



Ganz Control to VCA Integration Note

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Overview

Ganz offers integrated system architecture across multiple market segments including IP and analog cameras, performance-driven optics, intelligent video analytics, biometric access systems, discreet enclosures, video management software, including Ganz CONTROL, and recording devices.

The integration with VCA is based on sending events through TCP and Data Source.

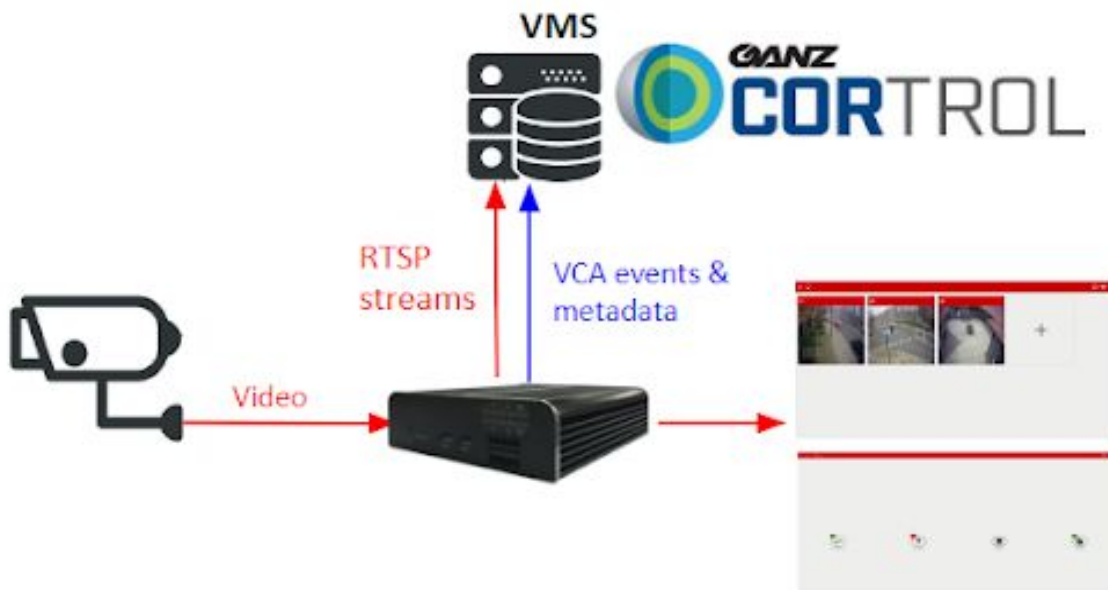
Requirements

- A VCA device such as VCAbridge or VCAserver.
- Ganz Control Premier 1.15.0 (Console, Client and Server).

Supported Features

- RTSP streams configured in Ganz Control.
- TCP actions/event notifications.
- HTTP actions/External events.
- Metadata is available within actions via tokens.

Architecture



VCA Configuration

Confirm the RTSP port used for transmitting video footage

Check, and change if required, the RTSP port used by VCA for external connections to the channels within the VCA service.

1. From the main screen, select the system cog in the top right.
2. Select **System** from the available menu items.



3. Note the **RTSP port** detailed under **Network settings**. This is the port VCA will use to send rtsp streams of its channels. The syntax for connecting to these channels is: *rtsp://<device ip>:<RTSP port>/channels/<channel id>*

Example rtsp://192.168.1.10:8554/channels/27

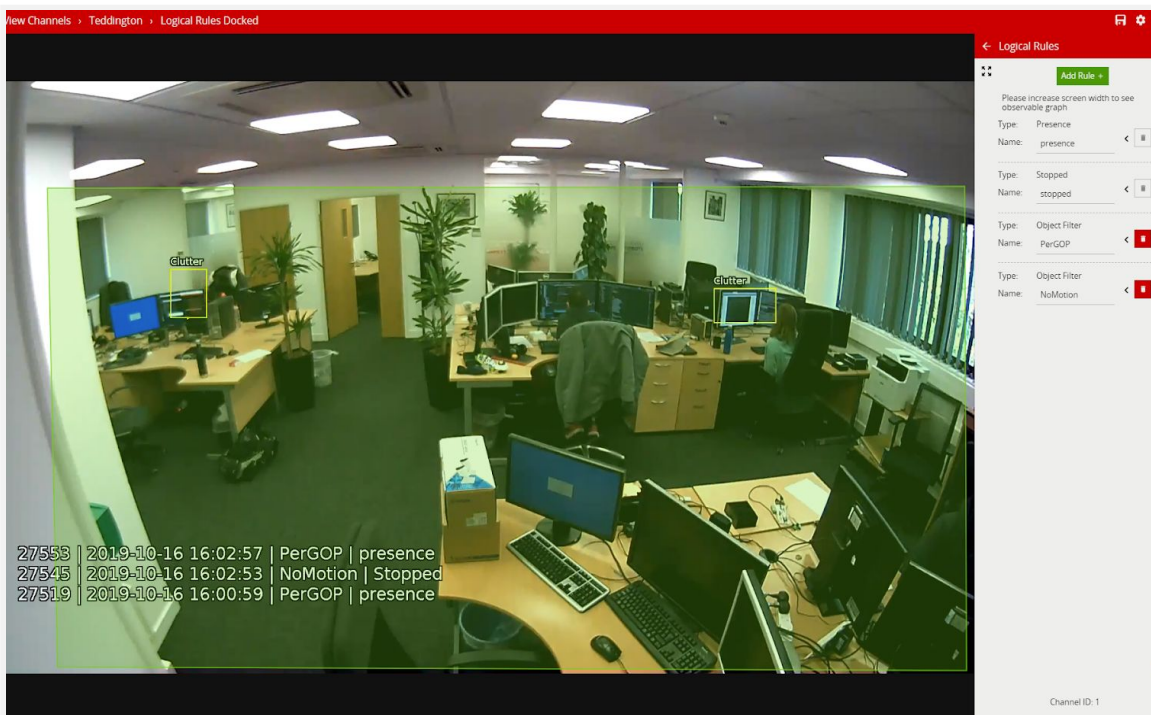
Network Settings		
Web Port:	8080	Save
RTSP Port:	8554	Save

Create a Channel

Configure the VCA application as required with the appropriate channel and logical rules. A basic setup is detailed below as an example:

1. Configure source to connect to camera.
 - a. *Note: the recommended settings for the camera stream to VCA is a maximum resolution of D1 (704 x 480) with a frame rate of 15 frames per second. A lower resolution and frame rate will reduce the analytic accuracy, a higher resolution and frame rate will result in high CPU usage and can reduce analytical accuracy.*
2. Configure a zone for the channel.
3. Create a presence rule to trigger an event on object detection in the zone.
4. Note the **Channel ID** as this will be needed when connecting to the RTSP stream from the Ganz Control server.

For more information on creating and configuring channels in VCA please refer to the VCA user manual.



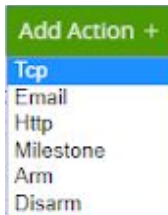
Note: You will need to note the channel ID number, it is used when attempting to connect to the RTSP stream from VCA. It can be located at the bottom of the channels menu

Create an Action

1. Select the **system cog icon** in the top right to access **Settings**.



2. Select **Edit Actions**.
3. Select **Add Action** and select **TCP** from the list of available actions.



4. Enter a descriptive name for the action.
5. Select the **arrow** on the right of the action to expand the TCP configuration options.
 - a. **URI:** Enter the URI of the Ganz Control Server.
 - b. **Port:** Enter the port of Ganz Control Server.
 - c. **Body:** Select **Custom** from the drop-down menu. Add tokens as needed.
 - d. **Sources:** Select **Add Source +** to display a list of the available Sources and logical rules and select the logical rule created for the source you want to send to the Ganz Control server.
6. Click **Test** to send a test TCP notification.

Type: Tcp
Name: Ganz
■

URI: 192.168.1.142

Port: 9090

Body: Custom

```
Event
Class:{{#Object}}{{#Classification}}{value}{{/Classification}}{Object}
Zone:{{#Zone}}{{name}}{Zone}
Type:{{#Rule}}{{type}}{Rule}
End
```

Line endings: Windows (CRLF)

Select a token to add it to the template string

Always Trigger:

Sources:

Add Source +

Test

For this integration, the following tokens were used to send an information on the camera, zone and rule type that triggered the event:

Event

Class `{{#Object}}{{#Classification}}{value}{{/Classification}}{Object}` crossing

Zone: `{{#Zone}}{name}{{/Zone}}`

Type:`{{#Rule}}{type}{{/Rule}}`

End

Where:

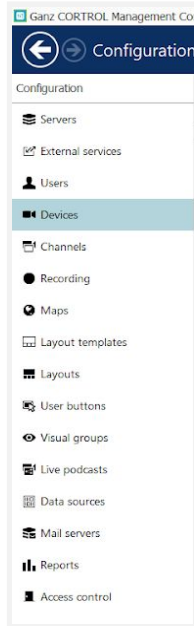
- **Event:** This represents the beginning of an event and is used to define the data source format in the GANZ Control server.
- **End:** This represents the beginning of an event and is used to define the data source format in the GANZ Control server.
- **{{#Object}}:** an array of objects that triggered the event.
- **{{#Classification}}:** the classification of the object. For example a person, vehicle or group of people.
- **{{value}}:** the value of the object.
- **{{#Zone}}:** an array if the zone associated with the event.
- **{{name}}:** name of the zone.
- **{{#Rule}}:** an array of the rules associated with the Event.
- **{{type}}:** the type of rule that triggered the event.

For more information on available tokens and how they can be used please refer to the [VCA manual](#).

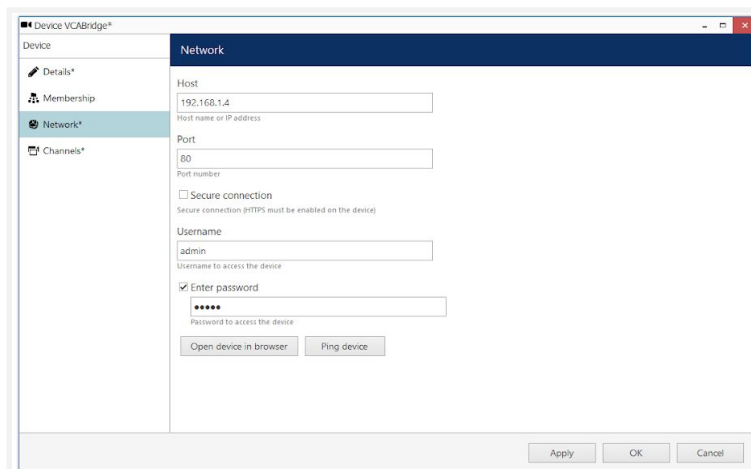
Ganz Control Console configuration

Device configuration

1. Go to the Configuration main page.
2. In the Panel on the left, select **Devices**.

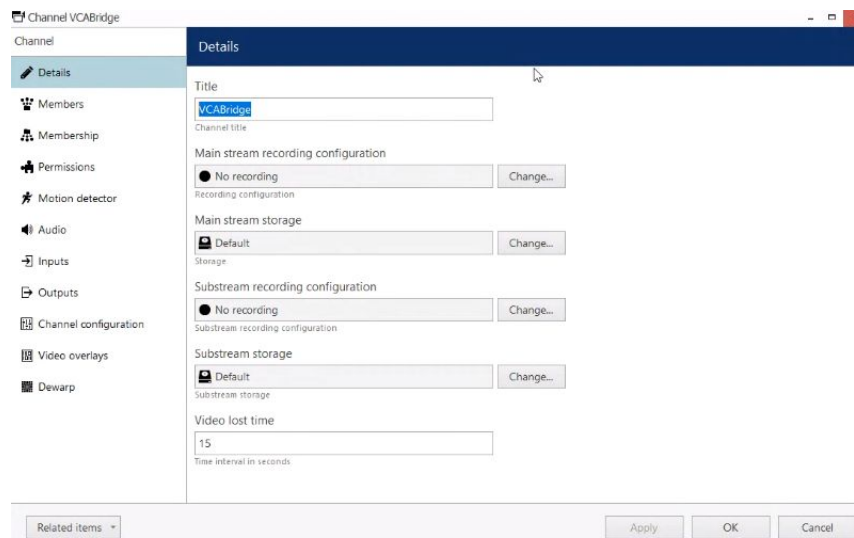


3. Select **New Device**.
 - a. Define a **title** for the device (for example VCABridge).
 - b. Click on **Select Model** and select **RTSP Compatible (VENDOR: Generic MODEL: RTSP Compatible)** from the list.
 - c. Go to the **Network** tab.
 - i. **Host:** IP address of the VCA device.
 - ii. **Port:** the web port configured used to access the VCA device (in our case it is 80).
 - iii. **Username:** The user for the VCA device.
 - iv. **Password:** The password for the VCA device.
 - d. Click **OK** to finish creating the new device.



Channel Configuration

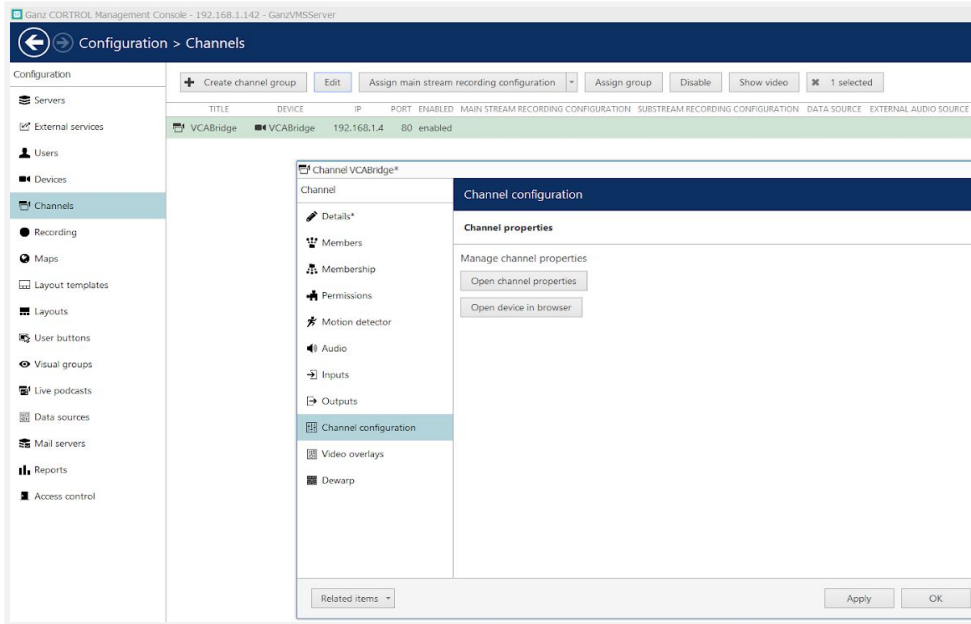
1. In the Panel on the left, select **Channels**.
2. **Edit** the newly created channel (The device created previously).
3. Click on **Details**.
4. **Main stream recording configuration:** click **Change** and select **continuous recording** and click **OK**.
5. **Substream recording configuration:** click **Change** and select **continuous recording** and click **OK**.



6. Click **OK**.

Channel RTSP Configuration

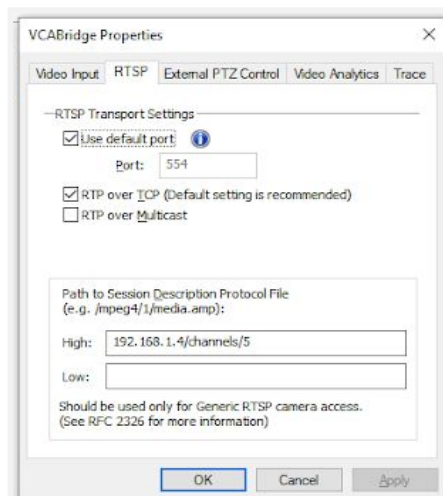
1. In the Panel on the left, select **Channels**.
2. **Edit** the newly created channel (The device created previously).
3. Click on **Channel configuration**.
4. Click on **Open channel properties**.



5. Go to the **RTSP** tab.
 - a. Confirm RTSP **Port**: 8554, override if required.

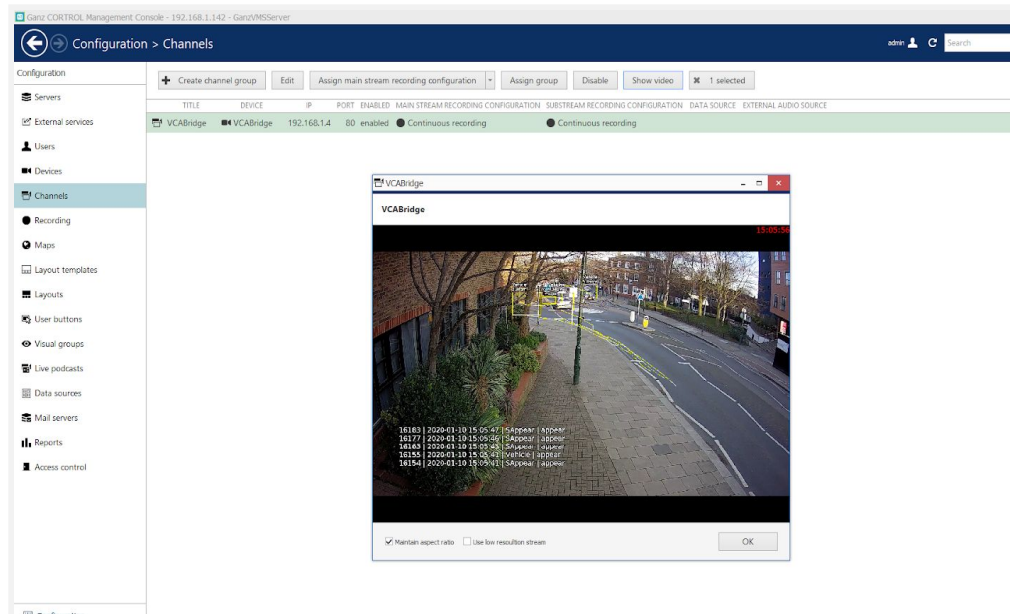
Note: 8554 is the default RTSP port used on VCA. Please confirm the RTSP port used by your VCA before continuing. Details on how to do this are detailed in the VCA configuration section of this document.

- b. Select **RTP over TCP (default settings is recommended)**.
 - c. **Path to Session Description Protocol File, High:** Enter the RTSP URL of the VCA channel. *RTSP URL format: `rtsp://<device ip>:<RTSP port>/channels/<channel id>`*
4. Click **OK**.
5. Click **OK** to save the changes.



To confirm the channel is configured correctly you can show a live stream. From the main screen click on the newly created channel and select **Show Video**.

Note: For further information about how to use Ganz Cortol, please refer to the [Ganz Cortrol user manual](#).

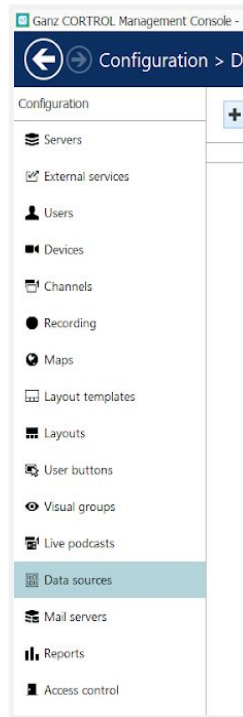


Click **OK** to close this window.

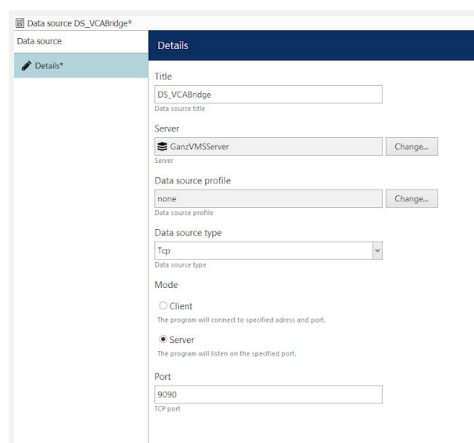
Data Source configuration

To send events from the VCA device, a data source will need to be created. Data is stored and displayed embedded with the video stream from the channel(s) you choose to associate with it.

1. In the Panel on the left, select **Data Source**..



2. Select **New data source**.
 - a. **Data source title:** name of the data source (DS_VCABridge).
 - b. **Server:** click on **Change** and choose the **Ganz server**.
 - c. **Data source profile:** leave none (it will be created later).
 - d. **Data source type:** in the drop-down menu select **TCP**.
 - e. **Mode:** select the **Server** (*the program will be listening to the specified port*).
 - f. **Port:** enter the TCP port used in the TCP action within VCA.
 - g. Click **OK**.

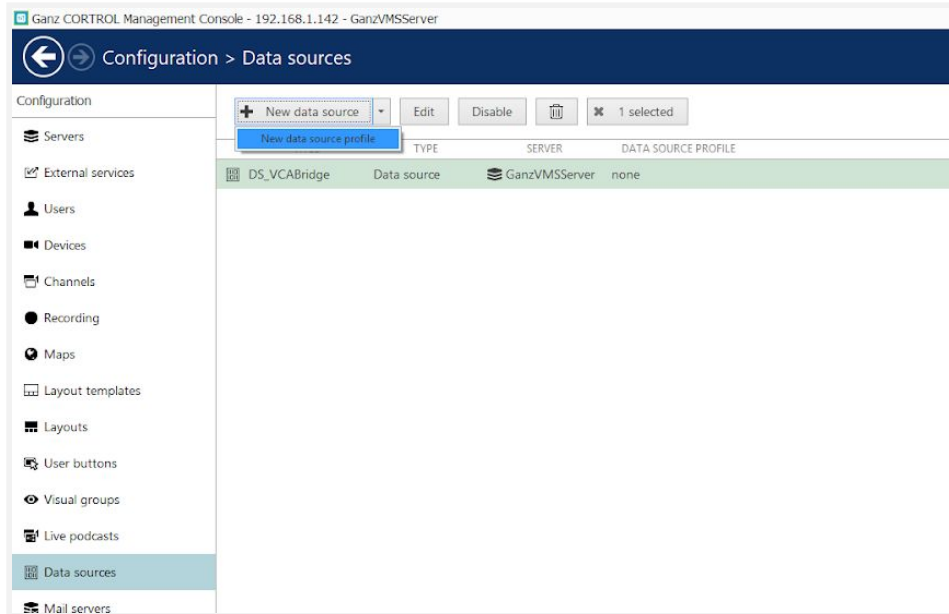


Note: Make sure any active firewalls are configured to allow traffic using the port detailed above.

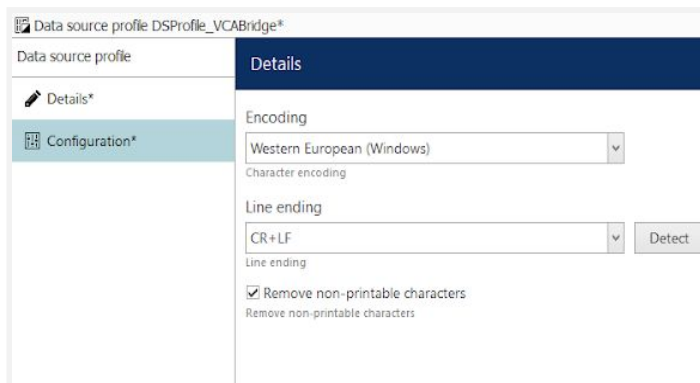
Data Source Profile configuration

Create New Data Source Profile

1. In the Panel on the left, select **Data Sources**.
2. Click **+ New data source profile**.



3. In the **Details** tab, enter a **custom name** (DSProfile_VCABridge) for your data source profile.
4. Click **Configuration**.
 - a. **Encoding**: select **Western European Windows**.
 - b. **Line Ending**: in the drop-down options select **CR + FL**.
 - c. **Remove non-printable characters**: leave it checked.

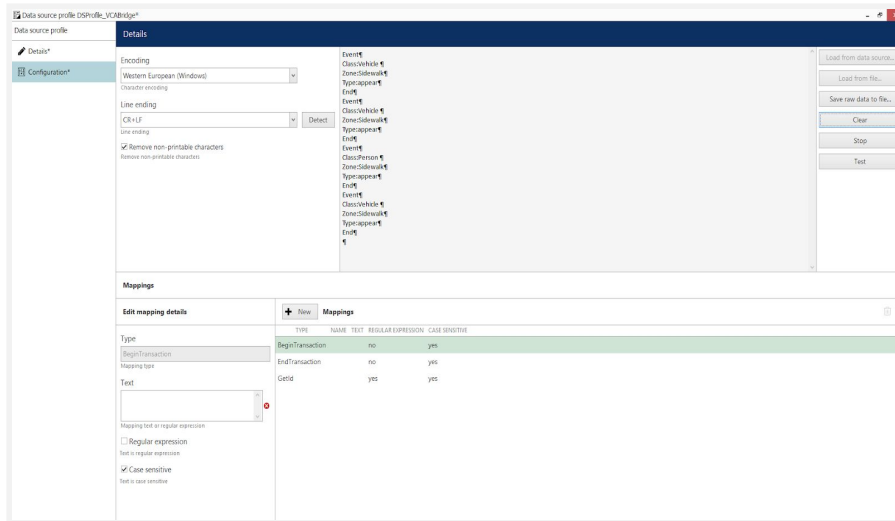


Define Data source profile format

1. Click **load from data source...** (in the upper right corner).
2. Select **the Data Source** created previously.
3. Click **OK**.

Note: Make sure that the VCA device is sending events to the Ganz server so that it can be viewed.

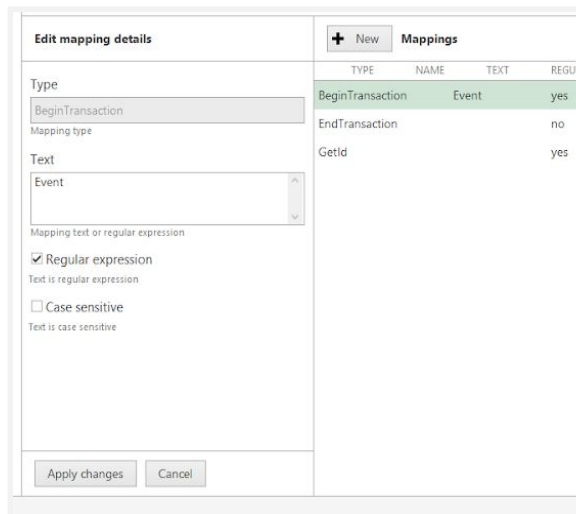
4. Events are displayed in the trace window, click **Stop** to stop receiving events.



If no events are being received then review the device configuration and ensure that your VCA device is producing events.

Now you need to define the beginning and the end of an event from the data being received. Locate the text that identifies the beginning of an event (in this case it is the word *Event*).

5. Click on the **BeginTransaction** entry in the **Mappings** section, this will show the settings for **BeginTransaction** on the left.
6. Enter the word *Event* into the **text** field.
7. Uncheck **Regular expression** and **Case sensitive**.
8. Click **Apply changes**.



Edit mapping details		+ New Mappings			
Type	Mapping type	TYPE	NAME	TEXT	REGUL
BeginTransaction		BeginTransaction	Event		yes
		EndTransaction			no
		GetId			yes

Text: Event

Mapping text or regular expression

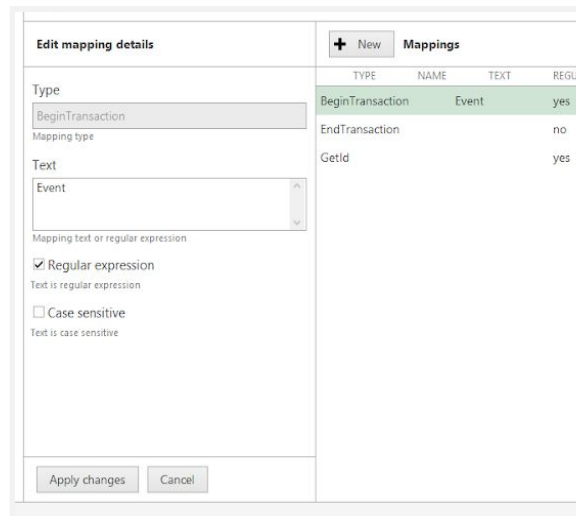
Regular expression
Text is regular expression

Case sensitive
Text is case sensitive

Apply changes Cancel

Locate the text that identifies the end of an event (in this case it is the word *End*).

9. Click on the **EndTransaction** entry in the **Mappings** section, this will show the settings for **EndTransaction** on the left.
10. Enter the word *End* into the text field.
11. Uncheck **Regular expression** and **Case sensitive**.
12. Click **Apply changes**.



Edit mapping details		+ New Mappings			
Type	Mapping type	TYPE	NAME	TEXT	REGUL
BeginTransaction		BeginTransaction	Event		yes
		EndTransaction			no
		GetId			yes

Text: End

Mapping text or regular expression

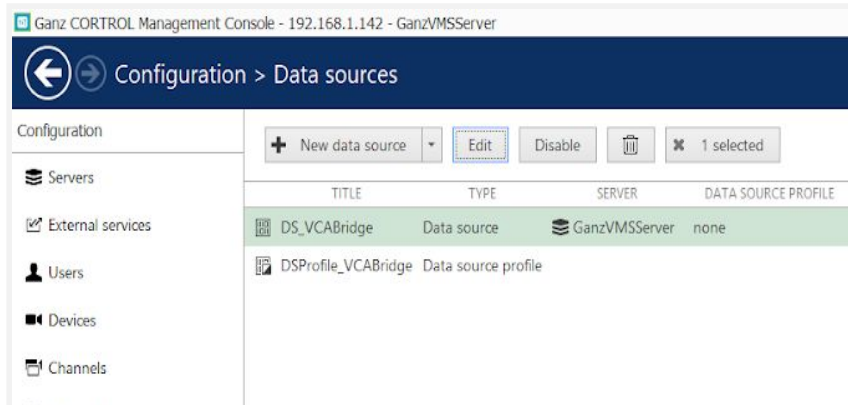
Regular expression
Text is regular expression

Case sensitive
Text is case sensitive

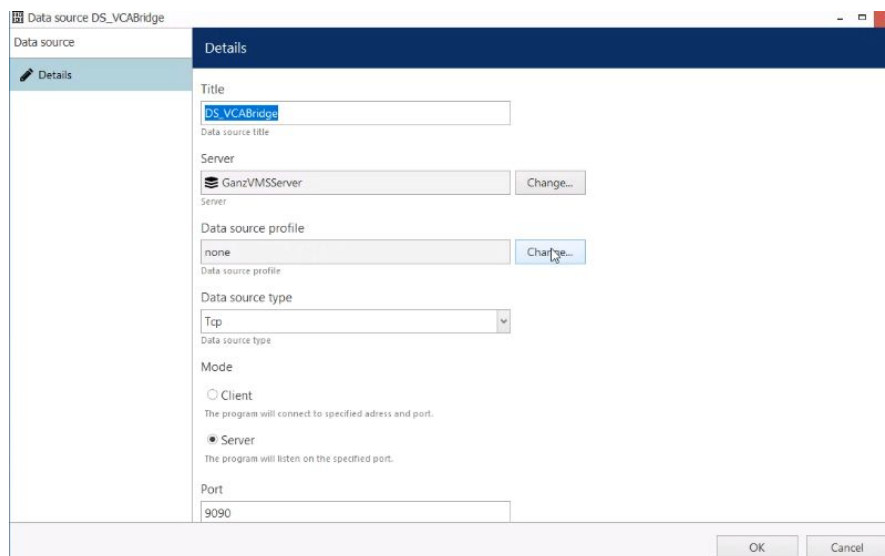
Apply changes Cancel

13. Click **Test** to verify the transaction format, if this fails then check the settings against the steps outlined above and try again.
14. Click **OK** to close the window and save the configuration.

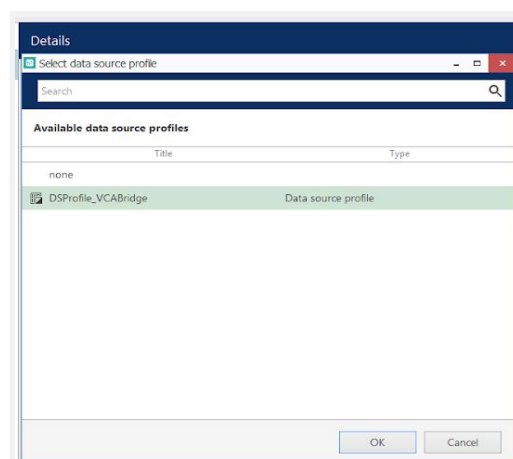
Link the Data source profile to the Data source



1. In the **Data Source** configuration screen, select Data Source created before and click **Edit**.



2. Click **Change** next to the Data source profile.
3. Select the new **Data Source Profile** and Click **OK**.
4. Click **OK** to save the changes.

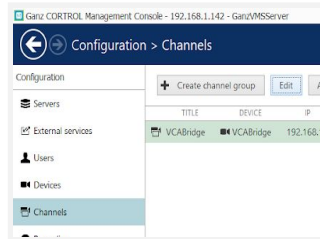


To confirm the data source settings, select **Test** to start receiving events using the data source profile.

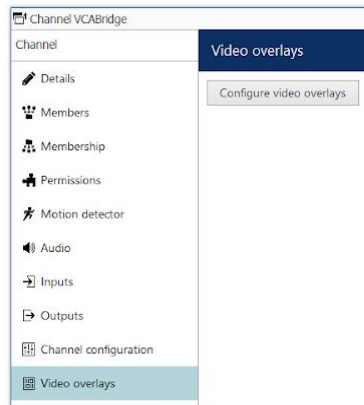
Link Data source to Channel

The Data source must now be attached to the Channel to link the event messages coming into the server to the video channel.

1. Go to the **Channels configuration screen**, then select the newly created channel and press **Edit**.

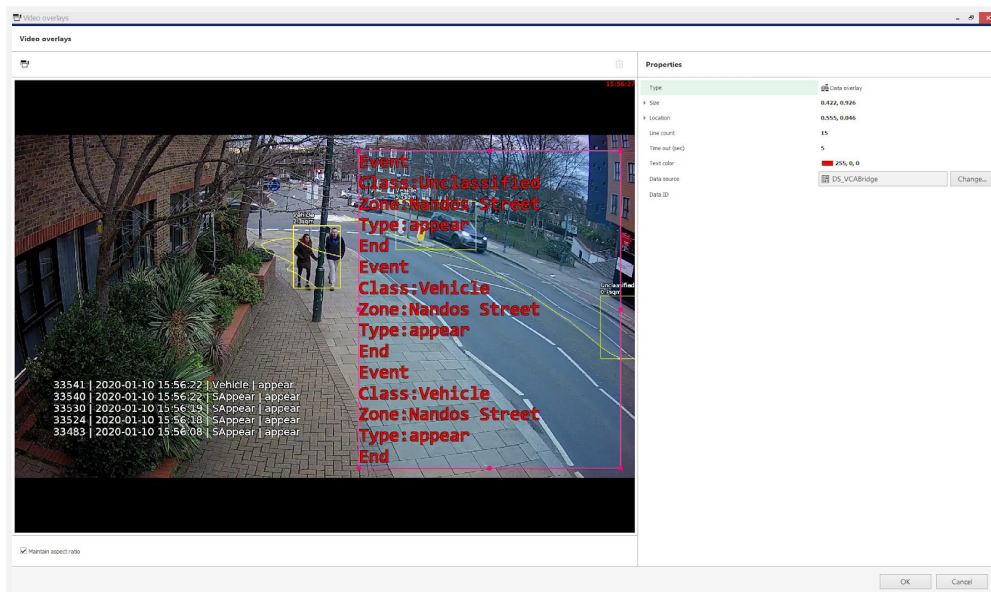


2. Select the **Video overlays** tab.
3. Click on **Configure video overlays**.
4. Click **Change** next to the data source option.



5. In the new screen, select the Data source.
6. Click **OK**.

The events will appear within the pink box shown on the right side of the video.





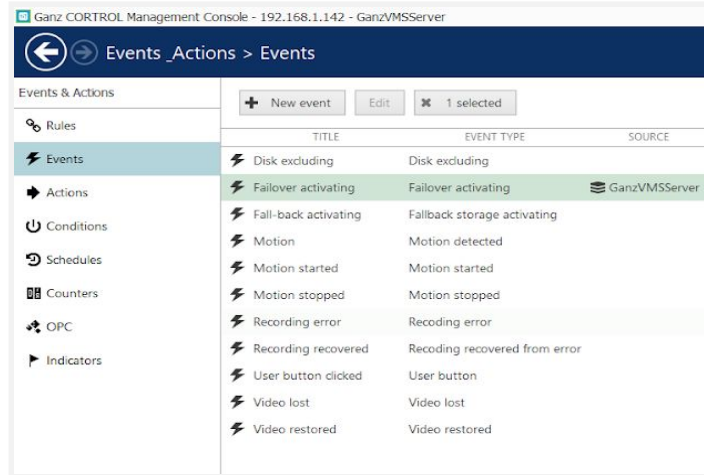
In this screen, you can configure the color, type, and size of the text that will reflect the events on the video.

7. Click **OK**.
8. Click **OK** to close the Channels window.

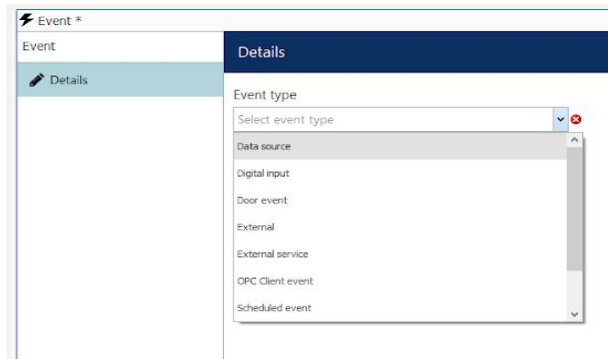
Create Events, Actions, and Rules

Here we will configure the events, actions, and rules that will be sending the Data Sources notifications to the Ganz Client.

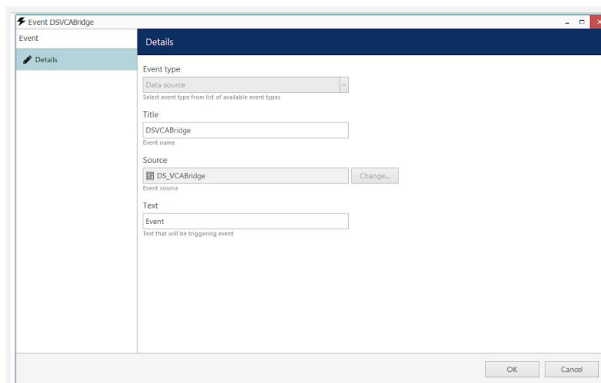
1. Go to the **Events and Action** tab.
2. Click on the **Event** tab.



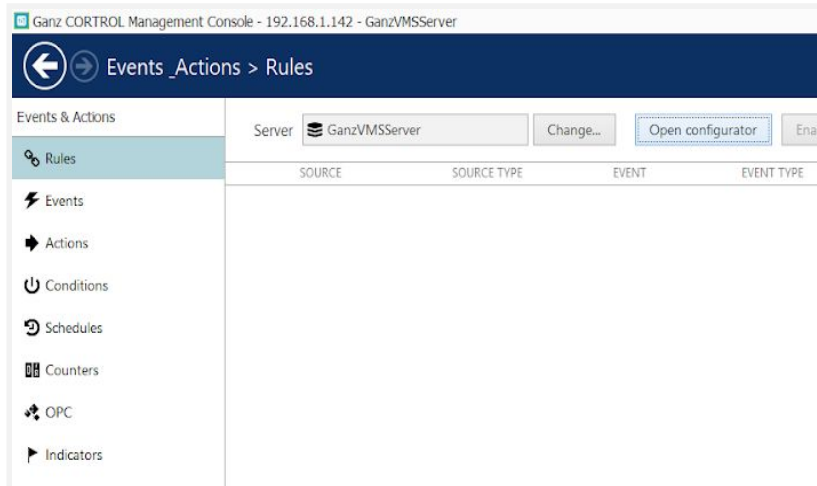
3. Click on the **New Event**.
4. Select **Data Source** from the **event type** drop down.



- a. **Title:** enter the title of this event (DSVCABridge).
- b. **Source:** select the Data Source.
 - i. **Click:** Change.
 - ii. Select **Data Source**.
 - iii. **Click** OK.
- c. **Text:** enter a text that will be triggering event (Event).
- d. **Click** OK.

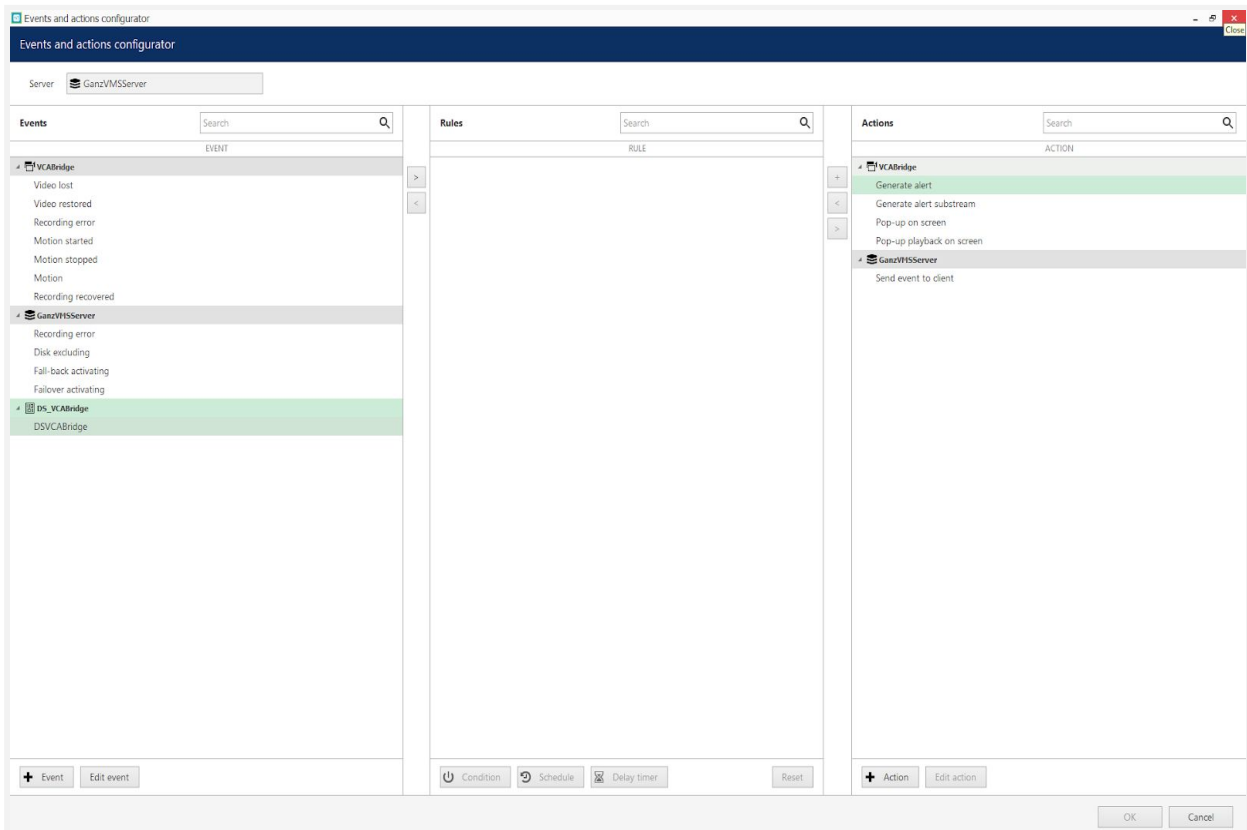


5. Click the **Rules** tab.
6. Click **Open configuration**.

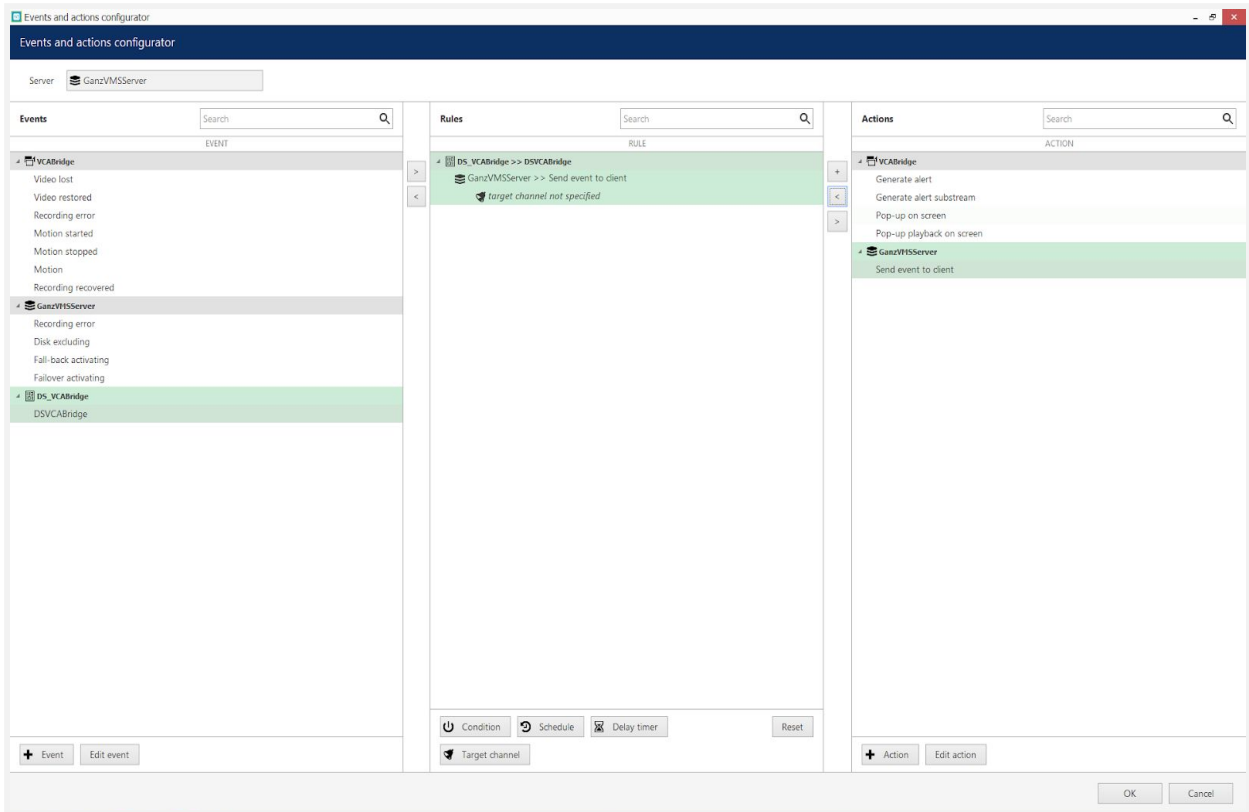


In the event and actions configuration screen, you will see three boxes associated with Events, Rules, and Actions.

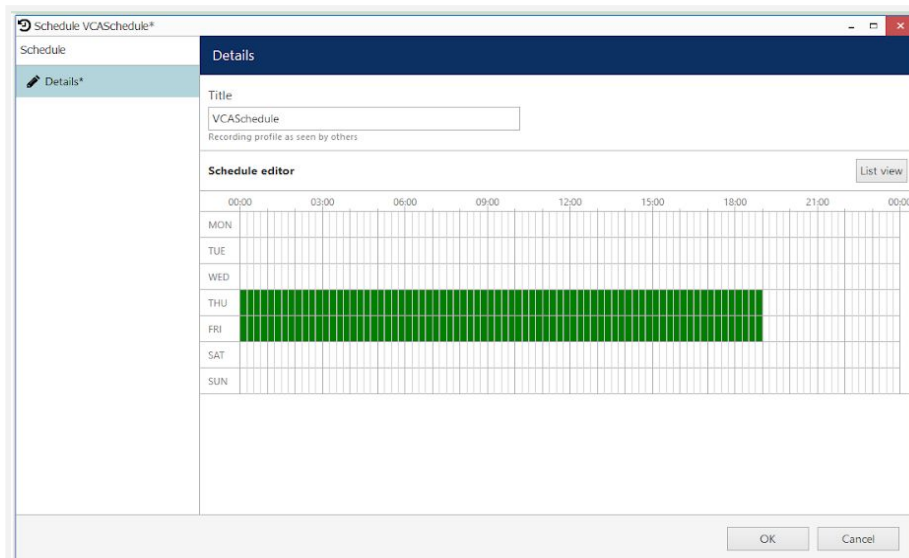
7. Go to the **Events** box and select the event associated with the previously created data source.



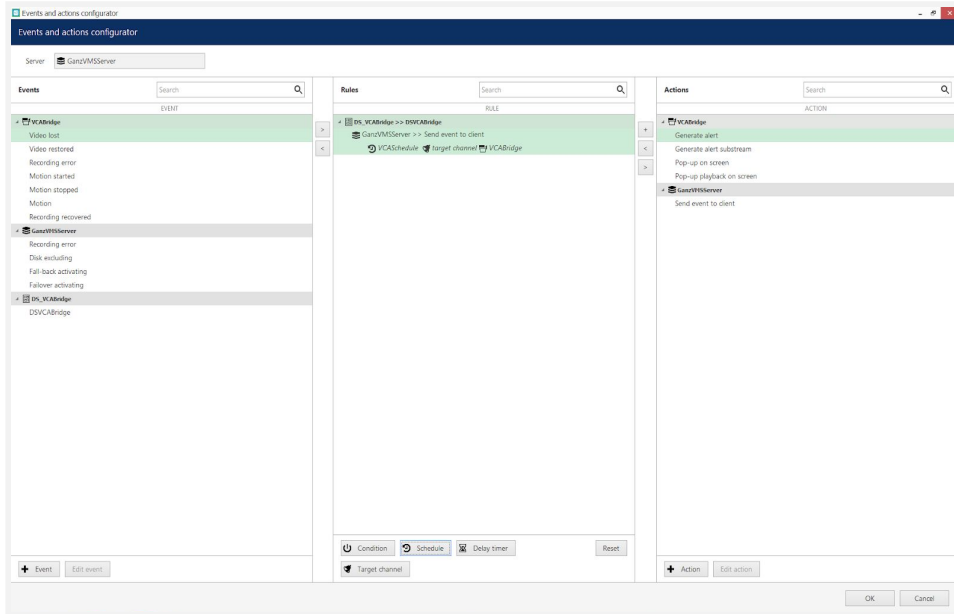
8. Select the **Data Source event** and click on the greater than > button (to move the event into the Rules box).



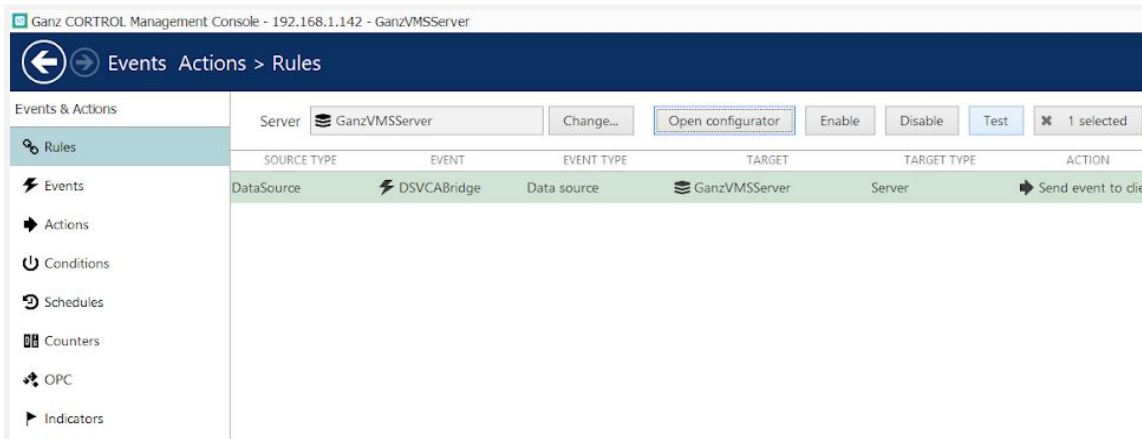
9. Go to the **Action** box and select **Send event to client**. Then click in the less than < button to move the action into the Rules box.
10. Go to the **Rules** box and click the Target **channel**.
11. In the pop-up screen, select the VCA device.
12. Click **OK**.
13. Click **Schedule**.
14. In the pop-up screen click **New schedule**.
15. In the new screen enter a title for the schedule (VCASchedule). Then, configure the schedule and click **OK**.



16. In the main screen, click **OK** to save the configuration.



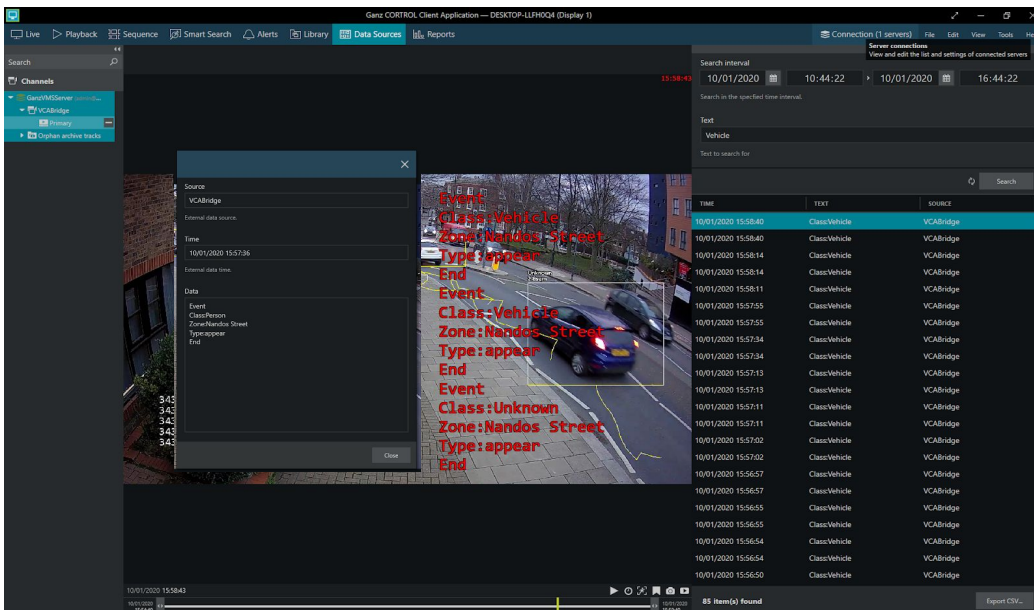
Note: You can test this Rule by clicking the **Test** button. The notification will appear on the **Alert tab** of the **Ganz Control Client**.



Verifying Events on the Ganz Console

Open the Ganz Control Console and select the VCA device created previously, verify the events created with the Data Source are reflected over the video.

1. Open the VCA device in the main layout.
2. Go to the **Data Source** tab to see the events received.
3. Select the channel on the left by clicking the plus “+” icon next to the channel name.
4. Specify **search criteria** on the right.
5. Click **Search**.



The events will also appear in the **Alert** tab.

