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# Application Note Milestone Corporate XProtect 6.0a Setup

FC- Series

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## Application Note - Milestone Corporate XProtect 6.0a Setup

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## Introduction

FLIR FC-Series cameras are compatible with Milestone XProtect Corporate Video Management Software 6.0a. Other Milestone builds may not be certified for this product and a correct behavior is not guaranteed. Write to [nexus.support@flir.com](mailto:nexus.support@flir.com) or check the Milestone Web Site when using a different build from the one specified in this document.

The ONVIF Protocol provides connectivity between these FLIR cameras and the Milestone XProtect Management Client/Smart Client.

This guide explains step by step how to configure the FLIR FC-Series and Milestone software to control and display the FC-Series.

## Items required

These items are required to follow the steps described in this guide.

- FLIR FC-Series camera
  - Nexus Server version 2.5.15.0 or higher
  - Firmware version: WW1.1 or higher
  - Known static IP.: 10.22.1.92
  
- Computer running Milestone XProtect Corporate built 6.0a:
  - Milestone XProtect Management Client
  - Milestone XProtect Smart Client 6.0a

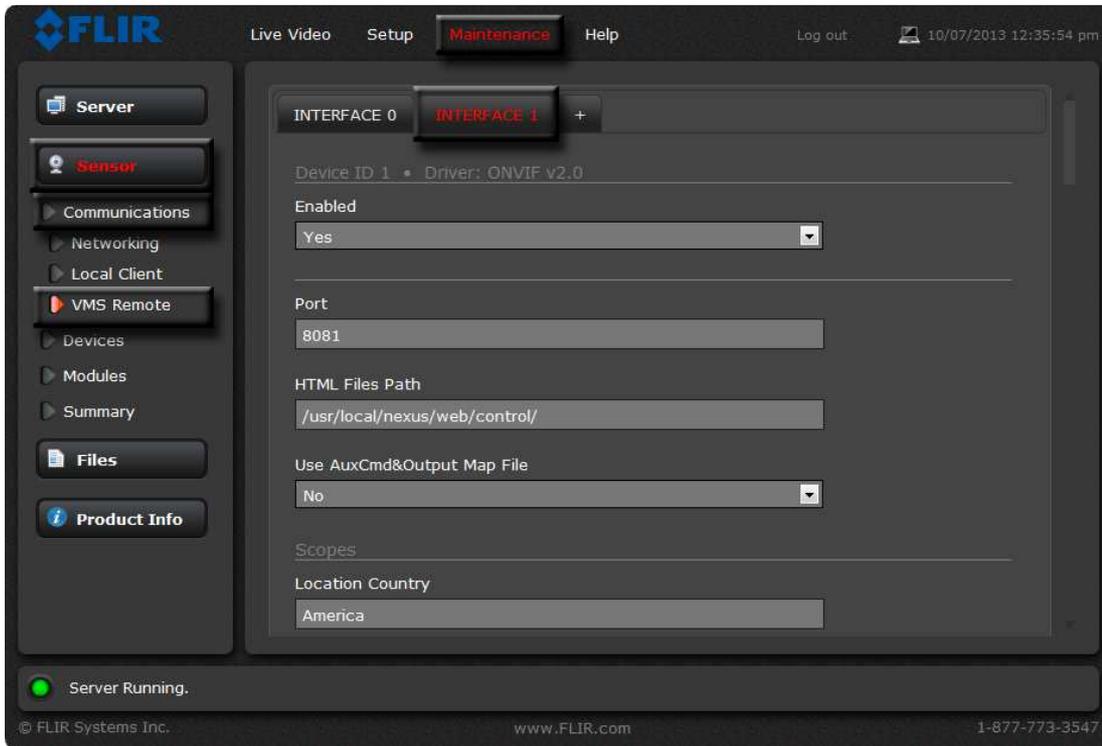
## FLIR Camera setup

This section describes how to configure the FLIR FC-Series camera in order to make it available in Milestone XProtect Corporate. FLIR FC-Series cameras should have the ONVIF interface configured by default, however double-checking this setting will ensure the compatibility.

Follow the steps below to review the ONVIF interface configuration.

1. Type the camera's IP address on your web browser address bar to access the Nexus Web Configuration Interface.
2. Go to Maintenance → Sensor → Communications → Remote/VMS → Interface 1.

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3. Make sure the following parameters are set correctly:

- a. Use Virtual PTZs: Enabled.
- b. Reorder Presets with Remove operation: Yes.

The overall configuration of the ONVIF interface shall be:

NOTE: There are up to 8 configurable Auxiliary commands on the Web Interface; in this example only 2 are configured.

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The image displays two screenshots of the Milestone XProtect 6.0a Web Configurator interface. The left screenshot shows the 'Advanced Settings' section, and the right screenshot shows the 'Auxiliary Commands' and 'Relay Outputs' sections.

**Advanced Settings (Left Screenshot):**

- Device ID: 1 • Driver: ONVIF v2.0
- Enabled: Yes
- Port: 8081
- HTML Files Path: /usr/local/nexus/web/control/
- Use AuxCmd&Output Map File: No
- Scopes
- Location Country: America
- Hardware: [Empty]
- Name: [Empty]
- Advanced Settings
- Port Discovery: 3702
- Global Unique Identifier: [Empty]
- Video RTP-Multicast: Supported
- Video RTP-TCP: Supported
- Video RTP-RTSP-TCP: Supported
- Authentication: Enabled
- \*admin\* Password (default:admin): [Empty]
- \*anonymous\* Password (default:nexus): [Empty]
- Use Virtual PTZs: Disabled
- Reorder Presets with Remove Operation: No
- Video Profiles
- Number of Video Profiles: 2
- Associated Video ID Profile 0: Video 0
- Associated Video ID Profile 1: Video 1

**Auxiliary Commands (Right Screenshot):**

- Auxiliary Commands
- Number of Auxiliary Commands: 2
- Aux Cmd #1 Name: Aux1
- Aux Cmd #1 Action: None
- Aux Cmd #2 Name: Aux2
- Aux Cmd #2 Action: None
- Relay Outputs
- Number of Outputs: 4
- Output #1 Name: Output1
- Output #1 Action On: IR Toggle Polarity
- Output #1 Action Off: None
- Output #2 Name: Output2
- Output #2 Action On: IR Start NUC Calibration
- Output #2 Action Off: None
- Output #3 Name: Output3
- Output #3 Action On: IR LUT Palette Toggle
- Output #3 Action Off: None
- Output #4 Name: Output4
- Output #4 Action On: None
- Output #4 Action Off: None
- Buttons: Save, Read

- To use all the FLIR FC-Series advanced features it will be necessary to configure the Auxiliary Commands and/or the Outputs available on the Web Configurator under Relay Outputs section. Once the configuration is completed click on the Save button and reboot the server. The Web configurator offers certain functions commonly used; if any other functionality is needed refer to section **Error! Reference source not found.** (ONVIF Map) of this document.
- In order to change the video settings go to Maintenance → Sensor → Modules → Video. Select Video 0 or Video 1 and scroll down to the Settings section to configure the Codec Type as needed. These two video streams will be imported into Milestone Software.
- Click on the Save button and reboot the server for the changes to be effective.

## ONVIF Map

To use other functions not contemplated on the Nexus Server Web Interface an ONVIF Map can be uploaded to the Camera's Nexus Server directory.

The ONVIF Map file is a text file that links a certain Nexus CGI function to a certain Output or Aux Command accessible from Milestone software.

This section will describe how to write an ONVIF Map and how to upload it to the Camera's Nexus Server.

### Specifications of a custom ONVIF Map file

An ONVIF Map File contains the Nexus CGI function to be performed for each possible Output/Aux Command. To specify the Nexus CGI function the user shall write Nexus.cgi? immediately followed by the function.

- **Output**

The general format of each output is:

```
OUTPUT[space]<ON_or_OFF> [pace]<number> [space]Nexus.cgi? <function>
```

The example below performs a polarity toggle when Output 1 is on.

```
OUTPUT ON 1      Nexus.cgi?IRPolarityToggle
```

When the Nexus CGI function has input parameters, these parameters are passed separated with the '&' symbol, followed by their name and value.

```
OUTPUT ON 2      Nexus.cgi?PTAzimuthElevationSet&Azimuth=20.0&Elevation=10.0
```

Refer to the Nexus CGI Interface Documentation to learn the name of each parameter.

- **Aux. Commands**

The general format of each auxiliary command is:

```
AUXCMD[space]<number> [space]Aux<number> [space]Nexus.cgi? <function>
```

The example below performs a polarity toggle in the auxiliary command 1:

```
AUXCMD 1   Aux1   Nexus.cgi?IRPolarityToggle
```

When the Nexus CGI function has input parameters, these parameters are passed separated with the '&' symbol, followed by their name and value.

```
AUXCMD 2   Aux2   Nexus.cgi?PTAzimuthElevationSet&Azimuth=20.0&Elevation=10.0
```

### How to upload the custom ONVIF Map file

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In order to upload the ONVIF Map File, follow the steps below.

**NOTE:** This part of the document can only be completed with Webfiles version 3.8.1.0 or higher.

1. Type the camera's IP address on your web browser address bar to access the Nexus Web Configuration Interface.
2. Go to Maintenance → Files → Config Files and scroll down to the ONVIF Map File.
3. Click on the Browse button of this section and select your ONVIF Map File.
4. Click on the Upload button.
5. Reboot the server for the changes to be effective.

**IMPORTANT:** If the camera is to use the ONVIF Map file instead of the Output/Auxiliary commands available on the Web Interface, go to Maintenance → Sensor → Communication → VMS Remote. Set Use AuxCmd&Output Map File to Yes.

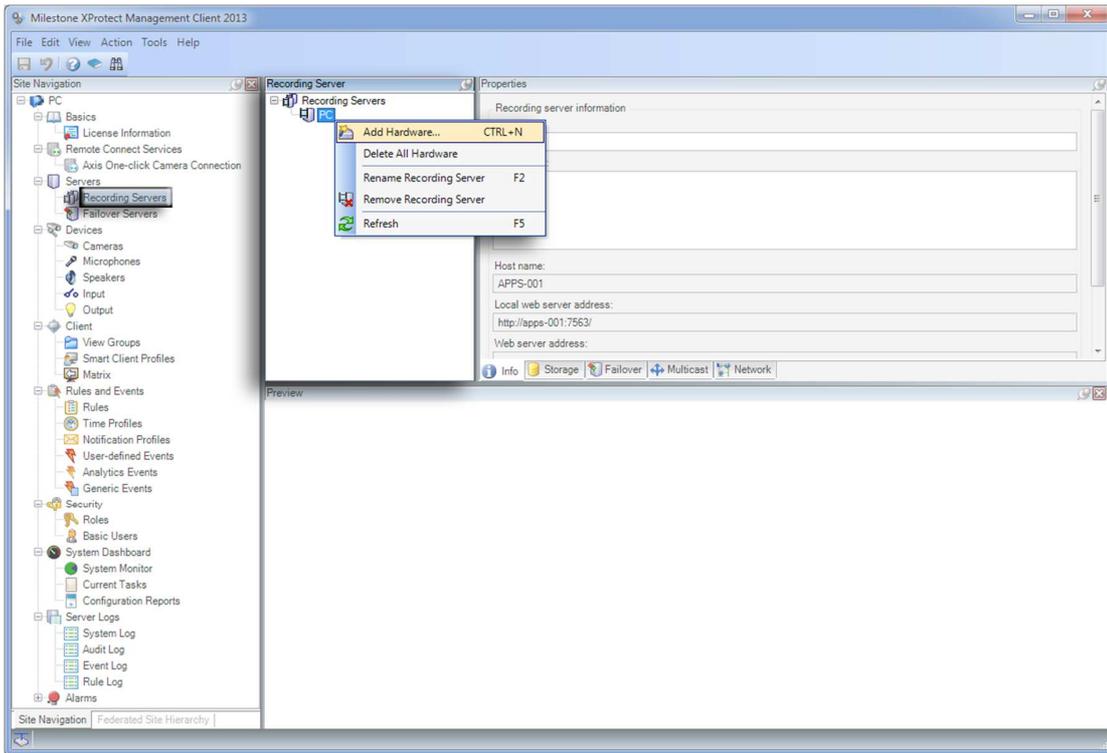
## Milestone XProtect Corporate Setup

This section will describe the process to command and control a FLIR PT-Series camera from Milestone XProtect Corporate 6.0a software.

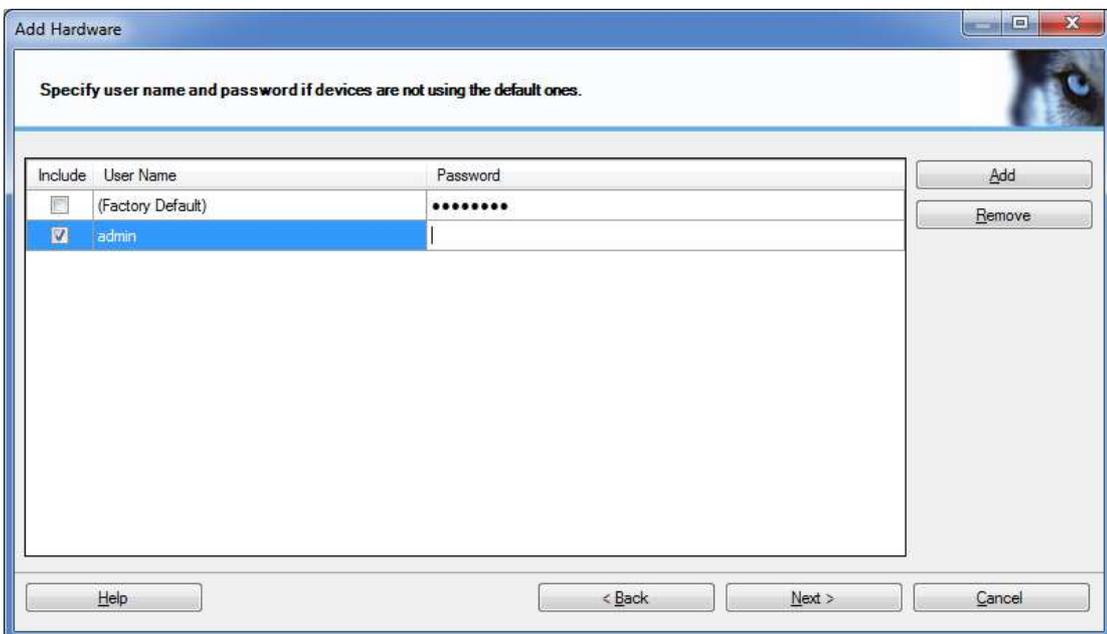
### Milestone XProtect Management Client

1. Run the Milestone XProtect Management Client.
2. Select Recording Servers from the left panel, right-click on your computer name and Add Hardware.

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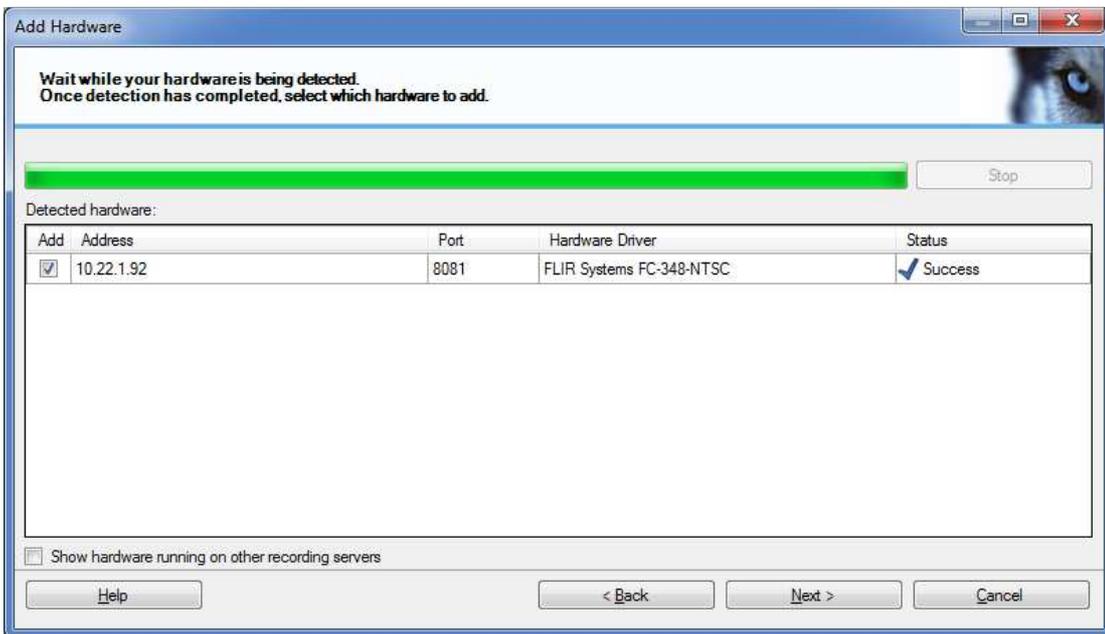


3. Select the Express option and click on Next.
4. Click on the password field of the admin user and type admin, click on Next.

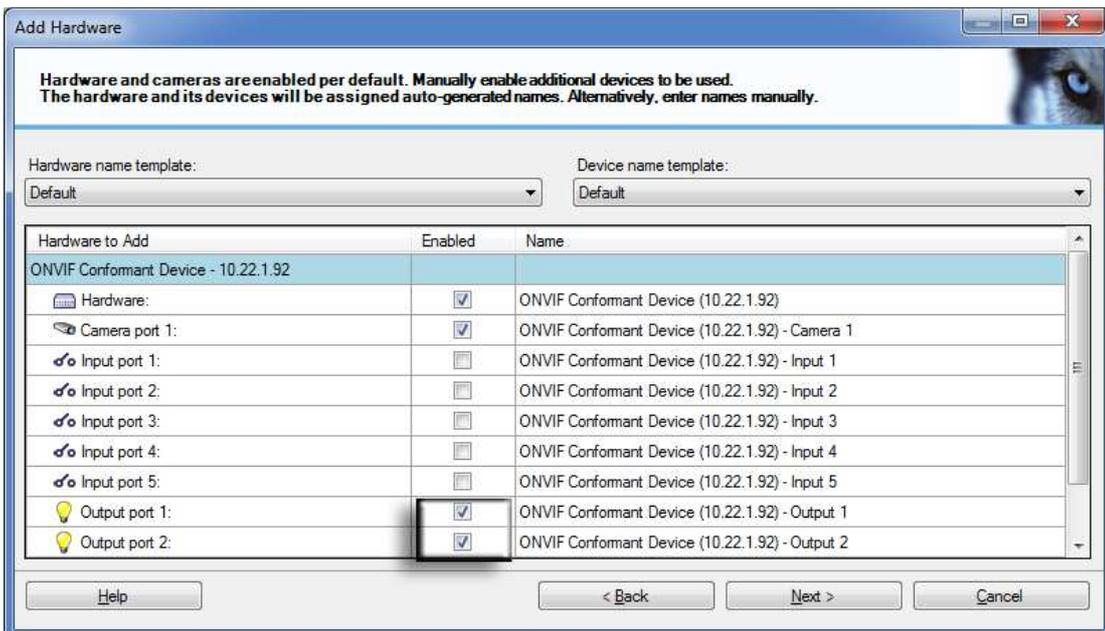


5. The Milestone software will discover all available cameras in your network. Select the desired one and click on Next.

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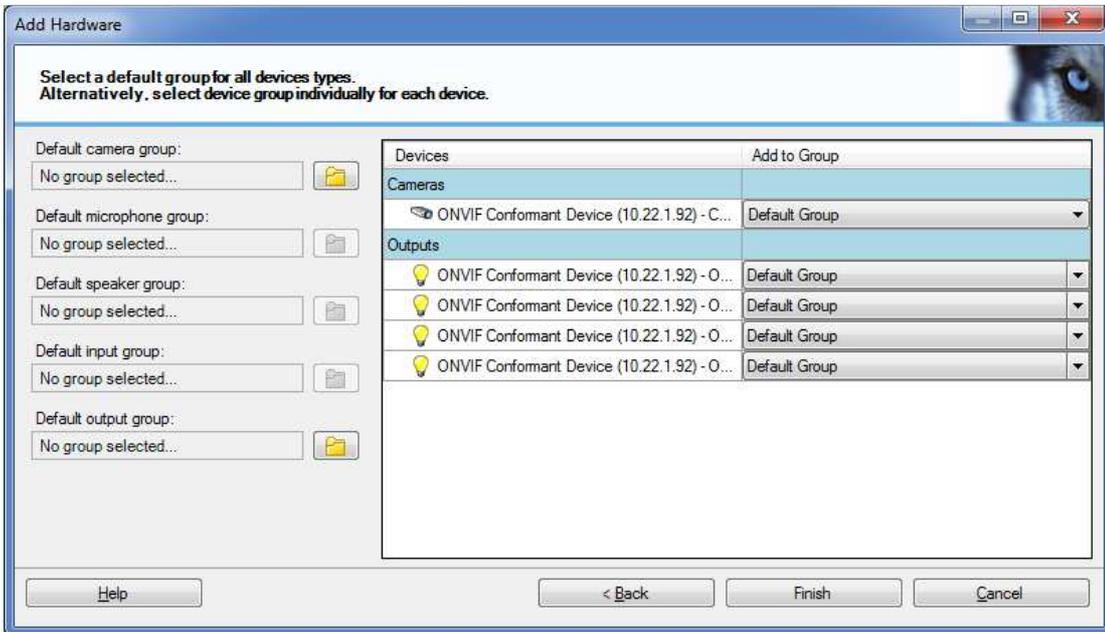


6. Once the software has successfully connected to the camera, click on Next.
7. The following screen will show your camera configuration. Check the Outputs boxes to make them available. Note the Outputs can be made available later in the process too. Click on Next.

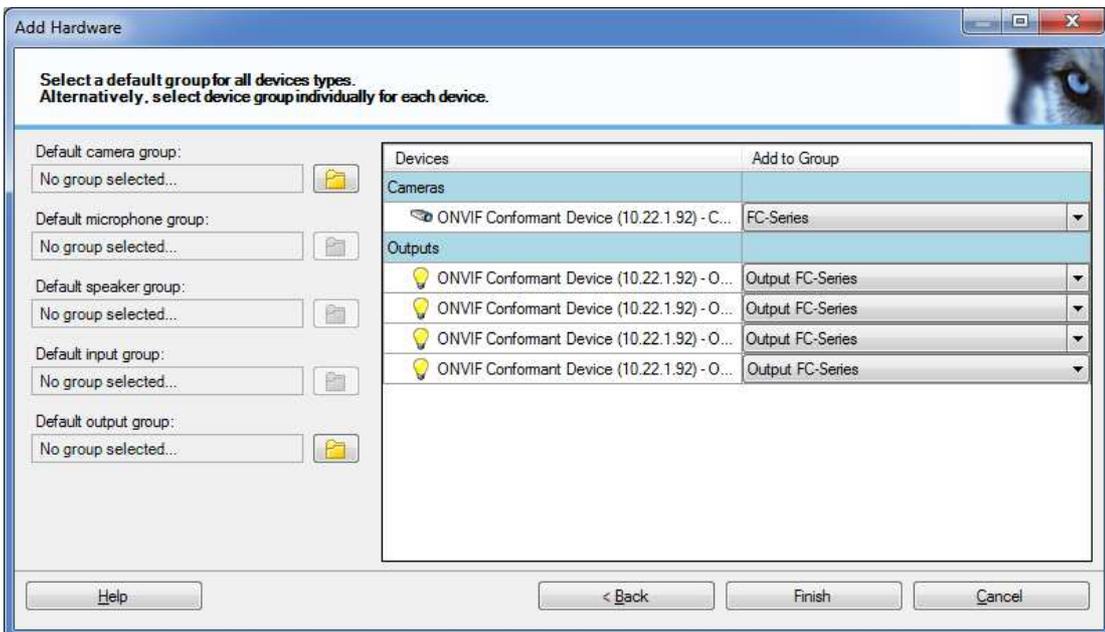


8. Click on the Add to Group column and Select a group for each piece of hardware. If no group has been previously created, the user shall create one. In this case the group is FC-Series.

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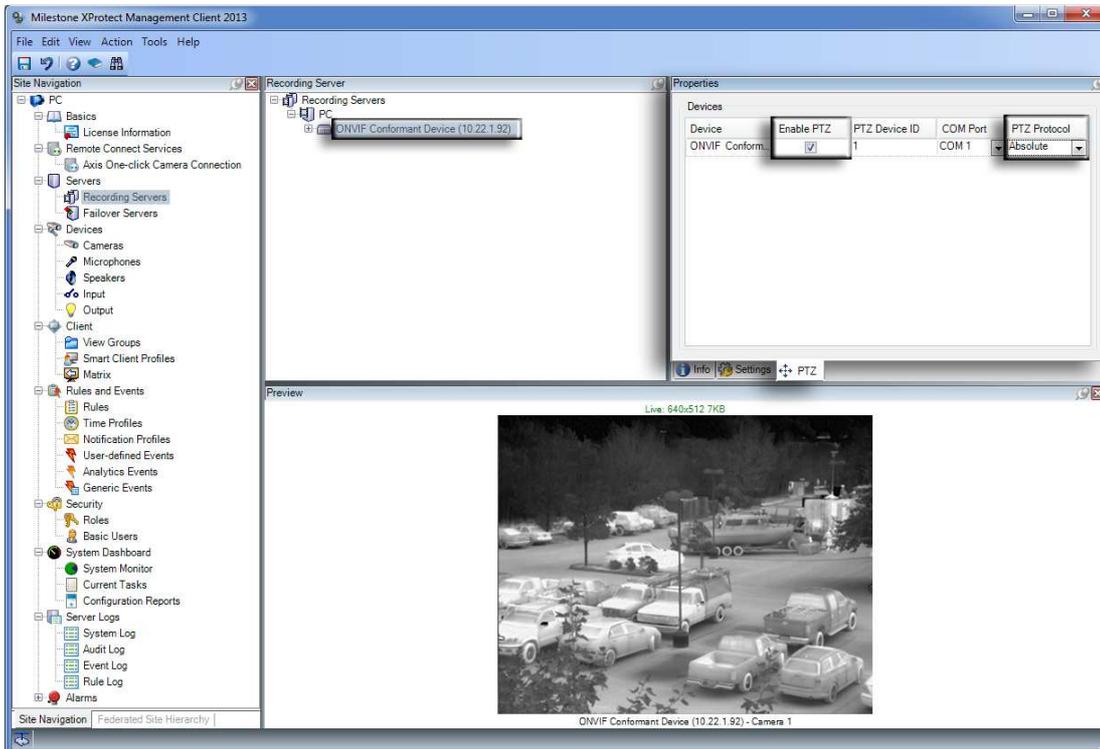
9. Once you assigned each element to a group click on Finish.



10. At this point the camera is added to the recording Servers of the Milestone software.

11. Selecting the Device from the Recording Server Panel, click on the PTZ tab and check the column Enable PTZ, choosing the PTZ protocol to be Absolute.

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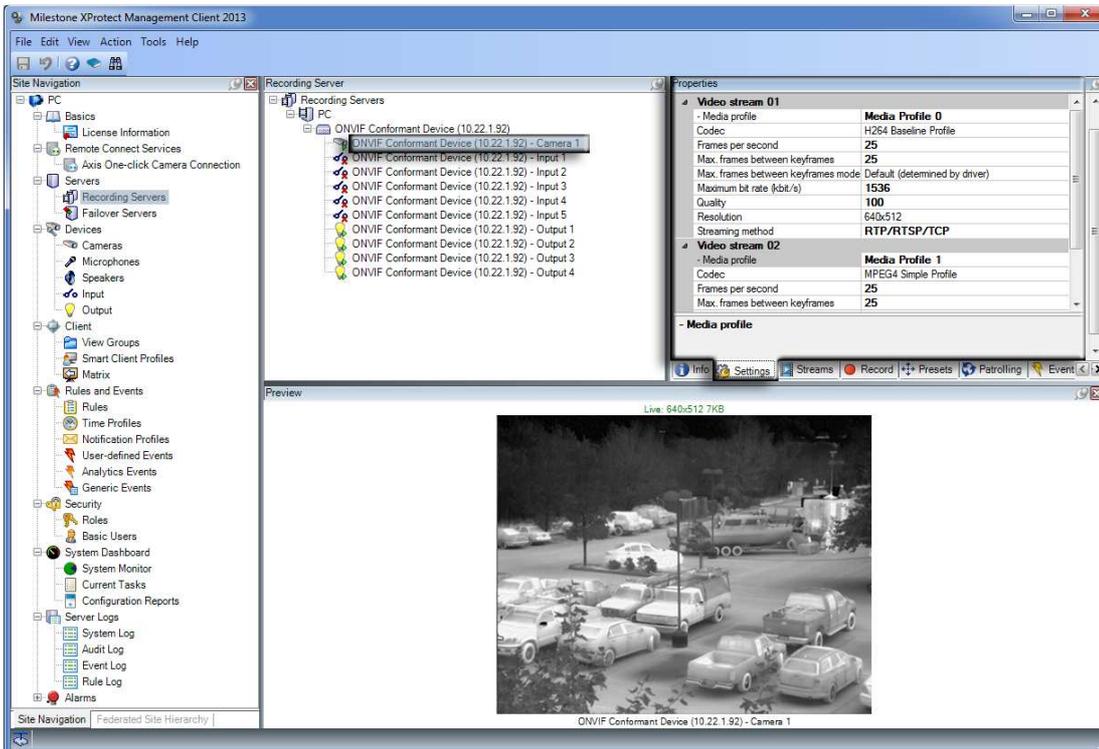


12. Select the camera and go to the Settings tab. This tab allows changing the Video settings.

**NOTE:** It is possible to select as streaming method RTP/RTSP over HTTP, however FLIR does not recommend using this streaming method due to overload issues on the CPU. If the user still wants to use it, it should be enabled on the camera's Web Interface.

**NOTE:** A change in the codec type or video resolution requires rebooting the video service to take effect, resulting in a loss of video during 30 seconds approximately.

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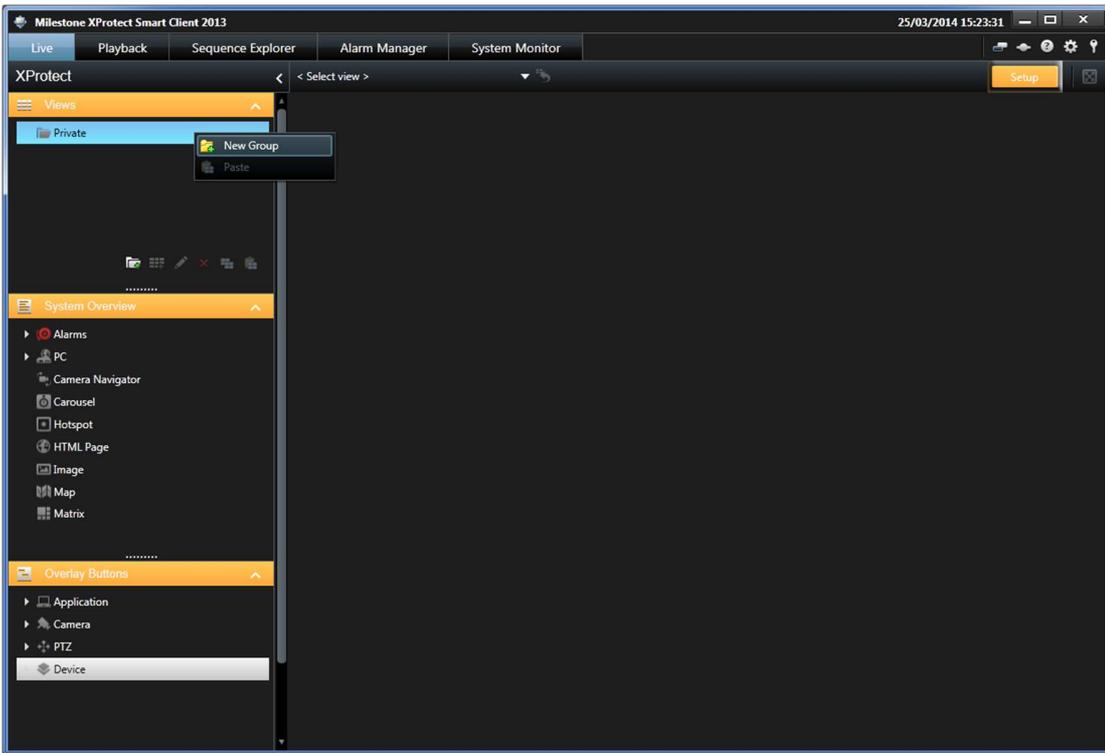


13. Click on Save to make the changes effective.

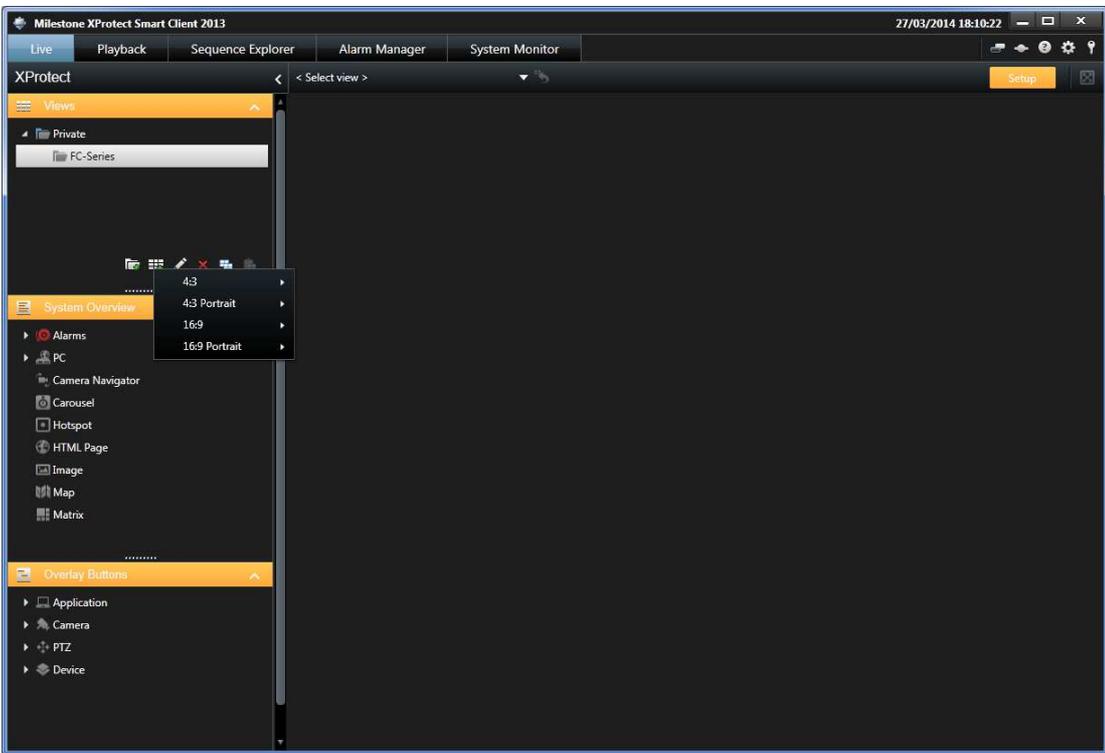
### Milestone XProtect Smart Client

1. Run the Milestone XProtect Smart Client.
2. Click on Setup and right click on the Private folder or use the icon to add a new group. In this example the group is named FC-Series.

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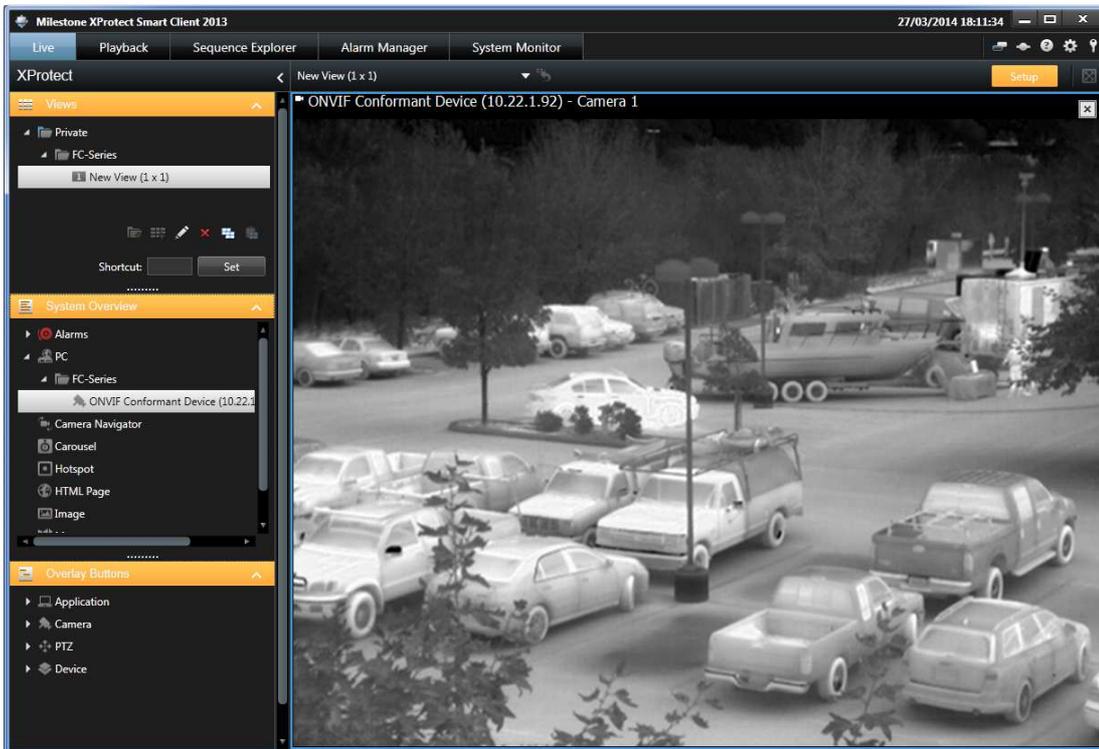


3. Select the Create a New View icon and configure the video wall display as desired.



4. Go to the System Overview panel and select the cameras. Drag and drop them onto the video wall tiles.

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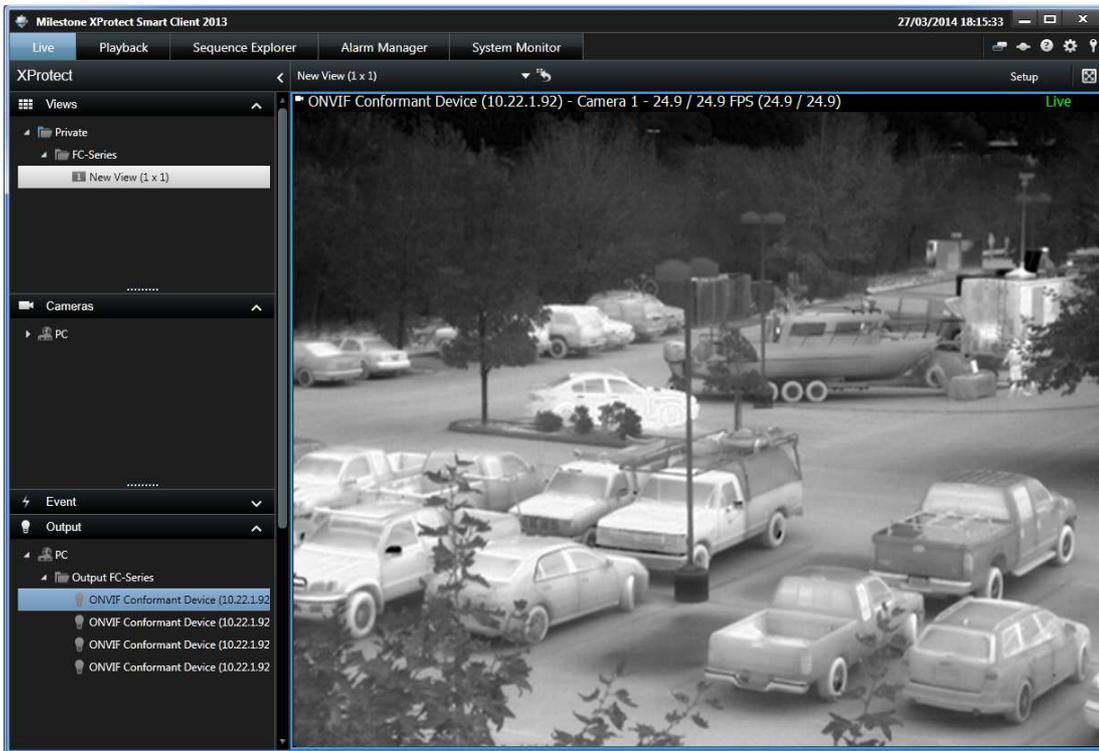
5. At this point your camera should be available to command and control it from Milestone XProtect Smart Client, click on the Setup button to save the changes.

### **Making the outputs available on Milestone XProtect Smart Client**

If Outputs were configured on the camera's Web Interface and they were enabled on the Milestone XProtect Management Client they can be used from the Milestone XProtect Smart Client.

The user can manage the Output functionality by selecting the correspondent Output from the Output section of the left pane. Once the desired Output is selected click on Activate and the function will be executed.

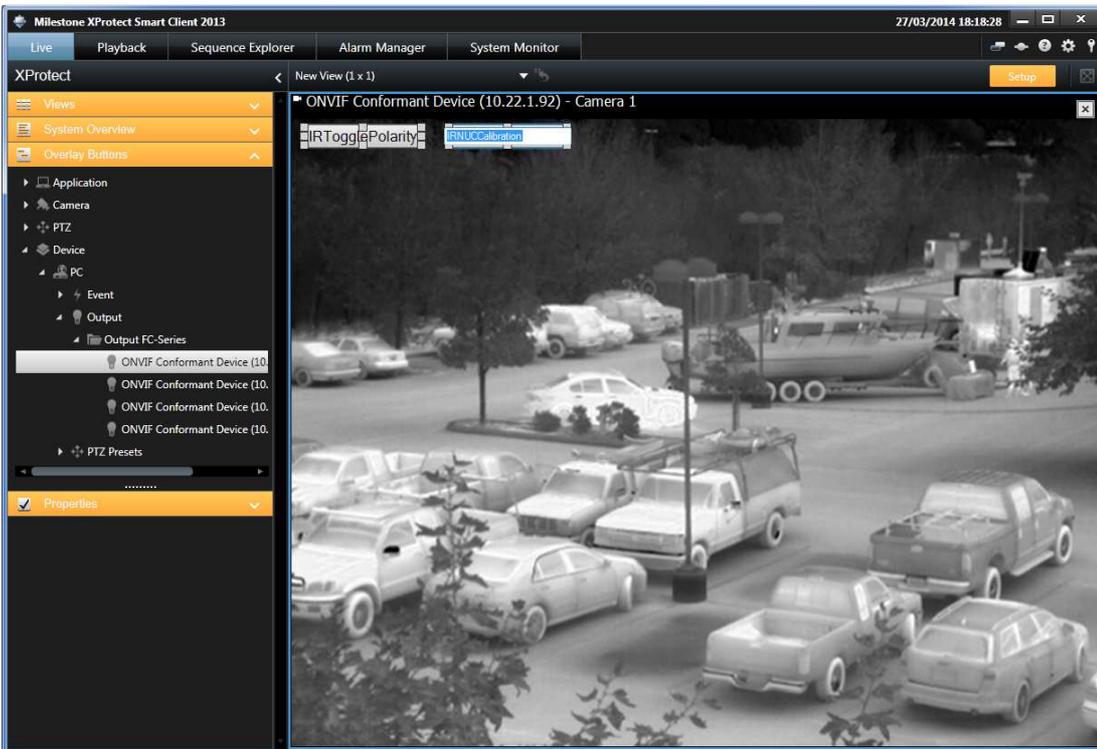
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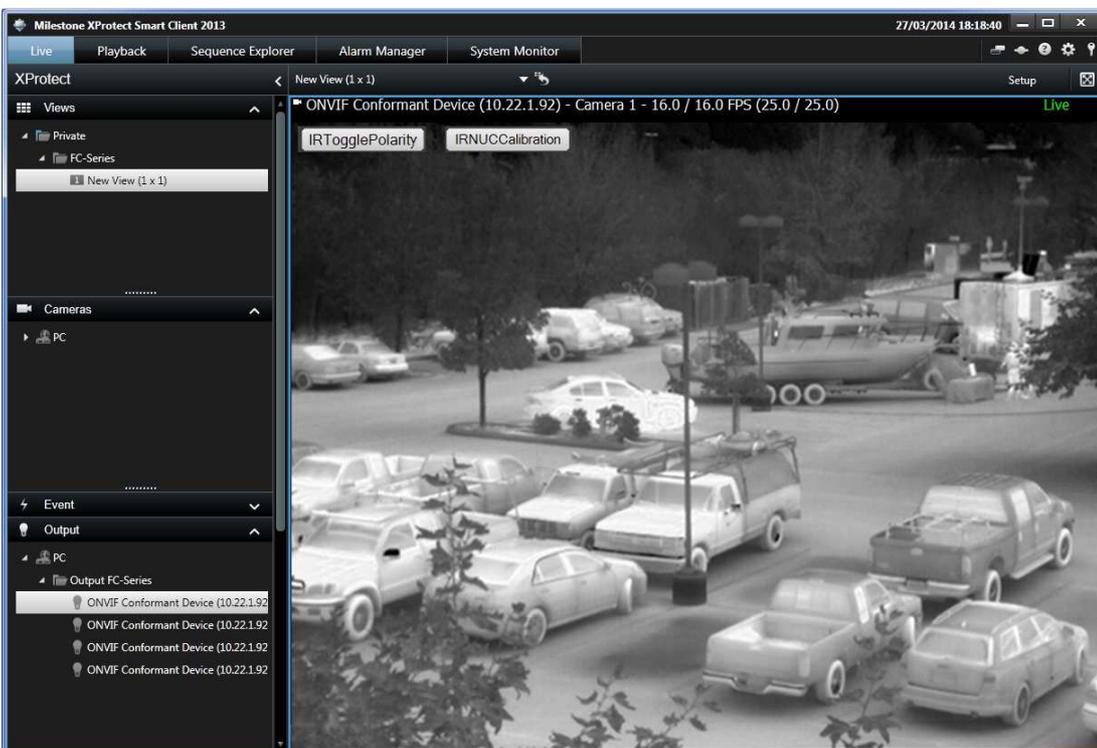
In order to make the Outputs available as OSD buttons, follow the steps below:

1. Click on Setup and go to the Overlay Buttons Section and display the tree, in this example the path is Device → PC → Output → Output FC-Series.
2. Drag and drop each of the Outputs onto the desired Video Wall tile.
3. Double clicking on the OSD button will allow the user to edit the text.

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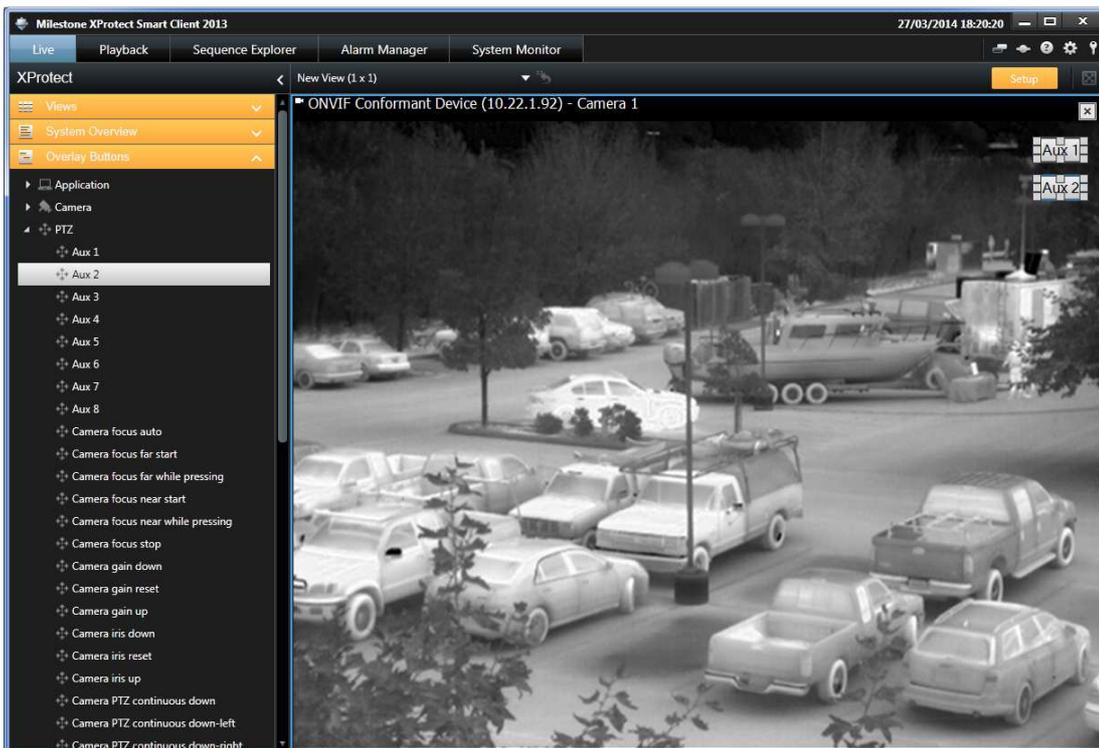
4. Click on Setup to exit this mode and start managing your camera. When the mouse hovers over the video is on top of the video tile where the Output OSD buttons were placed they will appear.



## Making the Auxiliary available on Milestone XProtect Smart Client

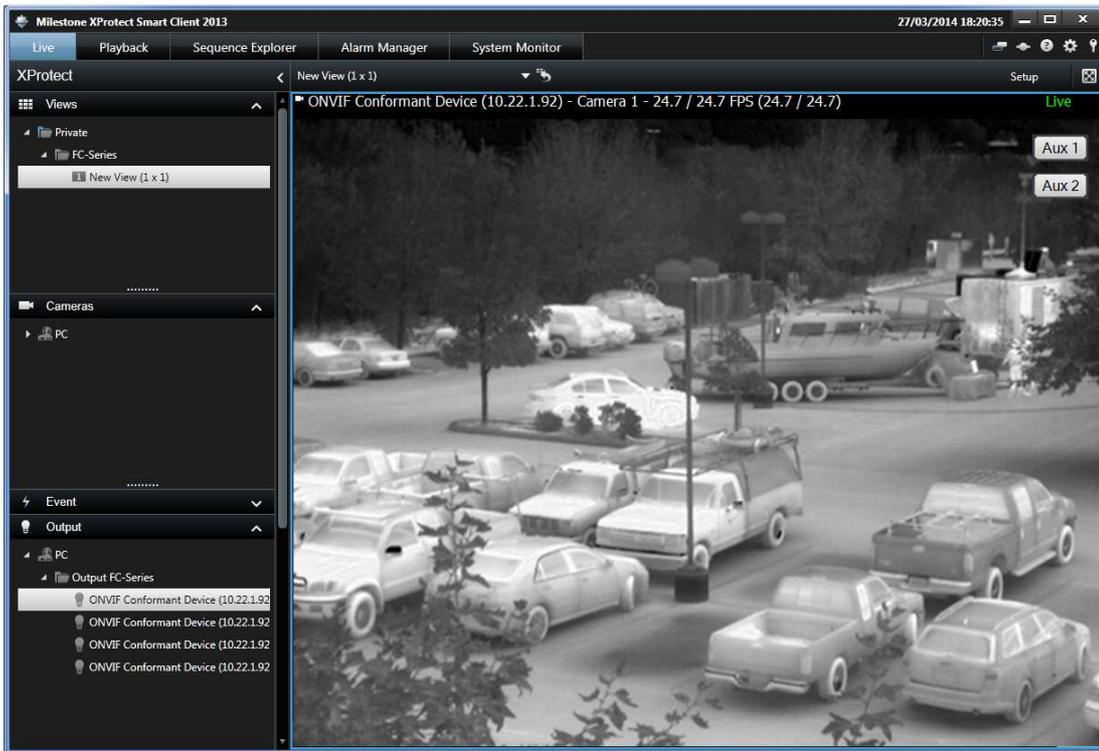
In order to use the Auxiliary commands configured on the camera's Web Interface available from the Milestone XProtect Smart Client.

1. Click on the Setup button and go to the Overlay Buttons Section. Display the tree by selecting PTZ, a list of all the Auxiliary commands configured will appear.
2. Drag and drop the desired Auxiliary command onto the video tile.



3. Click on Setup to exit this mode and start managing your camera. When the mouse hovers over the video tile where the Auxiliary OSD buttons were placed they will appear.

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At this point you camera should be ready to start