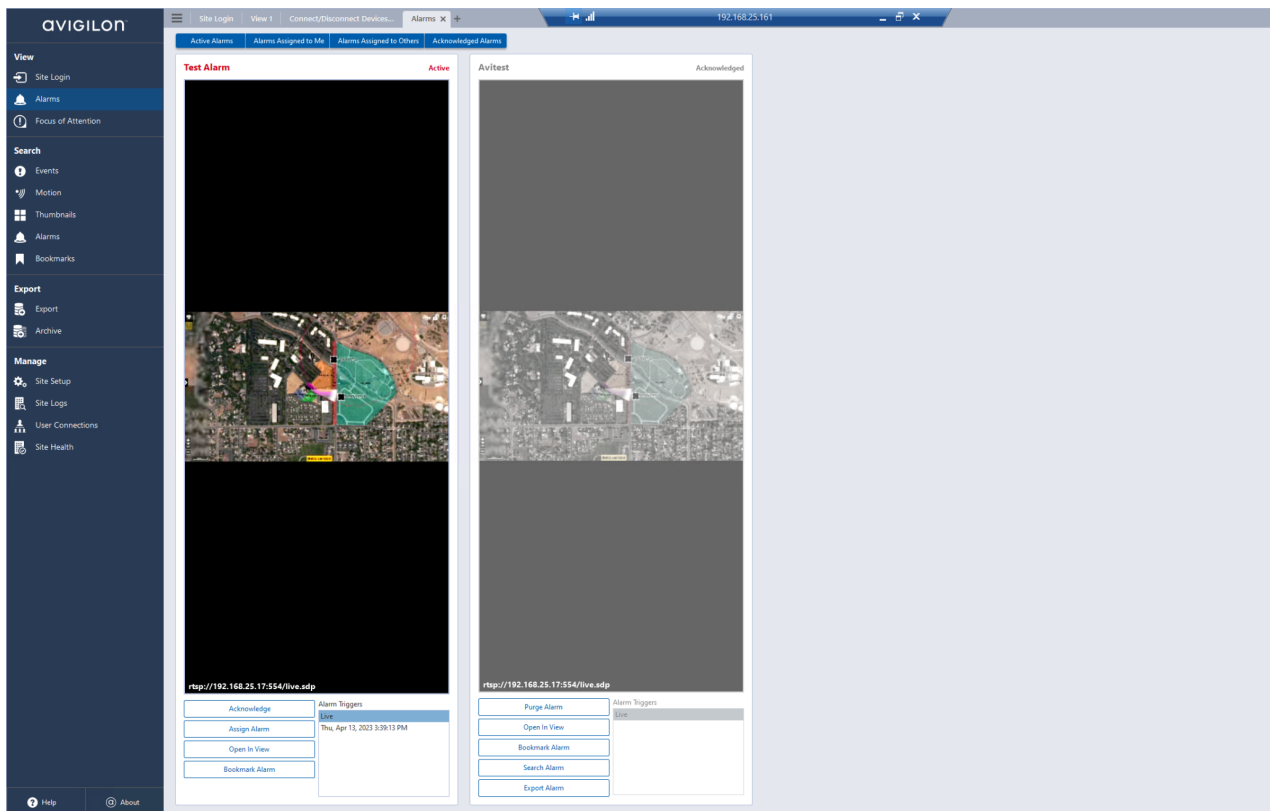


## Tech Note - Avigilon Integration for NIO Video and Alarms

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## I. Prerequisites

- A server running Avigilon Control Center (ACC) version 7 or later with the following installed and running:
  - ACC 7+ Server
  - ACC 7+ Client
  - ACC 7+ Gateway
  - ACC 7+ Web Endpoint Service
  - Server has static IP address
- A configured Spotter Global NIO device running firmware version 4.9 or later.
  - Zones already setup as desired
- Optional: In order to view RTSP feed as a camera view in ACC, RTSP Server and/or Onvif Server must be enabled in NIO Admin Settings. Note this will use 40 Device Points. Contact your Spotter Global representative if additional points are needed.

## II. NIO Alert Setup

- Log into your NIO device and navigate to the Settings Gear in the top right corner. Open the Actions viewer by clicking on the icon that looks like a strobe light.
- Create a New Action that will be used for sending alarms to ACC.
  - Click on the + button at the top of the banner in the Actions view.
  - Type: Script
  - Name: Name your action something meaningful
  - Settings:
    - Script: Trigger Avigilon Alarm
    - Host: Your Avigilon Machine's IP Address
    - Port: Default is 8443
    - Username: This is the username used to log into ACC
    - Password: This is the password used to log into ACC
    - Alarm Name: This name must be the **exact same** as the name created for the alarm in Avigilon in later steps
  - Click Add to save this Action.



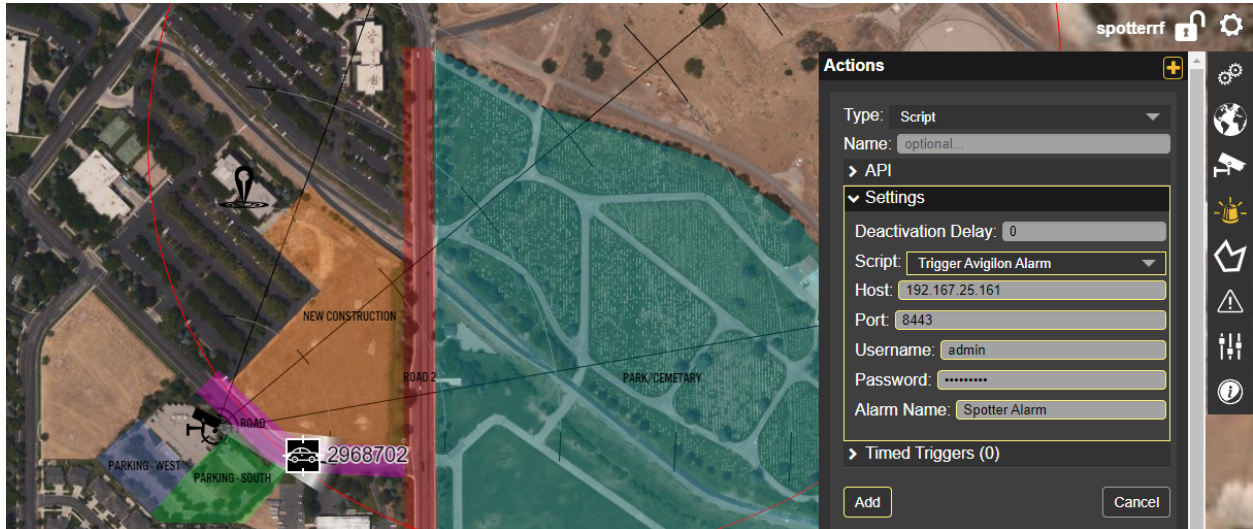


Figure 1: Creating the Action in NIO

- Navigate to the Zones viewer in NIO by clicking on the geometric shape icon just below the Actions icon.
- Add the newly created action to a Zone.
  - Select the Zone you would like to add the action to, then click the Actions dropdown.
  - Click the + button to add an action to the zone.
    - Type: script: Trigger Avigilon Alarm
    - Action: Find the name of the action you just created
    - Filter Group: Select the filters you would like. Default is Basic Filters. Note that after the action is saved to the zone, all filters can be removed if you wish



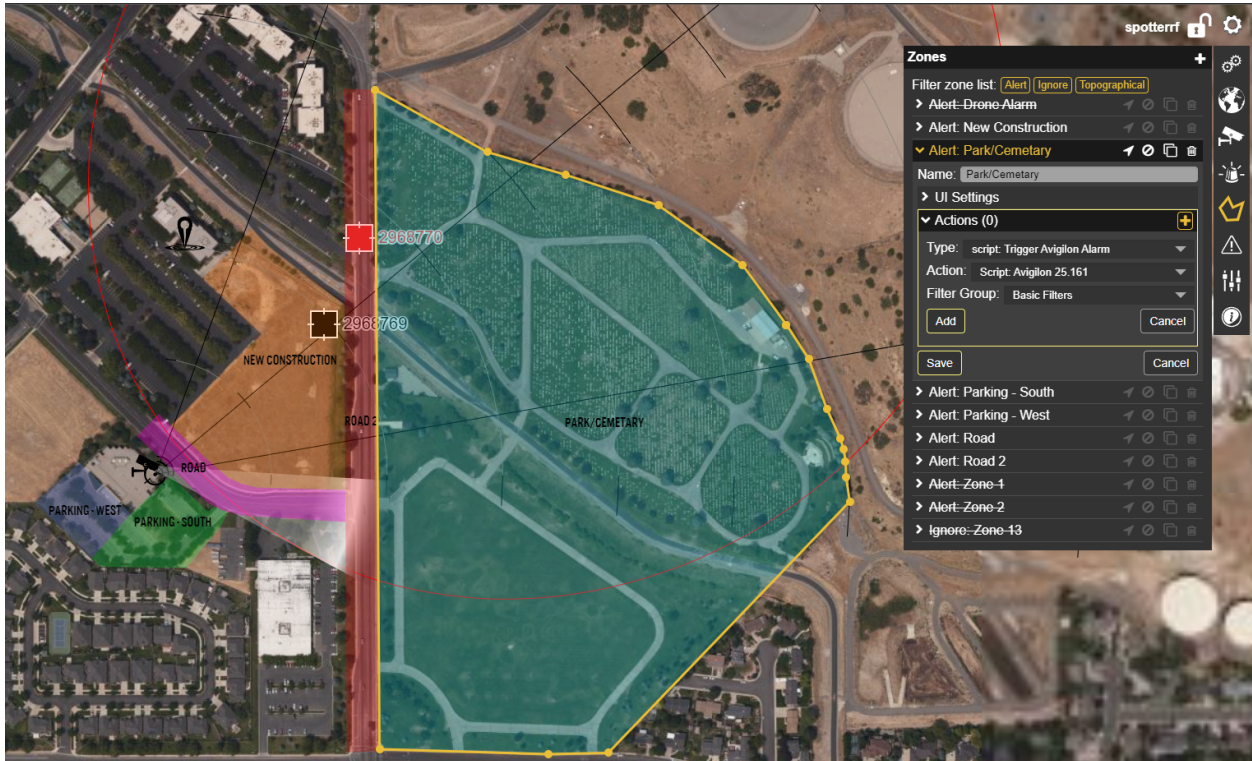


Figure 2: Adding the Action to the desired Zone

- With the Action added to the Zone, tracks meeting the filter requirements in the zone will trigger the created action. Triggered actions will turn green if the Actions actions menu is open.

### III. NIO RTSP Video Setup - Optional

The Spotter NIO device can also output an RTSP stream to be used as a camera if desired. Enabling this functionality will use 40 Device Points in your NIO.

- Open your Admin settings in NIO by clicking the Gear icon in the top right, followed by clicking on the double gear icon.
- Scroll down to the section called RTSP Server and/or Onvif Server. Note that in some versions of NIO that have Onvif functionality, RTSP Server and Onvif Server are separate sections that can be operated independently, and on others they will be controlled together.
- Enable the functionality by checking the box. This will use 40 device points.
- Create a Username and Password that will be used to access the RTSP stream



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- The default port number for RTSP streaming is 554, but can be changed to meet your needs.
- On newer versions of NIO firmware, the stream resolution, depth, and frame rate can also be adjusted.

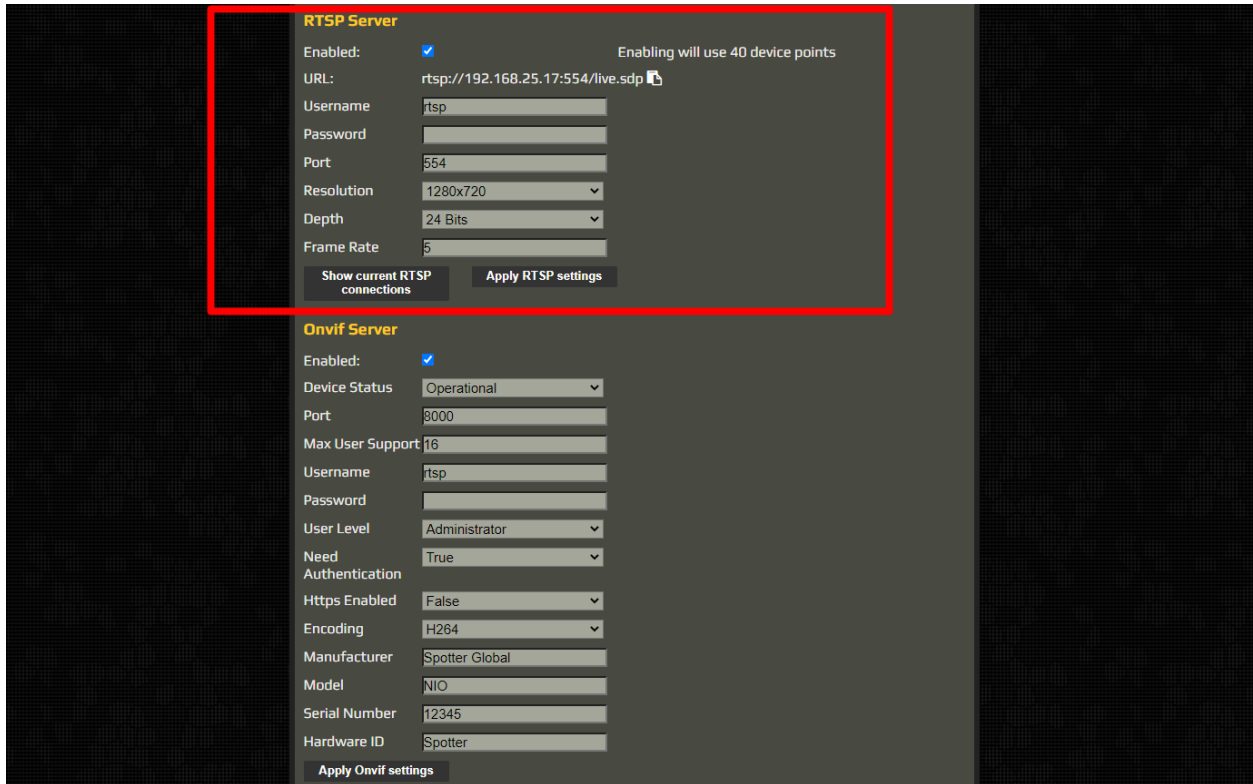


Figure 3: Setting up RTSP Server

- Finally, set the view that will be streamed by returning to the NIO map view.
- Zoom and pan on your NIO map to achieve the view you would like to see in the RTSP stream.
- Click the Gear icon in the top left followed by the globe button to enter the maps menu.
- Click the Map Presets dropdown, and then click the Chain Link icon to set the current NIO view as the preset. This view will be used as the RTSP stream view as well as the view that will load when opening the NIO interface.



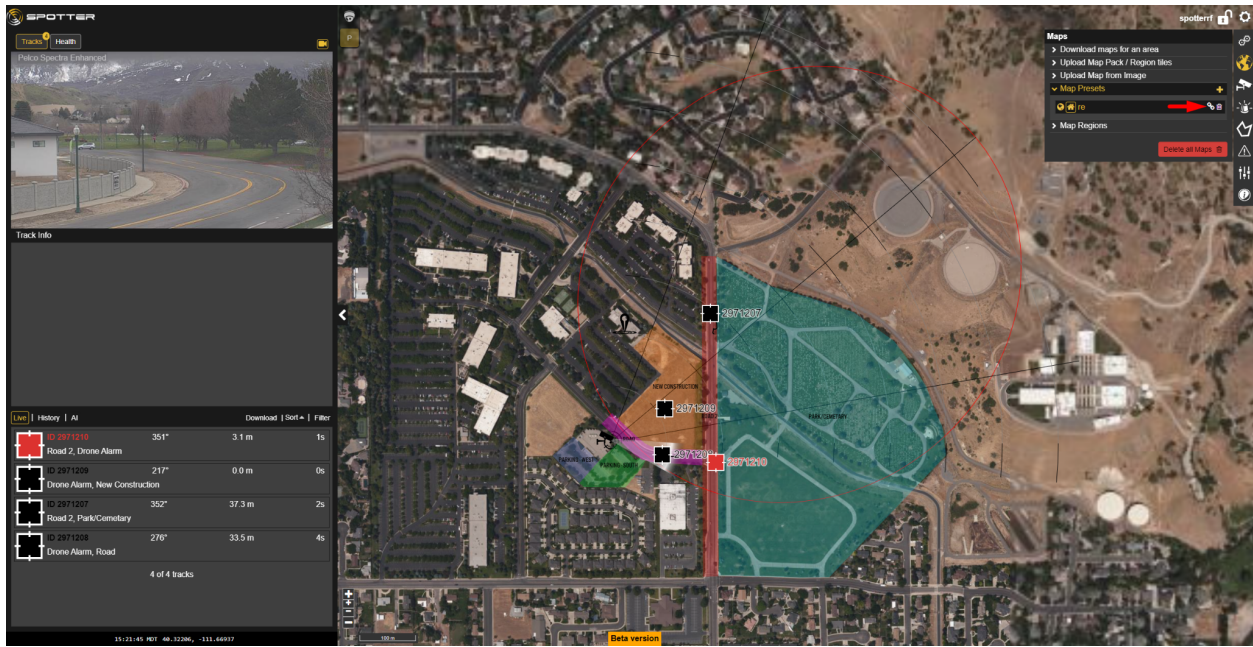


Figure 4: Setting the RTSP stream view

- The RTSP stream can be tested using a 3rd party video player such as VLC.

## IV. Avigilon Video Setup

- Log into Avigilon Control Center Client
  - There are two ways to view the NIO within ACC; A Web Page window and RTSP feed as a camera.
- a) Viewing NIO as Windowed Web Page
- On a View tab in the top banner, right click on your site and select "New Web Page..."



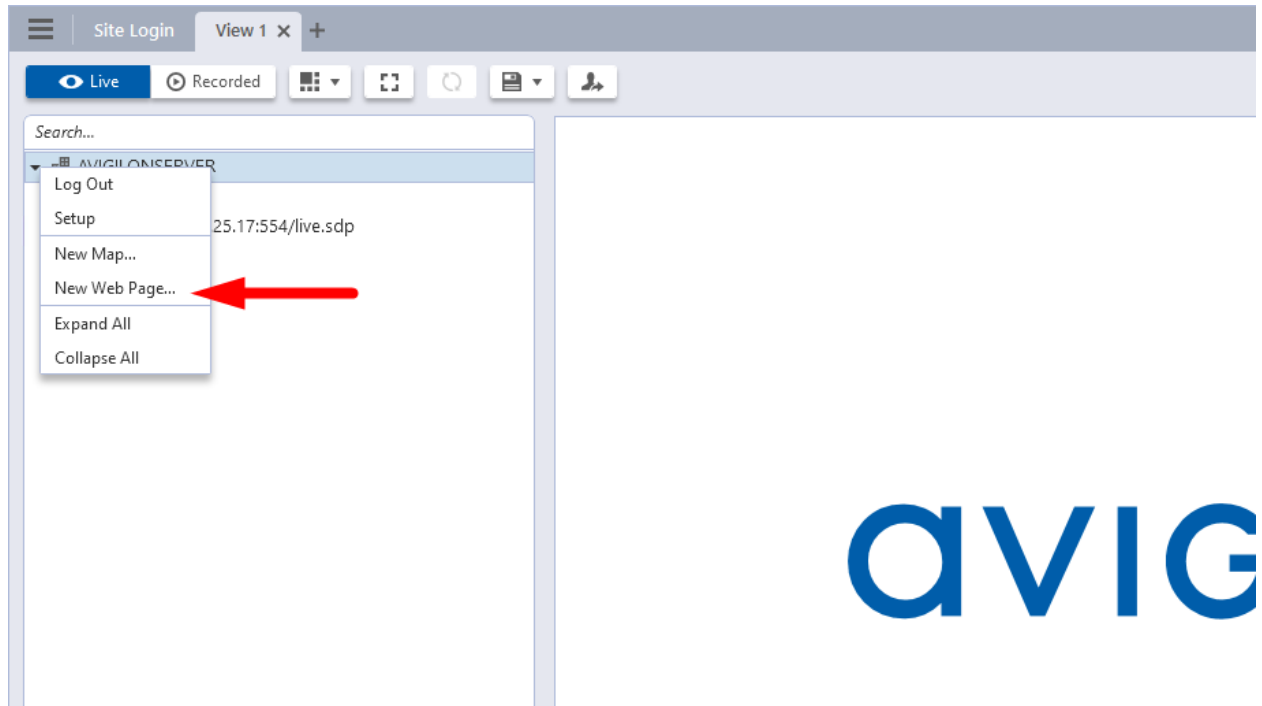


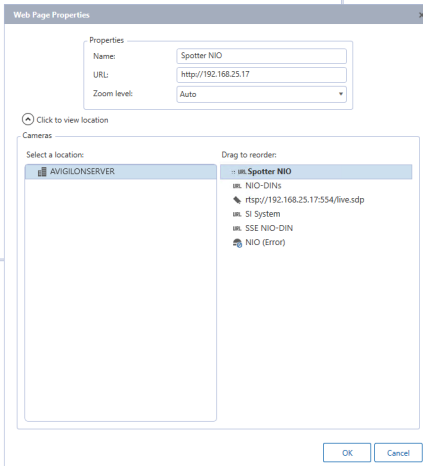
Figure 5: Select New Web Page to begin adding NIO window

- Fill out the Web Page Properties:
  - Name: Give your window a meaningful name
  - URL: input the IP address of your Spotter NIO
  - Zoom Level: Auto or Fit to Width are recommended
  - Select a Location: Select the site you would like to add the window to
  - Drag to reorder: Order your cameras as desired
  - Click OK to save



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Figure 6: Setting Web Page Properties for NIO

- Drag the new URL from the left side list under your site into a viewing window
- Log into the NIO with the user credentials
- NIO user interface should be accessible from this window now

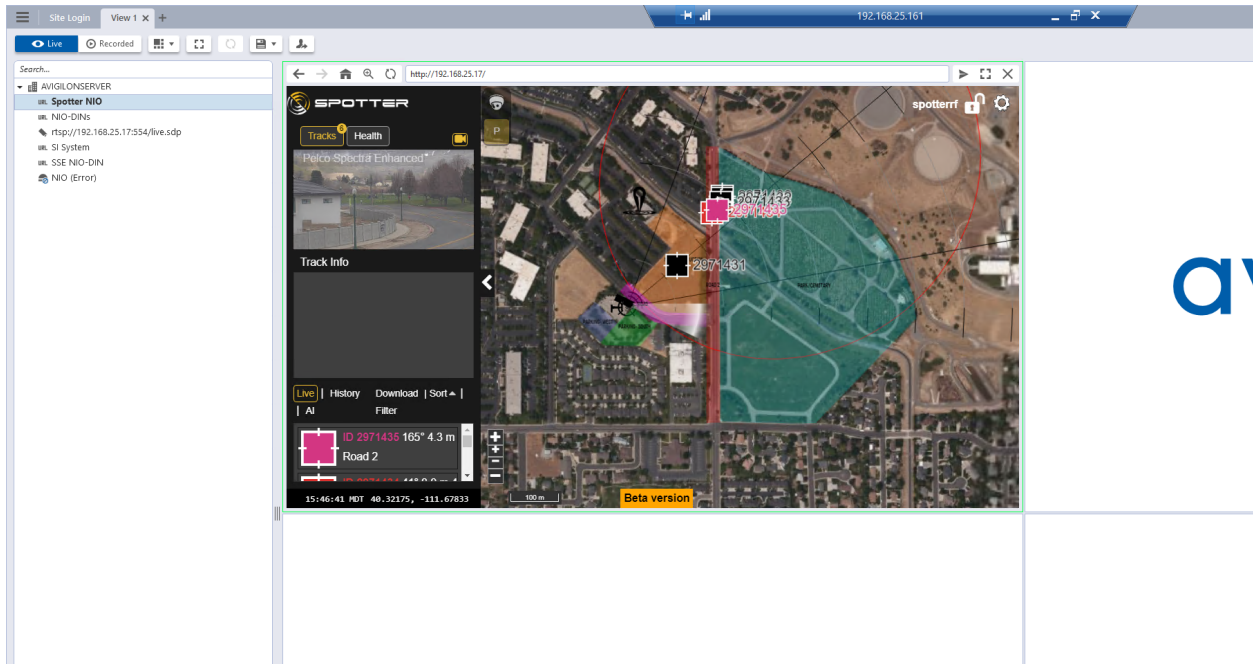


Figure 7: NIO Web Page Loaded into viewing window



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b) Viewing NIO as RTSP Camera

- Click the three bars in the top left to bring up the ACC menu, and click on "Site Setup".
- Select your server in the tree, and then open the "Connect/Disconnect Devices" window.

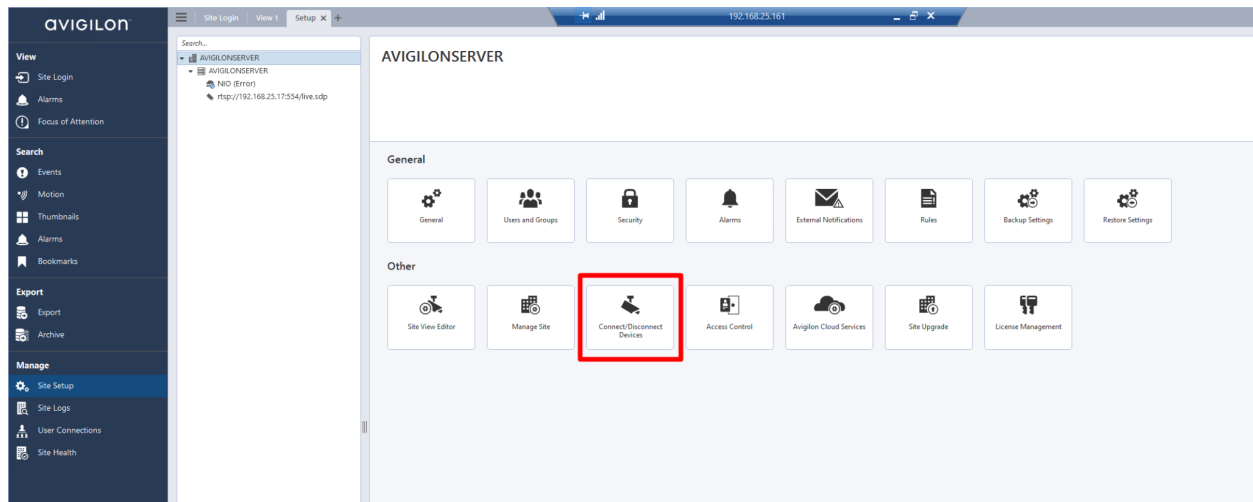


Figure 8: Navigate to Connect/Disconnect Devices

- Click "Find Device..." in the top left corner and enter the search criteria:
  - Search From Server: Select your server
  - Search Type: Select IP Address if options are available
  - Device Type: Generic RTSP
  - Stream URL: This URL can be found in NIO Admin page in NIO settings under the RTSP Server section
  - Click OK



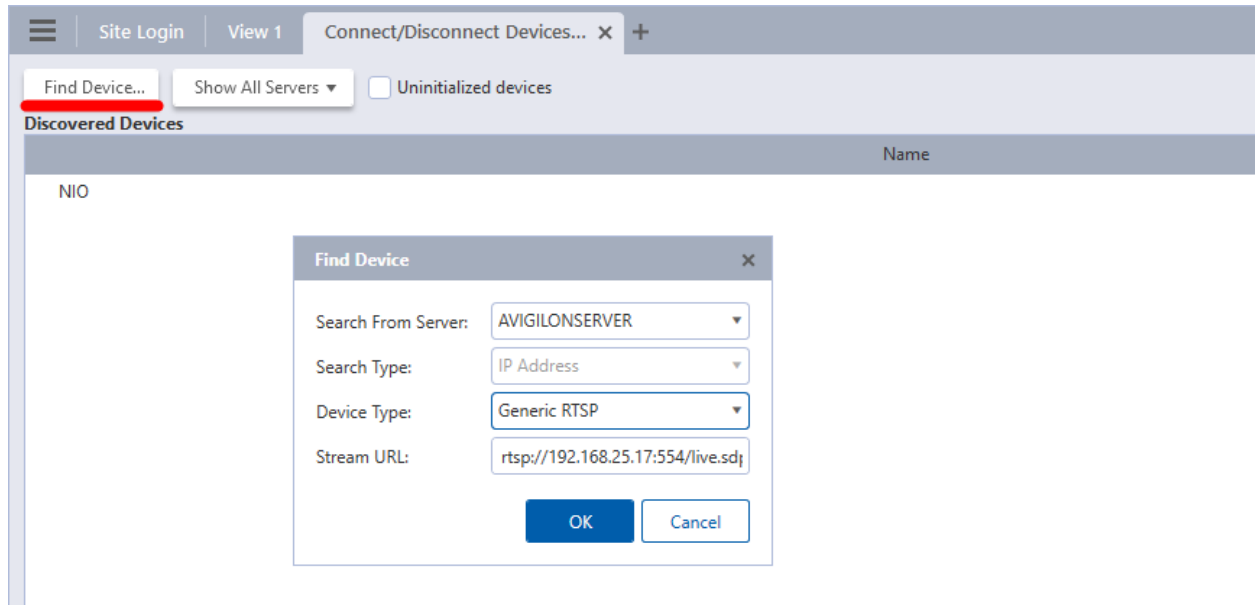


Figure 9: Entering NIO information to Find Device

- Enter the Username and Password that were created under the RTSP Server section in the NIO Admin settings
- Return to the View tab in the top banner, and drag the new rtsp url into a viewing window.

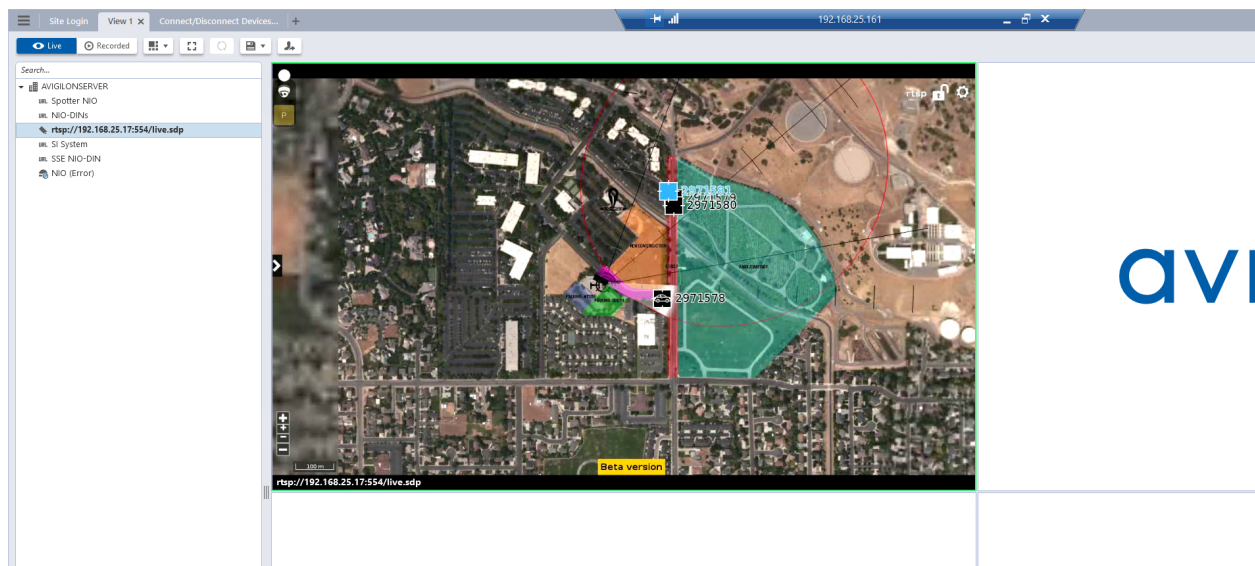


Figure 10: NIO RTSP stream loaded into viewing window



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## V. Avigilon Alarm Setup

- Here are the steps outlining how to setup the alarm functionality in Avigilon
- Click on the three bars in the top left to open the ACC menu and select Site Setup. Click on your server in the tree, and then select the Alarms window.
- In the Alarms window, click "+ Add" to add a new alarm

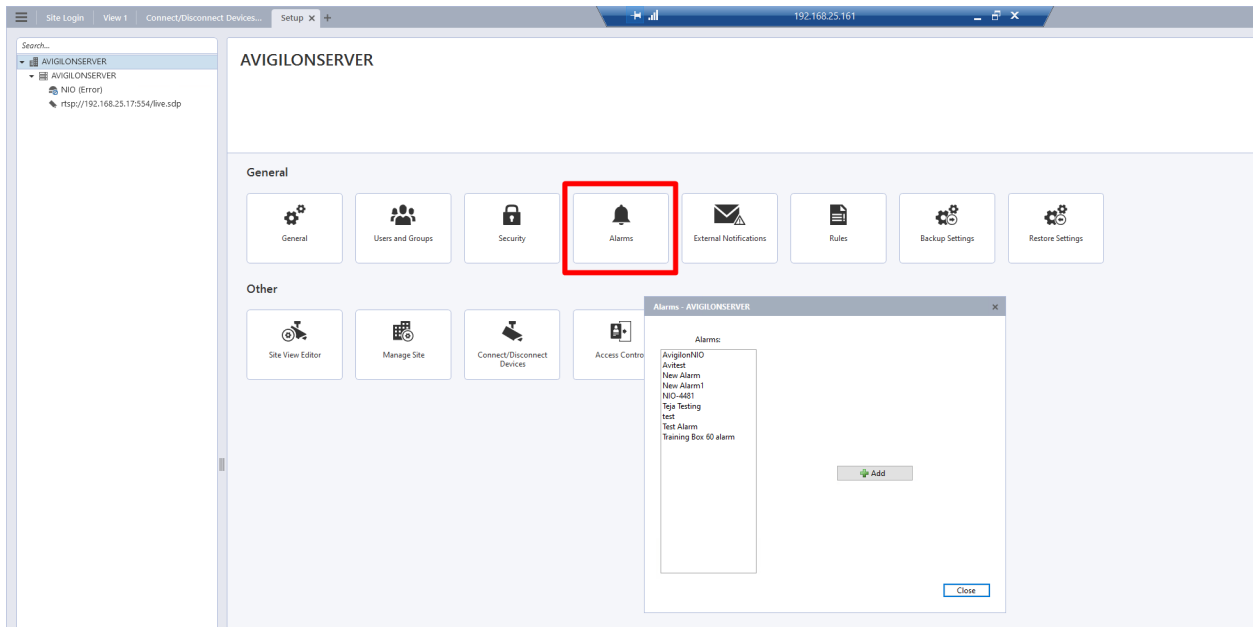


Figure 11: Creating a New Alarm

- Navigate through the setup windows:
  - Select Alarm Trigger Source: Select **External Software Event**, then click Next
  - Select the camera device you would like to record when the alarm is triggered, such as the NIO RTSP feed or a camera installed to monitor the zone.
  - Set your Pre-Alarm and Recording durations as desired and click Next
  - To Select Alarm Recipients click "Add Recipients..." and select the users that you would like alarm notifications to be sent to. Wait time and Play sound options may be set as well. Click Next.
  - Select Alarm Acknowledgement Action: this section can be filled out to send a digital output on alarm acknowledgement, but can be left black (default). Click Next.
  - Select Alarm Properties:
    - Name: **This name must match the alarm name as set up in the NIO action.** If the name does not match the alarms will not function.
    - Priority: set alarm priority (default is 1)



- Schedule: alarm schedule can be set to always, or adjusted here
- Check the "Enable alarm" box

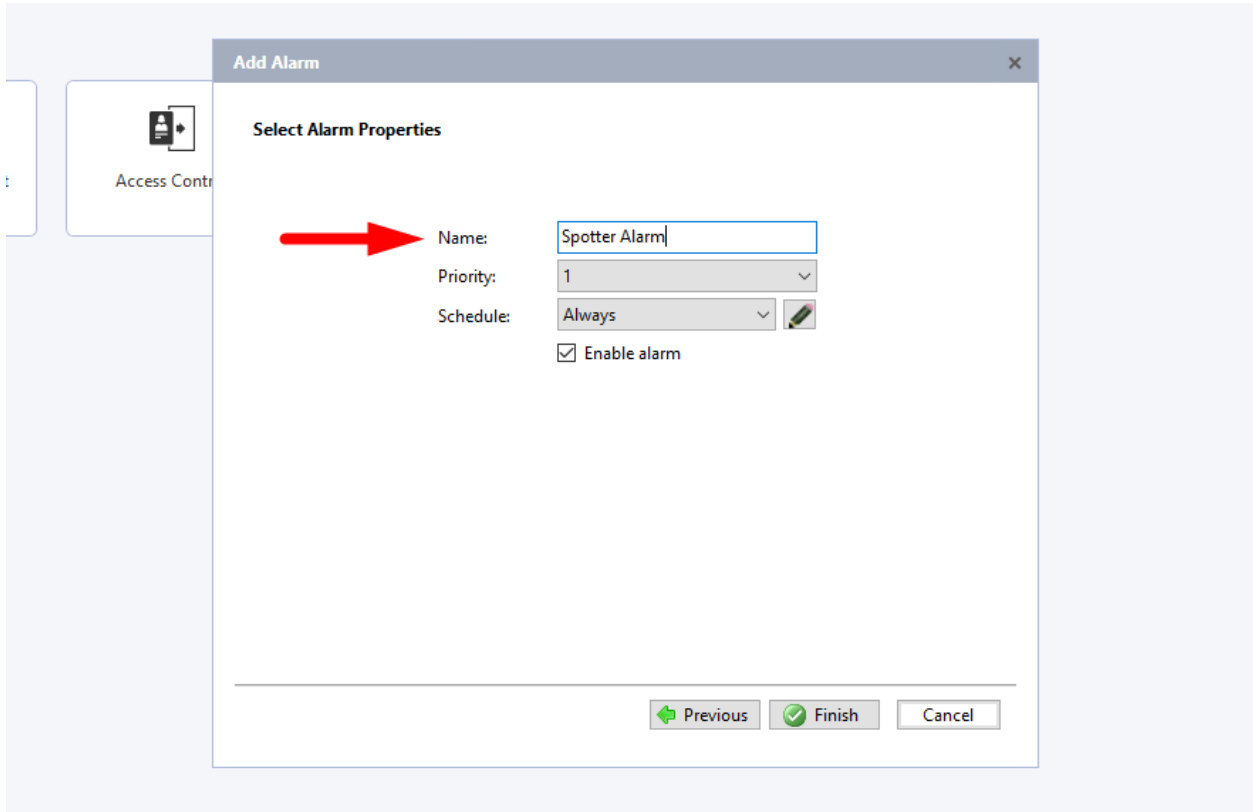


Figure 12: The alarm name must match the name of the action set up in NIO

- Click Finish
- Click the three bars in the top left corner to open the ACC menu and select Alarms under the View section. Active and Acknowledged alarms can be viewed and acknowledged here.



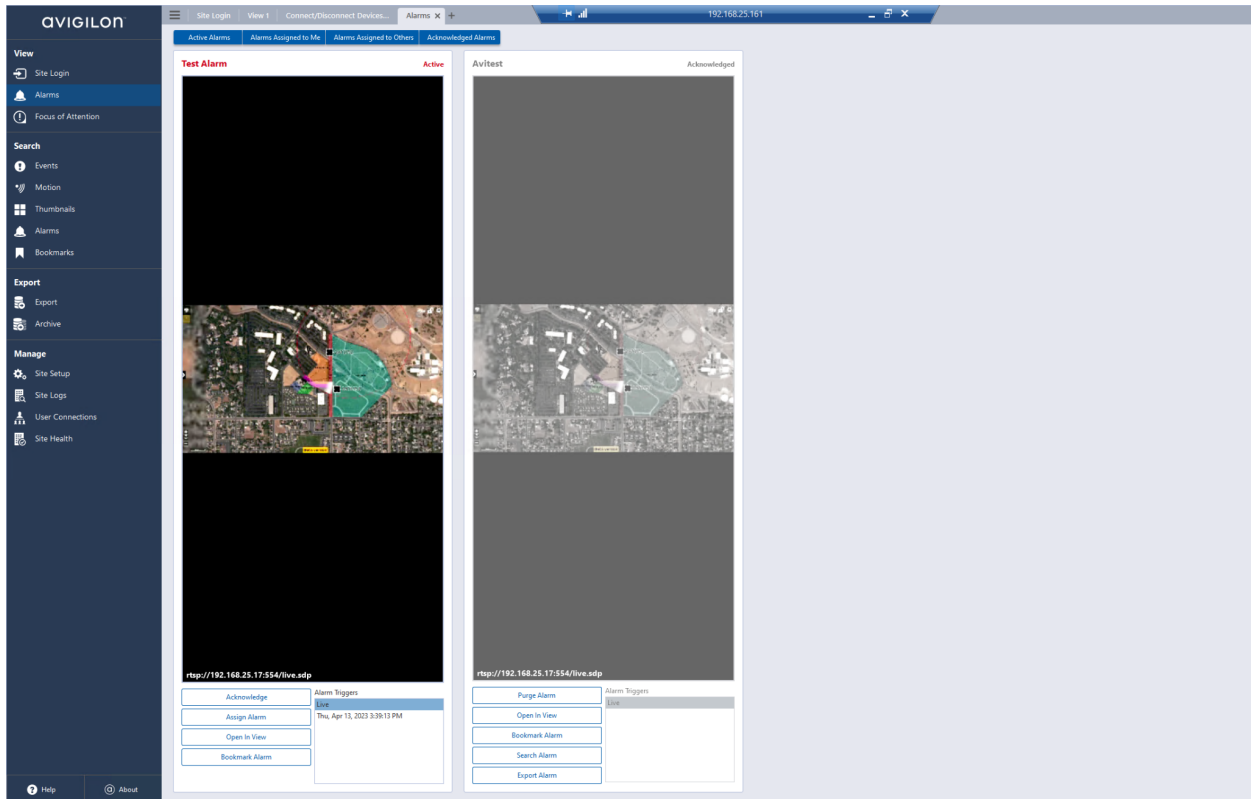


Figure 13: Alarms are passing from NIO to Avigilon and can be monitored in Alarms

## VI. Troubleshooting

- If alarms are not passing to Avigilon, tools such as WireShark or Postman may be used on the ACC server machine to monitor event traffic.
- If events are seen coming from NIO, but not making it to ACC, verify that the ACC Web Endpoint Service is running by going to <https://localhost:8443>. If the status is good further support from your Avigilon technician may be required.
- If events are not making it to the ACC machine at all, verify the setup of the NIO action and Zone. If the problem persists, further support from your Spotter Global technician may be required.



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