

Avigilon Control Center System Integration Guide

with Cardax FT Command Center

cardax

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Introduction

The Avigilon Cardax Integration allows the Cardax FT Command Center to utilize Avigilon surveillance technology. Integration features include:

- Viewing live video from Avigilon cameras and control of PTZ devices in the Cardax FT Command Center software
- Viewing recorded video from Avigilon cameras in the Cardax FT Command Center software
- Viewing motion events from the Avigilon Control Center in the Cardax FT Command Center software
- Controlling Avigilon Control Center alarms from the Cardax FT Command Center software

Requirements

Vendor	Requirements
Avigilon	Control Center Server Software 4.0.2.4 and later.
Avigilon	Avigilon 3rd party licence: ACC-CARDAX-NVR
Avigilon	Avigilon Cardax Server installation file Avigilon Cardax Server.exe
Avigilon	Avigilon Cardax Client installation file Avigilon Cardax Client.exe
Cardax	Cardax FT Command Center 5.21.130 and 6.01.187

The Avigilon Cardax Server and Avigilon Cardax Client installation files can be downloaded from the Avigilon website: <http://avigilon.com/support/software/int/>

NOTE: The Avigilon Cardax Server and Avigilon Cardax Client cannot be installed on the same computer.

For more information

For more detailed information and further configuration options for the procedures outlined in this guide, refer to the specific software documentation.

- *Avigilon Control Center Client User Guide*
- *Avigilon Control Center Server User Guide*
- *Cardax FT Command Center User Guide*

Installation

Server

1. Install the Cardax FT Command Center Server software.
2. Install the Cardax FT Controller API (FTCAPI) on the Cardax FT Command Center Server.
 - a. Set the Cardax FT Controller IP port. Refer to the “API Location” topic in the *Cardax FT Command Center Cardax FT Controller API Developers Guide*.
 - b. Verify that FTCAPI is installed correctly by running the FTCAPI test harness. It should start with no errors.
3. Install the Avigilon Cardax Server integration

Client Computer

Complete the following steps for all Cardax Workstations that require the Avigilon Cardax integration.

1. Install the Cardax FT Command Center Workstation software
2. Install the Avigilon Cardax Client on the same computer.

Checking the Licence

After you have installed all the required software, you can check if the `ACC-CARDAX-NVR` licence has been properly applied:

1. Open the Avigilon Control Center Admin Tool.
2. Select the **Settings** tab and click **Licensing**. The License Activation dialog box appears.

The dialog box must say *Integration Connections: unlimited* or the software was not properly licensed.

Basic Configuration

The basic configuration establishes the link between Avigilon servers and Cardax servers. This allows the two servers to communicate.

Adding a Cardax User in Avigilon

All image data recorded by Avigilon cameras are stored in the Avigilon Control Center Server. To protect the security of the Avigilon Control Center Server, add users specifically for accessing the Avigilon-Cardax integration.

Avigilon-Cardax integration users must have the following permissions or they will not have complete access to the integration features:

- View live images
 - Use PTZ controls
 - Lock PTZ controls
- View Recorded Images

See the *Avigilon Control Center Client User Guide* for details about how to add new users, and how to create new permission groups.

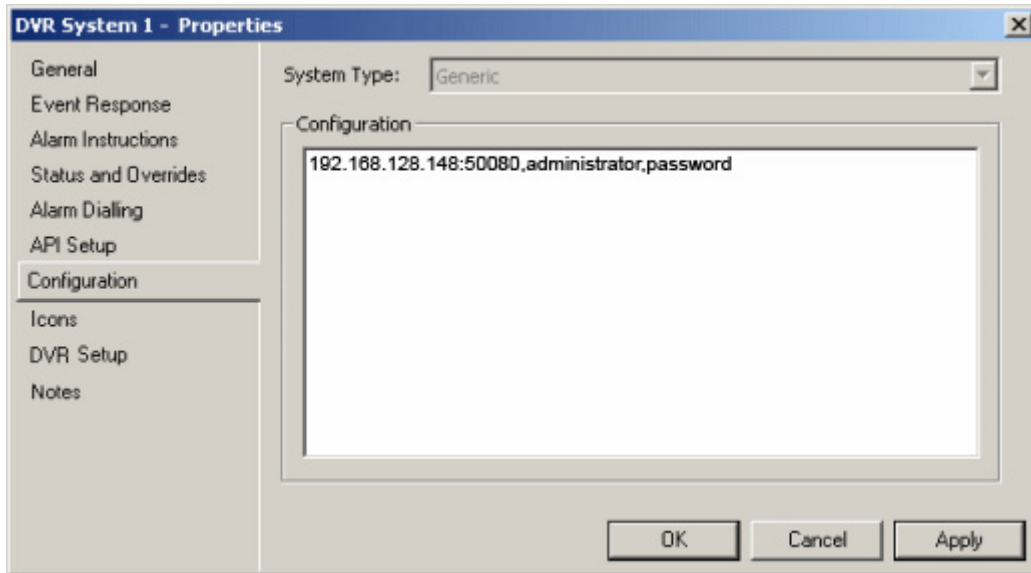
Cardax DVR Configuration

This configuration allows for communication between the Avigilon server and the Cardax server.

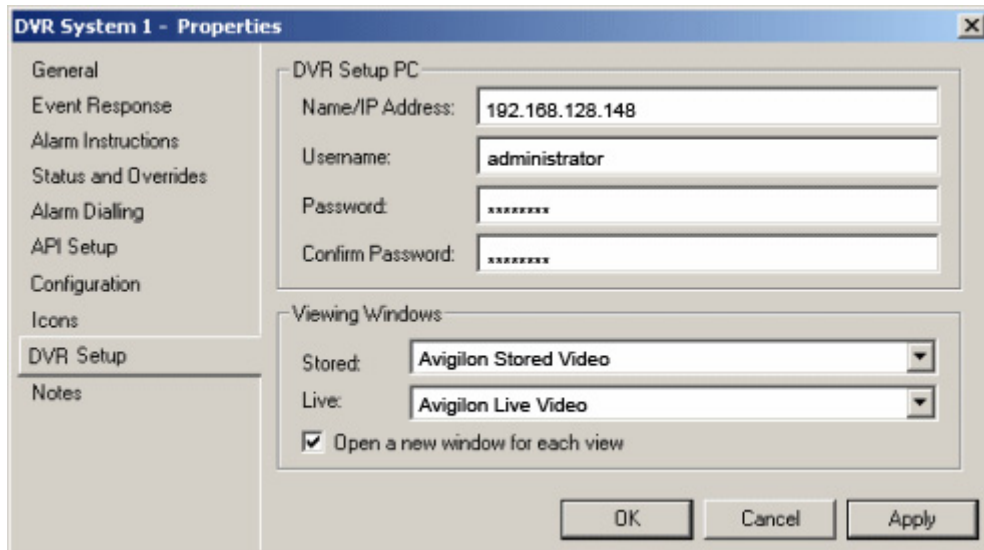
1. In the Cardax FT Command Center, open the External Systems Master List Window.
2. Right-click and select **New > DVR System**.
The New DVR System—Properties dialog box appears.
3. In the **General** tab, enter a name for the Avigilon server.
4. In the **Configuration** tab, enter the server IP address, port, username and password used to access the Avigilon server.

Use the format *<Server Address:Port>, <Username>, <Password>*

For example: 192.168.128.148:50080,administrator,password



5. Select the **DVR Setup** tab then complete the following fields:



- **Name/IP Address:** enter the Avigilon server's IP address.
- **Username and Password:** enter the username and password used to access the Avigilon Control Center.
- In the **Stored** drop down list, select **Avigilon Stored Video**.
- In the **Live** drop down list, select **Avigilon Live Video**.

6. Select the **API Setup** tab.

Complete the following fields:

The screenshot shows a dialog box titled "DVR System 1 - Properties". On the left is a vertical list of tabs: General, Event Response, Alarm Instructions, Status and Overrides, Alarm Dialing, API Setup (highlighted), Configuration, Icons, DVR Setup, and Notes. The main area is divided into two sections: "Connections" and "Identity". In the "Connections" section, there is a "Controller:" dropdown menu currently showing "-- None Selected --" and a "Middleware PC Name/IP Address:" text input field. In the "Identity" section, there are two radio buttons: "Unique:" (which is selected) and "Same as:". The "Unique:" radio button is followed by an empty text input field. The "Same as:" radio button is followed by a dropdown menu currently showing "-- None Selected --". At the bottom right of the dialog are three buttons: "OK", "Cancel", and "Apply".

- Select a controller to associate with the Avigilon server.
 - In the **Middleware PC Name/IP Address** field, enter the name or IP address of the server that is running the FTCAPI.
 - In the **Identity** area, give the Avigilon server a **Unique** identity.
7. Select the **Event Response** tab then select an **Alarm Zone for all Events** for the server.
 8. Click **OK**.

Trigger and Acknowledge Avigilon Alarms from Cardax

Create alarms in the Avigilon Control Center Client software that can be managed by the Cardax FT Command Center software.

Alarm Configuration in Avigilon

Set up alarms in the Avigilon Control Center Client before you configure Cardax to manage all the alarms.

1. In the Avigilon Control Center Client software, select **Tools > Setup** then select the Avigilon server to define the alarm on.
2. On the server Setup dialog box, click **Alarms**.
3. On the Add Alarm dialog box, click **Add**.
4. On the Select Alarm Trigger Source screen, select **External Software Event** from the **Alarm Trigger Source** drop down list and click **Next**.
5. On the Select Linked Cameras screen, select the cameras to link to this alarm, and set the **Pre-Alarm Record Time** and the **Recording Duration**. Click **Next**.
6. Select the groups or users who should receive alarm notifications, then click **Next**.
7. (Optional) If you would like to trigger an action when an alarm is acknowledged, select the **Activate selected digital output(s) on alarm acknowledgement** check box.
 - a. Select the digital outputs to be activated and specify the duration.
 - b. Select the **Require user confirmation before activating digital output** check box if users need to confirm the alarm before the digital output action is initiated.

NOTE: If this check box is selected, acknowledgement strings must be set to *grant* or *deny* when you configure the alarm in Cardax.
 - c. Click **Next**.
8. Enter a **Name** for the alarm and set the alarm **Priority**. The alarm name is case sensitive and must be unique to the server.

NOTE: The alarm name is required for configuring alarms in the Cardax FT Command Center.
9. Ensure the **Enable Alarm** check box is selected and click **Finish**.

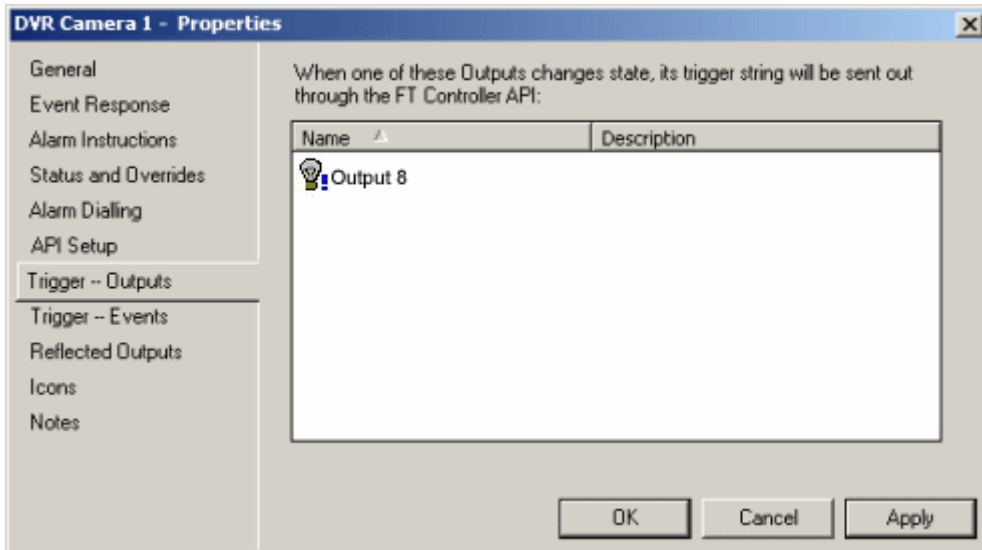
Configuring Cardax to Trigger and Acknowledge Avigilon Alarms

Configure the Cardax FT Command Center to manage Avigilon alarms. The Cardax FT Command Center uses FTACAPI strings to send alarm triggers and acknowledgements to the Avigilon Control Center.

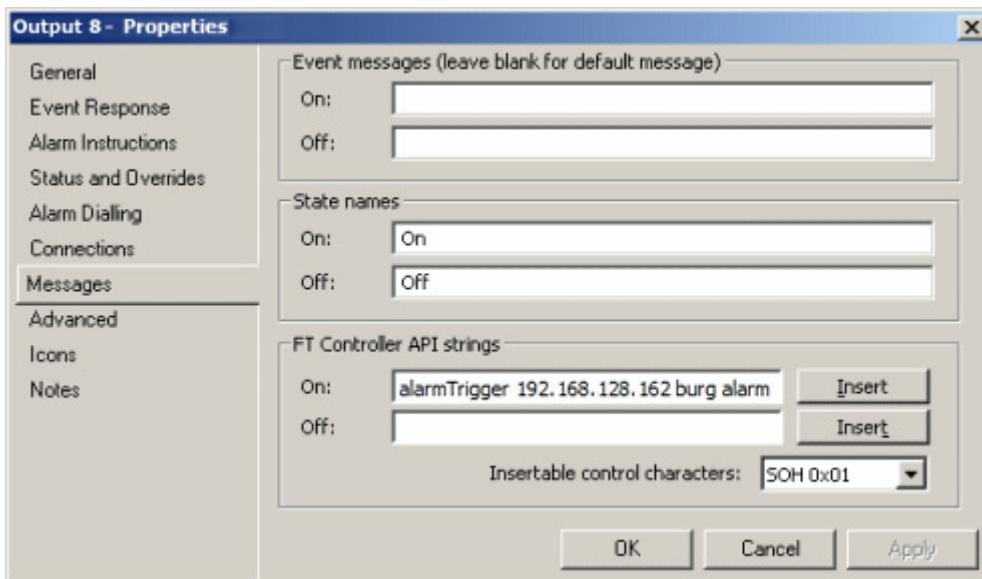
1. In Cardax Command Center, open the External Systems Master List Window.
2. Right-click the camera associated with an alarm and select **Properties**.

3. Select the **Trigger-Output** tab.
4. Open the Hardware Master List Window
5. From the Hardware Master List Window, drag the output that will trigger the alarm onto the camera Properties dialog box, **Trigger—Outputs** tab screen.

Outputs can include magnetic locks, alarm bells, or warning lights. A change in any of the outputs will send a FTCAPI string which can be used to trigger or acknowledge an Avigilon alarm.



6. Click **OK**.
7. In the Hardware Master List Window, right-click the selected output and select **Properties**.
8. Select the **Messages** tab.



9. In the **FT Controller API strings** area, enter the alarm trigger information in the **On** field in the following format:

alarmTrigger <NVR Address> <Alarm Name>

For example: alarmTrigger 192.168.128.162 burg alarm

NOTE: The case sensitive alarm name is configured in the Avigilon Control Center Client. See *Alarm Configuration in Avigilon* on page 6 for more information.

10. You have the option of adding an acknowledgement string in the **Off** field to automatically acknowledge the alarm in the Avigilon system. Use the following format:

alarmAck <NVR Address> <Ack Permission> <Alarm Name>

For example: alarmAck 192.168.128.162 normal burg alarm

NOTE: *<Ack Permission>* can be set to *normal*, *grant* or *deny*. The grant and deny setting only applies if the alarm configured in the Avigilon Control Center Client software requires user confirmation before a digital output is activated in response to the alarm. See *Alarm Configuration in Avigilon* on page 6 for more information.

Alarm monitoring in Avigilon Control Center Client

All alarms configured in the Avigilon Control Center Client software can be monitored in the Avigilon Control Client. See the “Alarm Monitoring” section in the *Avigilon Control Center Client User Guide* for more information.

View Avigilon Image Data and Events in Cardax

Cardax can be configured to view live and recorded image data from Avigilon cameras. Cardax associates recorded image data with specific alarms, so you must configure an action plan in Cardax before you can view recorded images in Cardax.

Configuring Cameras

Before Avigilon cameras can be viewed in the Cardax FT Command Center, the cameras must be added to the Cardax FT Command Center software. Complete the following procedures:

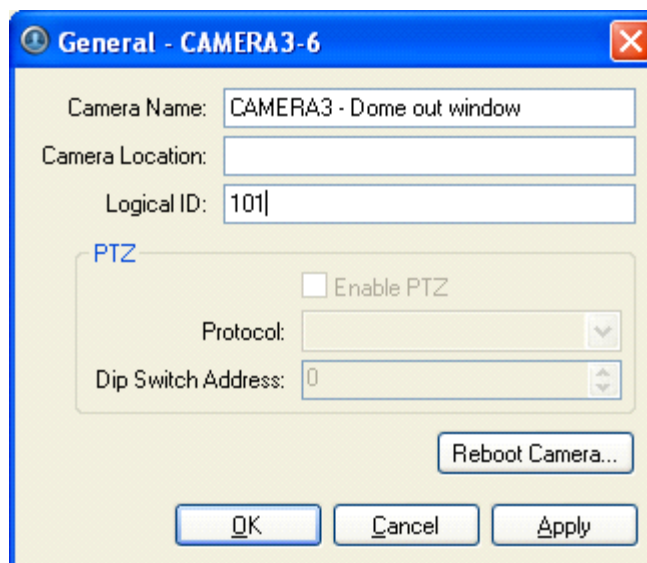
Assigning Avigilon Cameras a Logical ID

In the Avigilon Control Center Client software, assign each camera a logical ID because the Cardax software will only detect cameras with a logical ID. By default, Avigilon cameras do not have a logical ID.

1. In the Avigilon Control Center Client software, right-click a camera in the Systems Explorer and select **Setup**.
2. In the camera Setup dialog box, click **General**.
3. In the General settings dialog box, enter a **Logical ID** for the camera.

The logical ID must be a unique number.

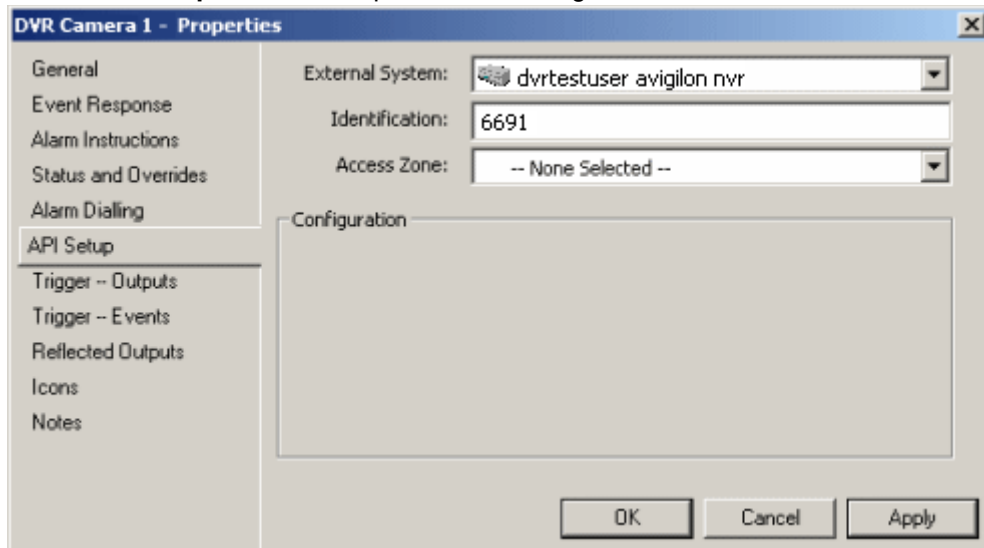
For example, the Logical ID for this camera is 101.



Cardax Camera Setup

1. In the Cardax FT Command Center, open the External Systems Master List Window.
2. Right-click the window and select **New > DVR System Camera**.

3. In the **General** tab, name the Avigilon camera.
4. Select the **Setup** tab, and complete the following fields:



- **DVR System:** select the Avigilon server the camera is connected to.
 - **Identification:** enter the Logical ID assigned to the camera in the Avigilon system. See *Assigning Avigilon Cameras a Logical ID* on page 9 for more information.
5. Select the **Event Response** tab then select an **Alarm Zone for all Events** for the camera.
 6. Click **OK**.

Testing the Connection

Once the cameras and software have been configured to support the integration, test the connection to confirm that the integration was successful.

In the Cardax FT Command Center, perform the following:

1. In the External Systems Master List Window, right-click an Avigilon camera and select **Watch**.

If you are able to view live video, the DVR configuration and camera setup in the Cardax FT Command Center software was successful.

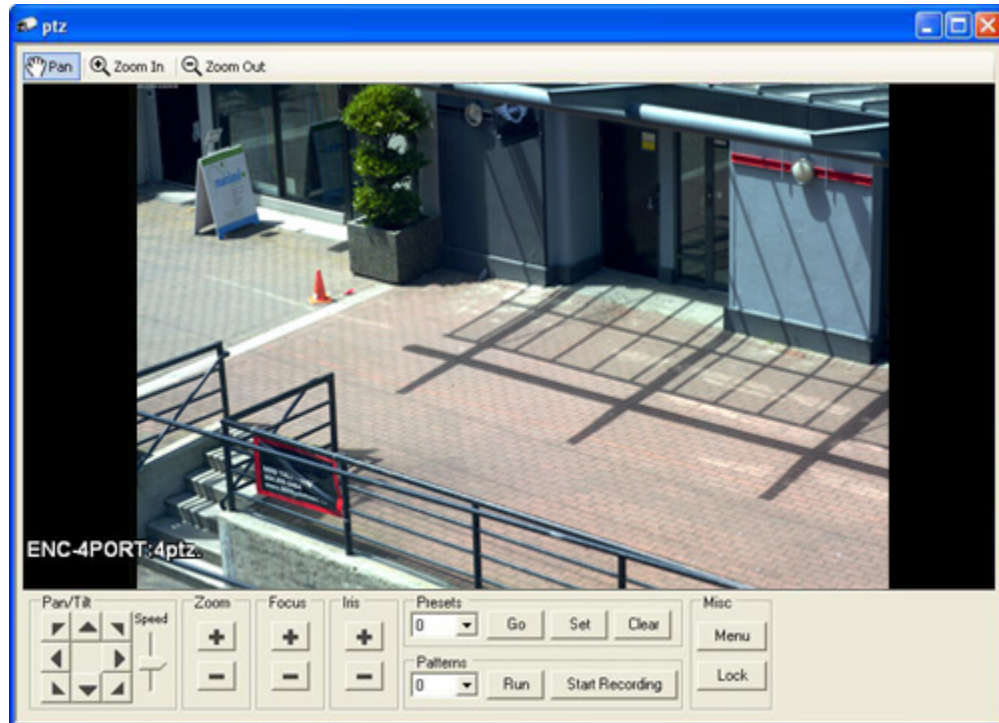
If you are unable to view live video and a red No symbol appears beside the camera, the Avigilon Cardax integration was unsuccessful. Confirm the following then test the connection again:

- The camera is connected to the Avigilon Server it is assigned to in the *Cardax Camera Setup* on page 9.
- The camera's logical ID matches the Identification assigned to the camera during the *Cardax Camera Setup* on page 9.
- The FTCAPI was installed properly
- The installation and configuration procedures were completed in full.

If the connection continues to be unsuccessful, contact Avigilon support at support@avigilon.com.

Viewing Live Video and Controlling PTZ

- In the Cardax FT Command Center, open the External Systems Master List Window, right-click the camera and select **Watch**.



If the Avigilon camera is configured for pan, tilt, and zoom (PTZ), the PTZ controls will automatically appear when you view live video.

Configuring and Viewing Recorded Video

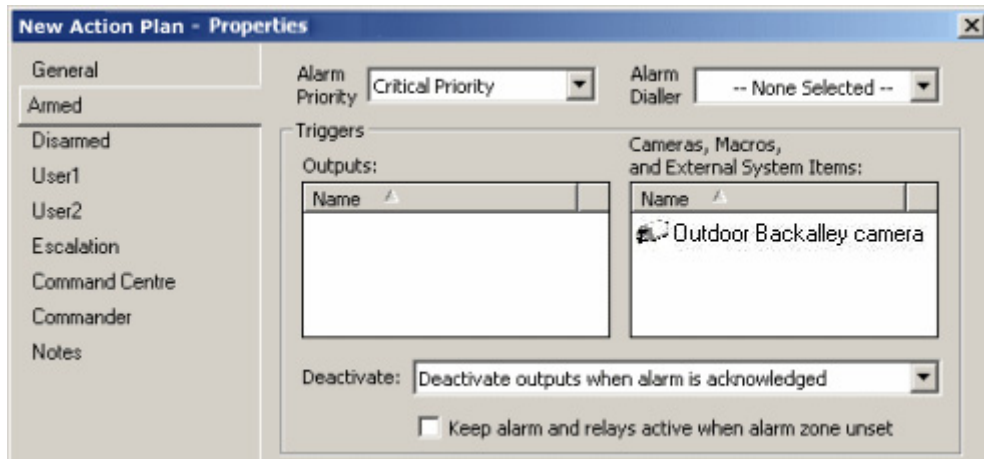
You can only view recorded image data from Avigilon cameras when the cameras are part of a Cardax alarm. Cardax alarms are generated from events with an action plan. Avigilon cameras must be added to action plans to become a part of Cardax alarms.

Adding Avigilon Cameras to a Cardax Action Plan

Create an action plan in the Cardax system to enable Avigilon cameras to be used when a Cardax alarm is triggered.

1. In the Cardax FT Command Center, open the Action Plan Master List Window and the External Systems Master List Window.
2. Right-click the Action Plan Master List Window and select **New > Action Plan**.
3. In the **General** tab, name the new action plan.
4. Select one of the following tabs:
 - Select the **Armed** tab if the action plan is to be associated with an Armed Alarm Zone.

- Select the **Disarm** tab if the action plan is to be associated with a Disarmed Alarm Zone.



5. In the **Alarm Priority** drop down list, select an available alarm priority.
6. For the **Cameras, Macros and External System Items** box, drag a camera from the External Systems Master List Window into the box.
7. Click **OK**.

Assigning Action Plans to Events in Cardax

Once an action plan has been created to include an Avigilon camera, the action plan must be attached to an event in order to trigger an alarm.

To assign an action plan to an event in Cardax, see “Assigning Action Plans to Events” in the *Cardax FT Command Center User Guide*.

Viewing Recorded Video

Once an alarm is triggered by an event, with an action plan that includes an Avigilon camera, recorded video can be viewed. To view the recorded video, perform the following:

NOTE: If an alarm is deleted, the event cannot be viewed.

1. In the Cardax Command Center, open the Alarm Viewer.
2. Right-click the alarm, select **View**, then select the camera.



If the event is still occurring, you will not be able to view the video because the Avigilon server has not completed recording the event. Wait a few seconds and try again, or watch the video live.

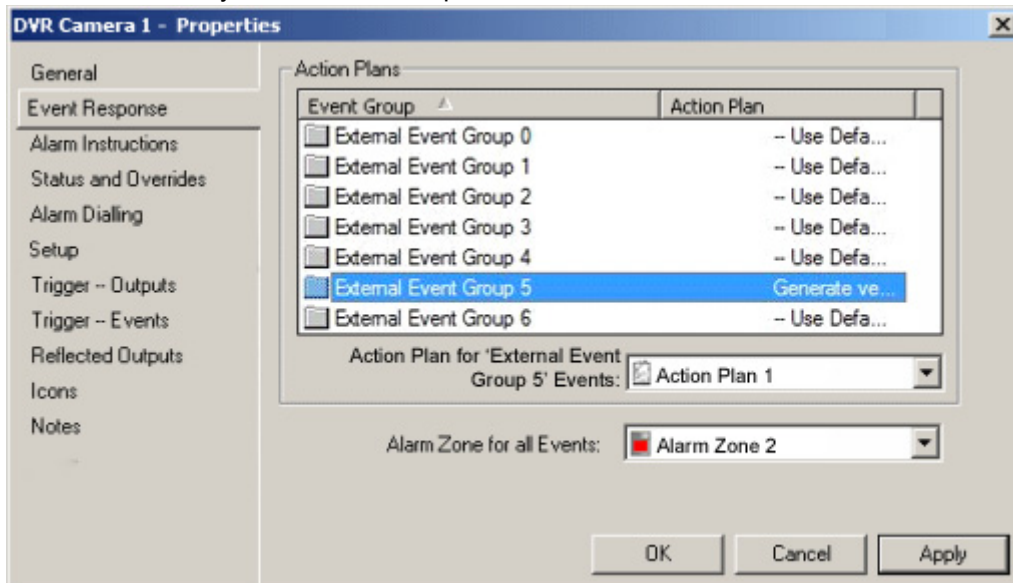
If you cannot locate the alarm, use the **Find Tool** to locate the recorded video.

Configuring Avigilon Motion Events in Cardax

Create an External Event Response to configure the Cardax Command Center to monitor motion events generated by Avigilon cameras.

1. In the External System Master List Window, right-click an Avigilon camera and select **Properties**.
2. In the DVR Camera—Properties dialog box and select the **Event Response** tab.
3. In the **Event Group** list, select **External Event 5**

Motion events detected by Avigilon cameras are automatically sent to External Event Group 5. Do not select any other Event Group.



4. In the **Action Plan for External Event Group** drop down list, select an action plan.

If you want to view the Avigilon camera recording of the motion event, select an action plan that includes the Avigilon camera. See *Adding Avigilon Cameras to a Cardax Action Plan* on page 11 for more information.

5. In the **Alarm Zone for all Events** drop down list, select an alarm zone for this alarm.
6. Click **OK**.