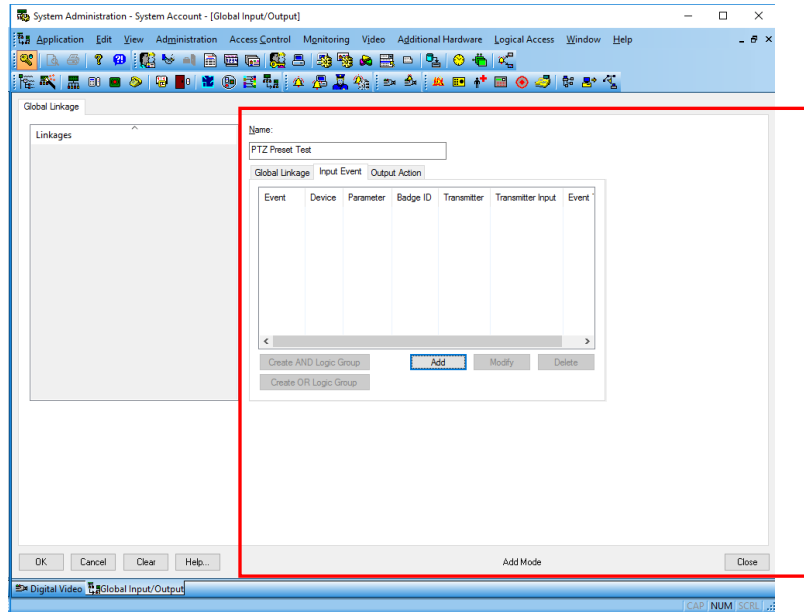


Figure 39: Triggering a PTZ Preset from an Event – Step 4 (Add Input Event)

- 5) In this example, Motion Detected and IMP 221 camera have been selected and are notated by a check mark on each selection.

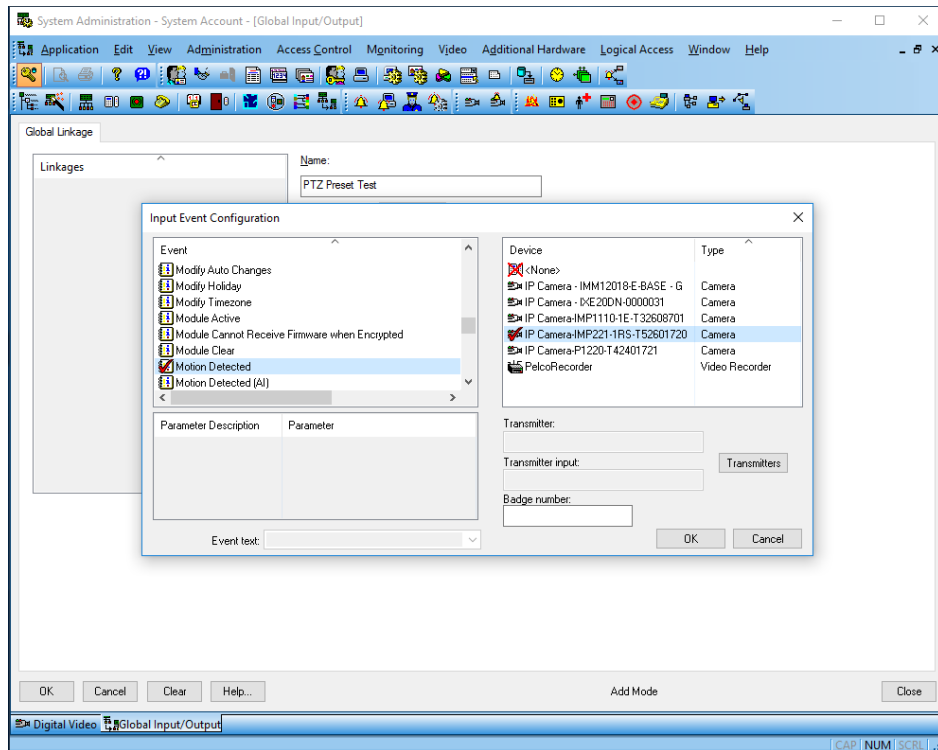


Figure 20: Triggering a PTZ Preset from an Event – Step 5 (Mark Event and Camera)

6) Click OK to save the Input Event. The dialog box displays the summary of the Input Event.

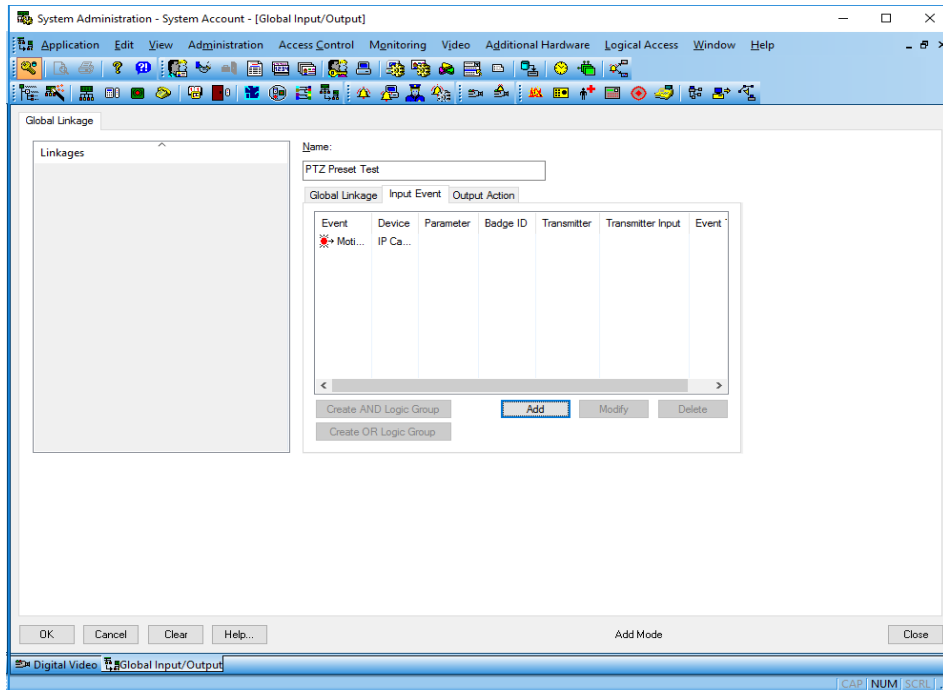


Figure 21: Triggering a PTZ Preset from an Event – Step 6 (Linkage added)

7) Select the Output Action tab. This tab specifies what action to take. Click the Add button.

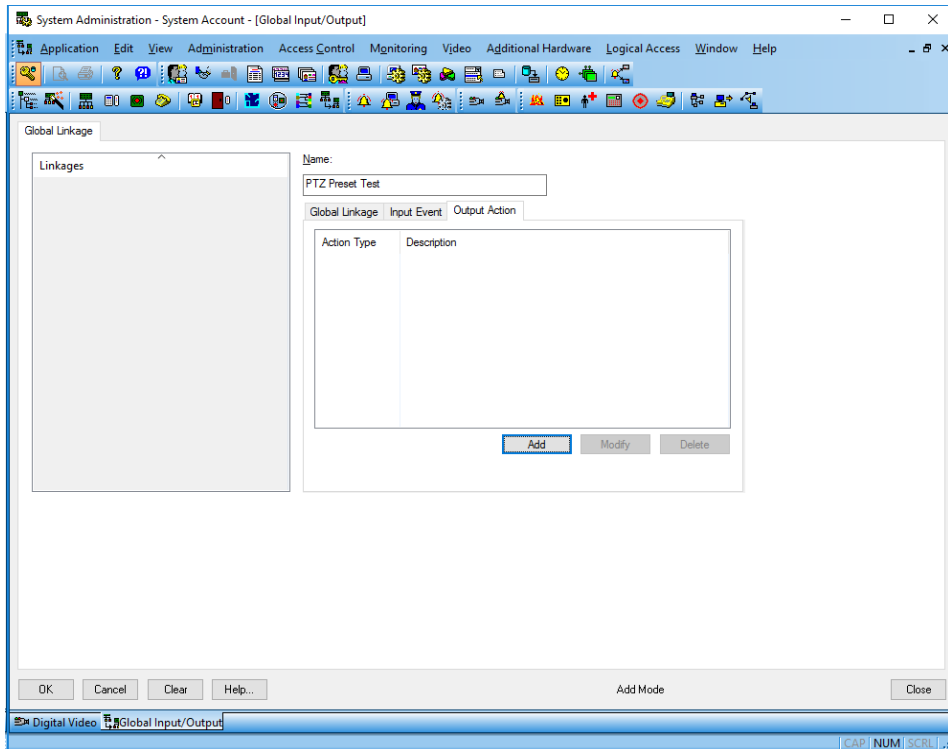


Figure 22: Triggering a PTZ Preset from an Event – Step 7 (Output Action)

8) Select Action Type → Objects → Select PTZ Preset.

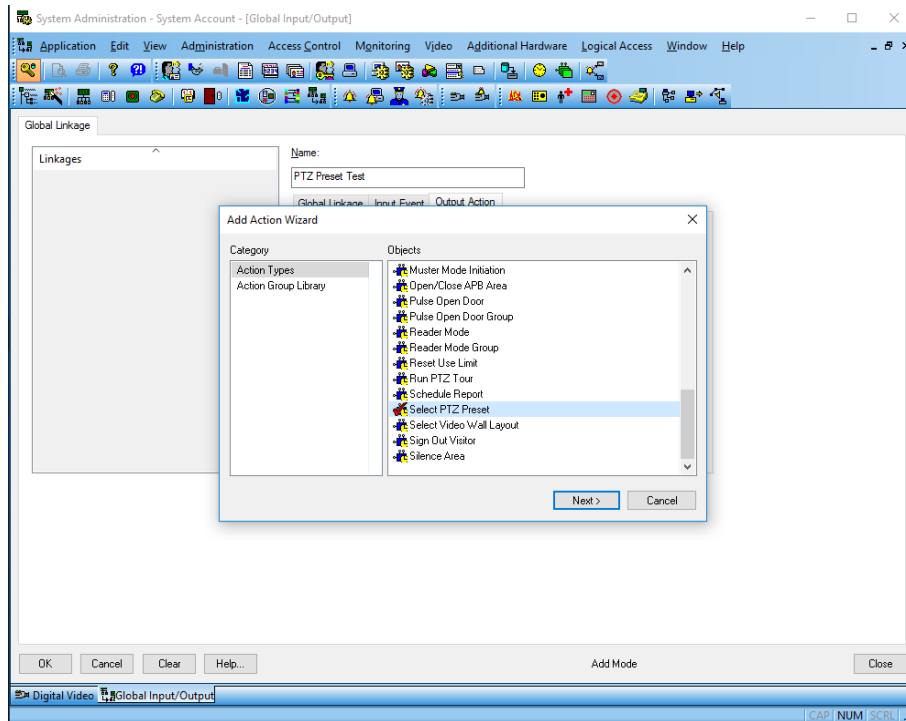


Figure 23: Triggering a PTZ Preset from an Event – Step 8 (Selecting action)

9) Select a camera and a named preset from that camera, then click OK.

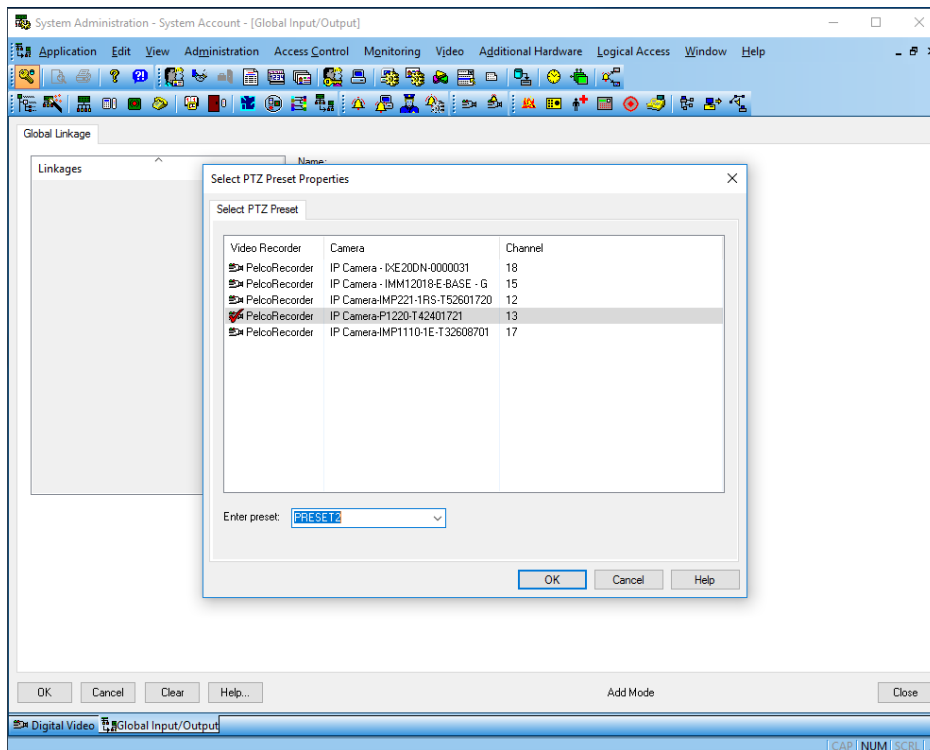


Figure 24 Triggering a PTZ Preset from an Event – Step 9 (Selecting camera preset)

10) The Linkage is configured. You can add additional Input Events and Output Actions if desired. Click OK when you are finished configuring the Linkage.

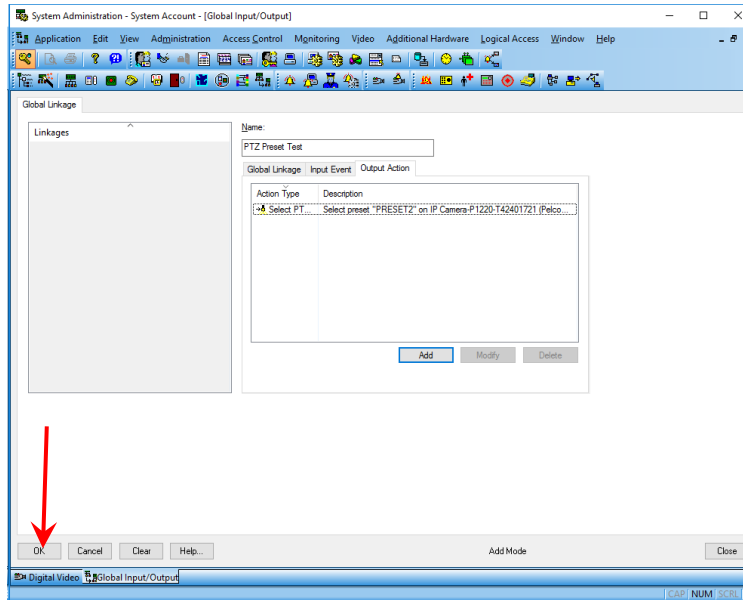


Figure 25: Triggering a PTZ Preset from an Event – Step 10

11) The Linkage displays a checkmark indicating it is active.

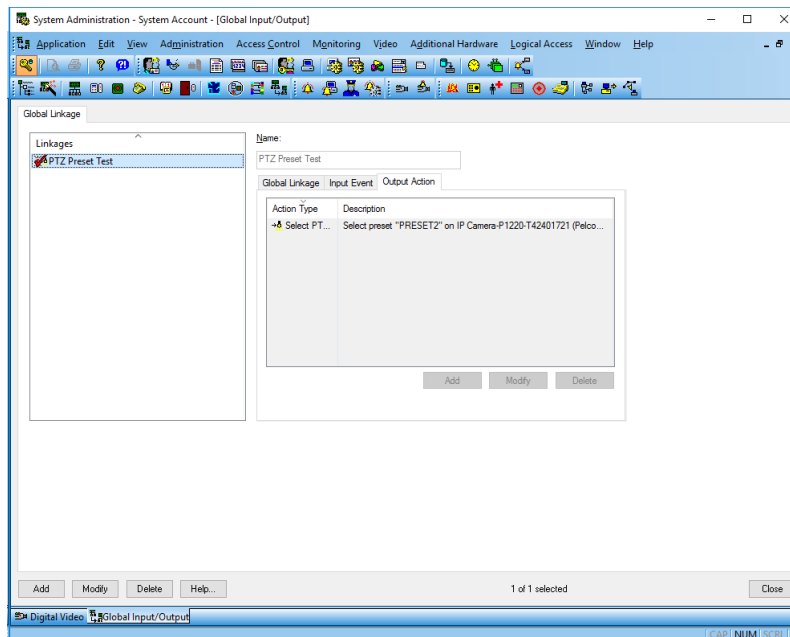


Figure 26: Triggering a PTZ Preset from an Event – Step 11 (Active Preset set)

Note: The selected/desired preset should have been configured as described earlier.

In this example, when an event occurs on the first camera, it will cause the second camera to run the PTZ preset.

## 7.5. LoggingSetupLenel

Logging is specific to VideoXpert, and is configurable. This section describes how to configure logging.

- Run the LoggingSetupLenel application from 'C:\Program Files (x86)\Pelco\Lenel'.
- Select the items that you want to log, as well as the folder where the logs should be stored and the maximum log file size. Click 'Set' to save the settings.
- To view the current log, click the View Log File button.

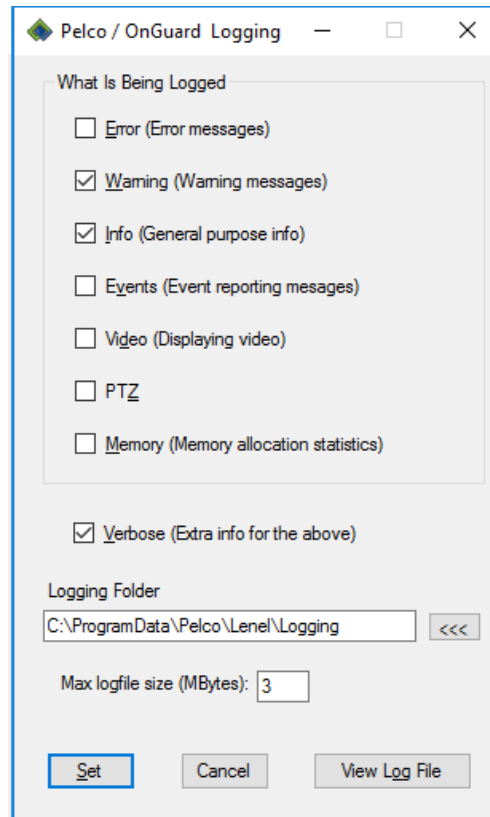


Figure 47: LoggingSetupLenel –Utility application with VideoXpert Integration

**NOTE:** The maximum log size is 50 MB. Any settings over that value will default back to the 50 MB restriction. Logging should be normally off (no items checked) unless Pelco technical support asks for logging info when tracing issues.

The following settings are also available with 'LoggingSetupLenel':

- Error: for error messages. This is usually the most important item.
- Warning: for less important errors that can usually be ignored.
- Memory: to log memory allocation statistics. Usually this should not be checked.
- Events: logs event processing, event video recording and locking.
- PTZ: logs PTZ actions.
- Info: provides high level info on actions performed that do not fit in the other categories.

- **Verbose:** selecting this item affects all the categories. It will log more info for all (when available) and will also log actions that happen often and should normally not be logged because they fill up the log file quickly.

## 8. References

#	Documents/Inputs	Description
1	Discussions	Technical and requirement analysis discussions between all internal and external stakeholders.
2	VideoXpert SDK	Documentation of VideoXpert SDK
3	OpenVideo – Recorder - DeveloperGuide.pdf	Available with OnGuard SDK
4	OpenVideo – Recorder - OpenVideoGuide.pdf	Available with OnGuard SDK
5	Pelco VideoXpert OnGuard Integration Guide - 7.2.pdf	User guide for the previous integration
6	OnGuard 7.4 – Installation.pdf	Available at Lenel Partner Center

*Table 3 References*

## 9. Support

If the instructions provided fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance.



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