MAGOS

MASS 3.0 and ExacqVision Integration

User Guide

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1. INTRODUCTION TO THIS GUIDE

This guide is designed to aid users with the integration of MASS (Magos Area Surveillance System) and ExacqVision, a Video Management System (VMS) that provides an interface to alerts received from MASS with regard to targets that enter or exit monitored areas. The guide specifies first the operations that need to be carried out in MASS to enable the integration, and then provides instructions for performing the integration.

MASS is a multi-feature command and control software, developed and designed for use with Magos radar sensors as well as a variety of additional sensors and verification equipment (for example: cameras and indicative fences). For in-depth information about the installation and operation of MASS, see Mass User Guide.

ExacqVision is a VMS software that is used for recording surveillance video from thousands of IP camera models and providing an interface for the display of the recorded videos on a free Windows, Linux or OSX client software, web browser, or mobile device. For further information about ExacqVision, see the ExacqVision User Guide.

This guide is intended for both Magos administrators and users.

1.1 ABOUT MAGOS SYSTEMS

Magos was established in 2007 to realize its co-founders' vision of bringing advanced radar technology to the security and perimeter protection and detection market. We are Experts in Low cost, Low power consumption, High performance radars that can be easily integrated with existing VMS, PSIM and other control software and automatic PTZ slew-to-cue for an end-to-end cost effective and easily maintained solution of the customer's security requirements.

1.1.1 CONTACTING MAGOS SYSTEMS

Email	info@magosys.com
Mail	Gad Feinstein 13 Office 225, Rehovot Israel 7638517
Web site	www.magosys.com

1.1.2 CONTACTING MAGOS SUPPORT

Support is available to customers who have a trial version of a Magos product or who have purchased a Magos product and have a valid maintenance contract.

To contact Magos support, send an email to support@magosys.com.

1.2 REQUIREMENTS

Exacq client version 8.8.1.119433

NOTE

Older version of Exacq client might also work. However we cannot assure this as they have not been tested.

Figure 1: Client Version

2. PREPARING MASS FOR THE INTEGRATION

Enabling the integration between MASS and ExacqVision requires defining Alarm zones, namely: areas where any target should be regarded as a potential threat. This chapter specifies how to define such area.

2.1 DEFINING AND EDITING AREAS

MASS supports an unlimited number of areas, which can be added by following the instructions described in this section.

IMPORTANT

Prior to defining zones, ensure that the **Alarm Zones** check box in the Layers menu is selected (see Mass user guide section 4.1) otherwise the zones will not be visible.

*To define and edit **Alarm Zones**:*

1. Open the main menu by clicking the  icon on the top left of the screen.
2. Make sure that the requested profile is currently active.

3. Move the cursor over the **ALARM ZONES** menu and click the  icon to add a new zone.
   In the **Map View** the edit the zone editing options will appear.

Figure 2: Edit Zone side menu

4. Click **Draw a polygon** () to draw a new zone
   a) Click the map at the location of the polygon that defines the zone of interest. Each click adds a vertex to the polygon.
   During this stage the polygon, as defined by the vertexes (mouse clicks) is temporarily filled in semi-transparent blue, solid red lines define the borders of the polygon, and the dashed line represents the next border-line that is to be drawn.

Figure 3: Drawing a new zone

At any stage while drawing, before clicking on the first point and closing the polygon, you can select an option from the auxiliary menu:

- **Finish – click for finishig drawing the zone**
- **Cancel** – Discards all vertexes drawn
- **Delete last point** – Discards the last vertex drawn (can be used repeatedly up to the first vertex)

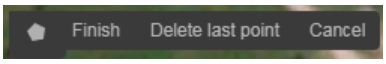

Figure 4: Polygon Drawing Auxiliary menu

b) When finished, click the first point of the polygon. The mouse cursor's shape changes from cross-hair (+) to a point hand ( ) icon when moved over the first point, to indicate that this operation closes the polygon.
Once the polygon is complete and closed, it will be displayed as the drawn shape, filled with semi-transparent light red and bordered by a solid light red line.

Proceed to the next step in order to edit the zone properties.

5. While in Zone Edit mode, move the mouse over the requested zone (currently filled with semi-transparent blue), and click it to open the **Zone properties** menu on the bottom left side of the screen.

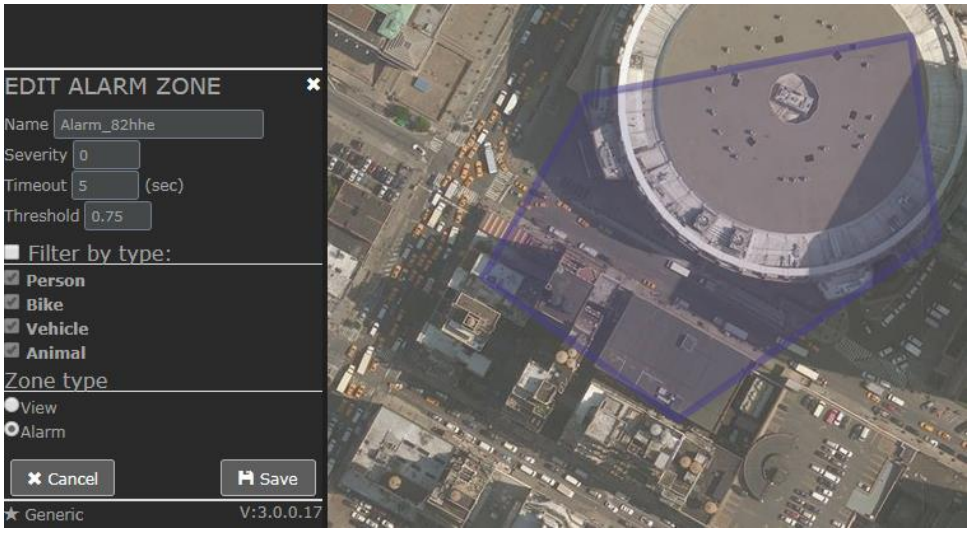

Figure 5: Zone Properties Menu

NOTE

In places where two or more zone polygons overlap each other, right-clicking the opens a pop-menu with the list of overlapping zone names, allowing you to select the zone to be edited.

This menu contains the following options:

- **Name** – User-defined name for the zone. By default, the system assigns an arbitrary name to each zone.
- **Severity** – Set Severity for the zone. Severity affects the **Resource Scheduelr** decision when several targets need to be tracked with limited amount of camera.
- **Timeout** – the number of seconds to wait since the last target left the alarm zone and before "re-arming" the alarm trigger. Eg. if set to 5, then if a target apears within the area and then dispears, then next alarm event will be issued only if a new target is reported more than 5 seconds after the first one disappeared.
- **Threshold –** A numeric value between 0 and 1, Typical value is 0.75. This is the track confidence threshold for decalring an alarm in this zone. A higher value will reduce False and Nuissance alarms. A lower value will increase sensitivity.
- **Zone Type** – Choose View or Alarm . See above Zones Logic explanation for more info.
- **Save** – saves all changes made. For a newly defined polygon this operation turns the polygon into an applicable zone, thereby changing its fill color from light red to green.
- **Cancel** – Discards all changes made for the zone. For newly defined polygons this operation deletes the entire polygon, while or existing/pre-defined polygons all changes made since the polygon was last saved are discarded.

NOTE

Zone name must not contain spaces or "–" (Hyphen-minus).

6. Click **Save** to finish and add the zone.
7. The newly zone will be added to the **ALARM ZONES** list in the main menu.

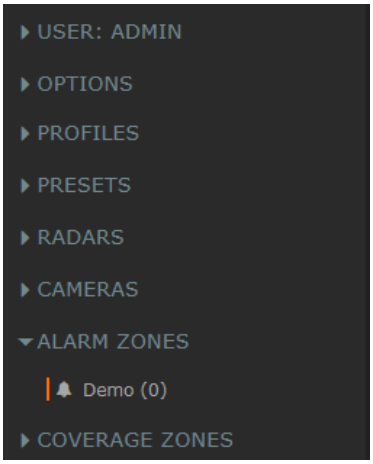

Figure 6: ALARM ZONES list menu

Editing Zones:

8. On the top left of the page, click the  button to open the **Settings menu** on the left of the screen.
9. Expand the **ALARM ZONES menu to open the zones list.**
10. **Move the cursor over the preferred zone and click** the  icon to edit the zone or the  to delete the zone.
11. To edit the vertex positions or add new vertexes to existing polygons, click the  icon from the **Edit Zones** side menu in editing mode:
    - All zones are now displayed as semi-transparent polygons. The edges are marked with dashed orange red lines and the pre-defined vertexes are indicated by small white squares. In addition, semi-transparent white squares appear on the center of each edge.

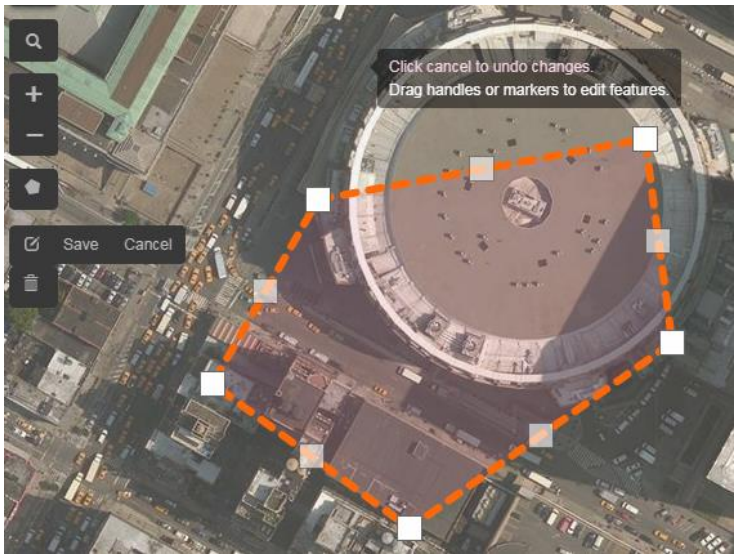

Figure 7: Edit Polygons mode

- To move the position of an existing vertex, click and drag the white square indicating the vertex's position to the requested new position.

- To add a vertex, click and drag the semi-transparent squares from the center of the requested edge to the requested position of the new vertex.

Use any of the options in the auxiliary menu available while in this mode.

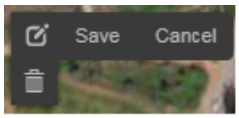

Figure 8: Polygon Editing auxiliary menu

- Click **save** when done applying the requested changes.

Alternatively, you can discard your changes by using either of the following options:

- Reverting to the previous state by clicking Cancel.
- Deleting fully-drawn polygons (whether newly defined or existing), by clicking the icon and then clicking the zones to be reomoved.

When in this mode, an auxiliary menu is available.

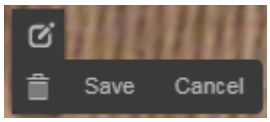

Figure 9: Polygon Deleting auxiliary menu

Reviewing Zones:

12. On the top left of the page, click the button to open the **Settings menu** on the left of the screen.
13. Expand the **ALARM ZONES menu to open the zones list.**
14. **Move the cursor over the desired Zone name and click** the icon to edit the zone or the to open the Zone Info pane showing all the settings defined for this zone.

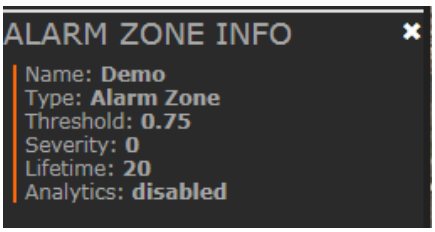

Figure 10: Zone Info

3. ENABLING THE INTEGRATION

The integration between MASS and ExacqVision is carried out in two stages: First, you must edit the configuration in MASS on the server side, and then you must define the required settings in ExacqVision Server.

This chapter specifies the instructions for carrying out the integration.

3.1 EDITING THE MASS CONFIGURATION

To edit the MASS configuration:

1. Open the main menu by clicking the  icon on the top left of the screen the Settings bar appears.
2. Expand the USER menu, and on the  button.
3. The Mass System Configuration page will open.

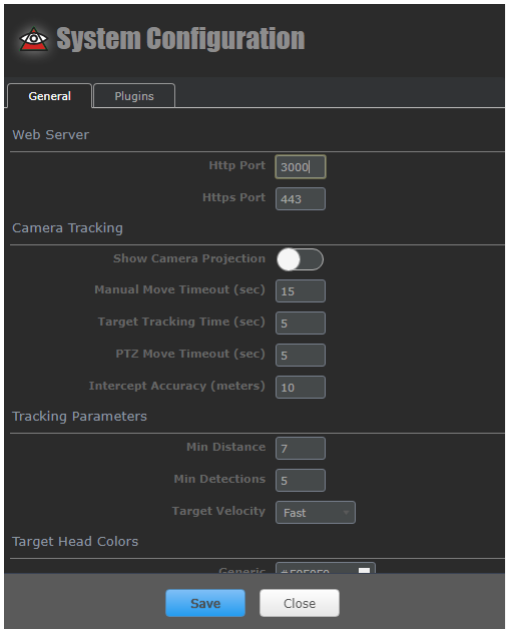

Figure 11: Open Mass system configuration

4. Open **Plugin** tab.
5. Set the following values to the Exacq plugin section:
   - Enable - Set to *true* (to enable the integration).
   - EventServerAddress - Specify the Exacq server IP address; if the MASS and the exacq server are installed on the same computer, use IP address 127.0.0.1.
   - Port - A UDP port of your choice; by default, 1111.
   - Zone Alarm - Define whether to send the event to ExacqVision by leaving the default option true, or to disable event by setting the value *false*.

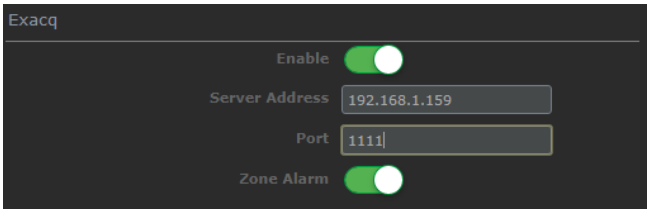

Figure 12: Exacq plugin

6. Save changes.
7. Click "Close" to go back to MASS.

3.2 ENABLING THE INTEGRATION IN EXACQVISION

To enable the integration in exacqVision:

1. Open Exacq server.
2. Click the **Config (Setup) Page** button ().
   The *Configuration* page opens.
3. Go to **ExacqVision Server**.
4. Click on **Serial Ports** to open the *Serial Ports* screen.

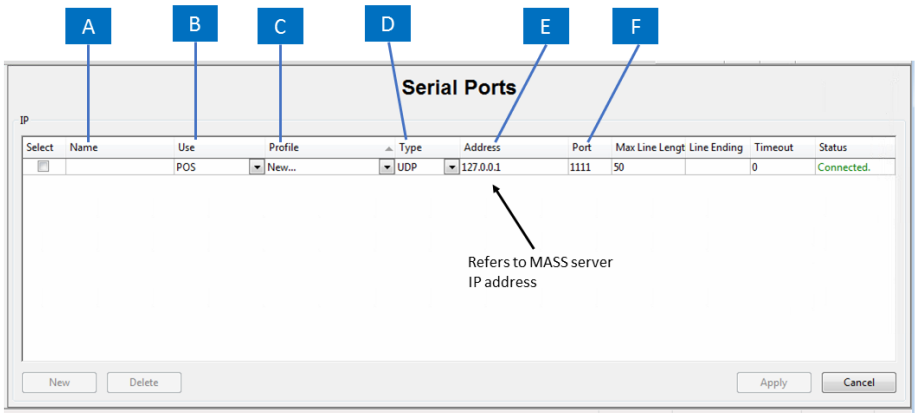

Figure 13: The Serial Ports screen

5. Click **New** to add a new serial port.
6. Carry out the following steps:
   A. In the *Name* column, enter a name of your choice.
   B. In the *Use* column, select *POS* (Point of Sale).
   C. In the *Profile* column, click **New…**
   D. In the *Type* column, select *UDP*.
   E. Use the *Address* column to enter the MASS server's IP address.
   F. Use the *Port* column to enter the port defined in the mass configuration; by default, 1111.
7. Click **Apply**.

The *Serial Profiles* screen opens.

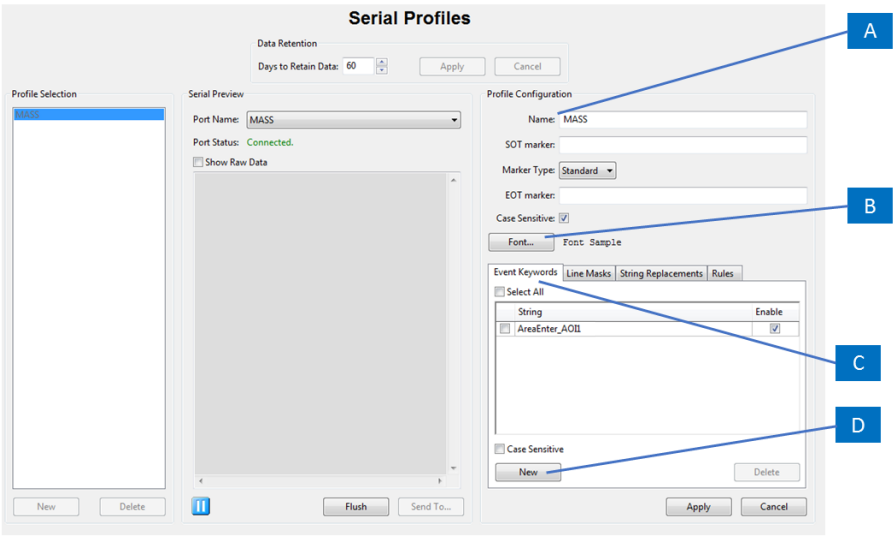

Figure 14: The Serial Profiles screen

8. Carry out the following steps:

   A. Use the *Name* field to enter a name for the new profile. In this example, the name selected for the new profile is *MASS*.
   B. Click the **Font…** button to edit the font as needed.
   C. Click the **Event Keywords** tab.
   D. Click **New** and add the string that will trigger the event.

   • You can add more than one string, based on the template. The strings must be entered by using the following convention:

   < *ZoneAlarm* >_<*AlarmZoneName*>; for example, *ZoneAlarm_AOI*.

NOTE

Ensure that you have enabled zone alarm for the Exacq plugin, as seen in Figure 12:

9. Click **Apply**.

NOTE

Select the check box Show Raw Data if you would like to see the raw data that Exacq is receiving from MASS, thereby ensuring that the integration has been done properly. Once this check box is selected, the grey rectangle shown below the check box in Figure 13 will display all events entering the system in their raw form.

10. Go to ExacqVision Server > **Serial Ports**.

    The newly created profile will appear in the *Serial Ports* list.

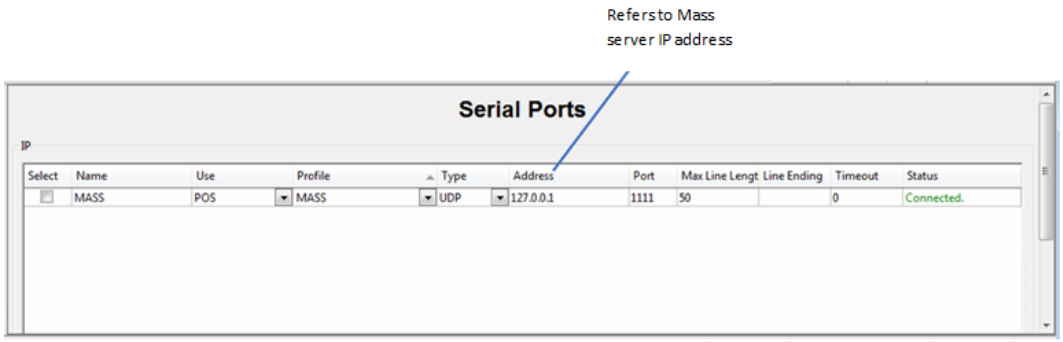

Figure 15: The Serial Ports screen with the newly created profile

11. Go to ExacqVision Server > **Event Linking**.
12. Click **New**.

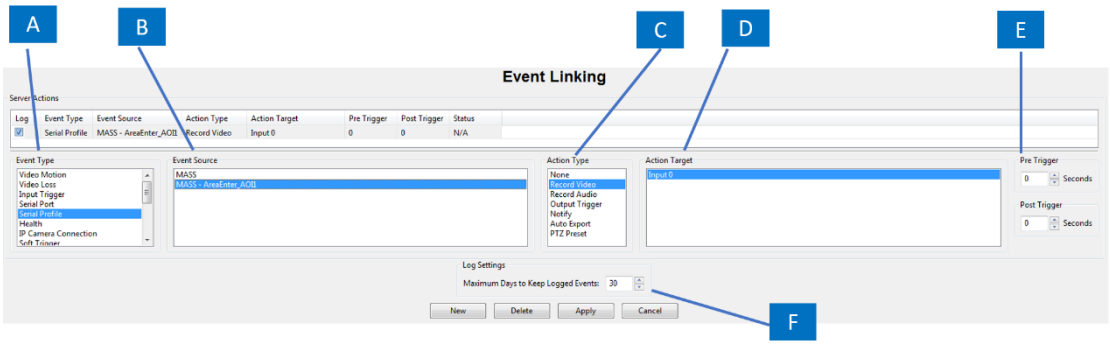

Figure 16: Defining new event linking

13. Carry out the steps specified below:
    A. Use the *Event Type* column to select the type *Serial Profile*.
    B. Use the *Event Source* column to select from the list one of the sources you created.
    C. Use the *Action Type* column to select the type *Record Video*.
    D. Use the *Action Target* column to select a camera type of your choice.
    E. Select *Pre* or *Post* trigger if required.

       Pre and Post triggers are used for triggering certain action types before and after an event takes place. For example, if a car entering a region of interest is set to trigger video recording, you can configure a Pre and/or Post Trigger to capture the video for up to 120 seconds before and/or after the car entered.

    F. Optionally, select the maximum number of days for which events are to be kept in the log.
14. Click **Apply**.
15. Go to **Event Monitoring**.

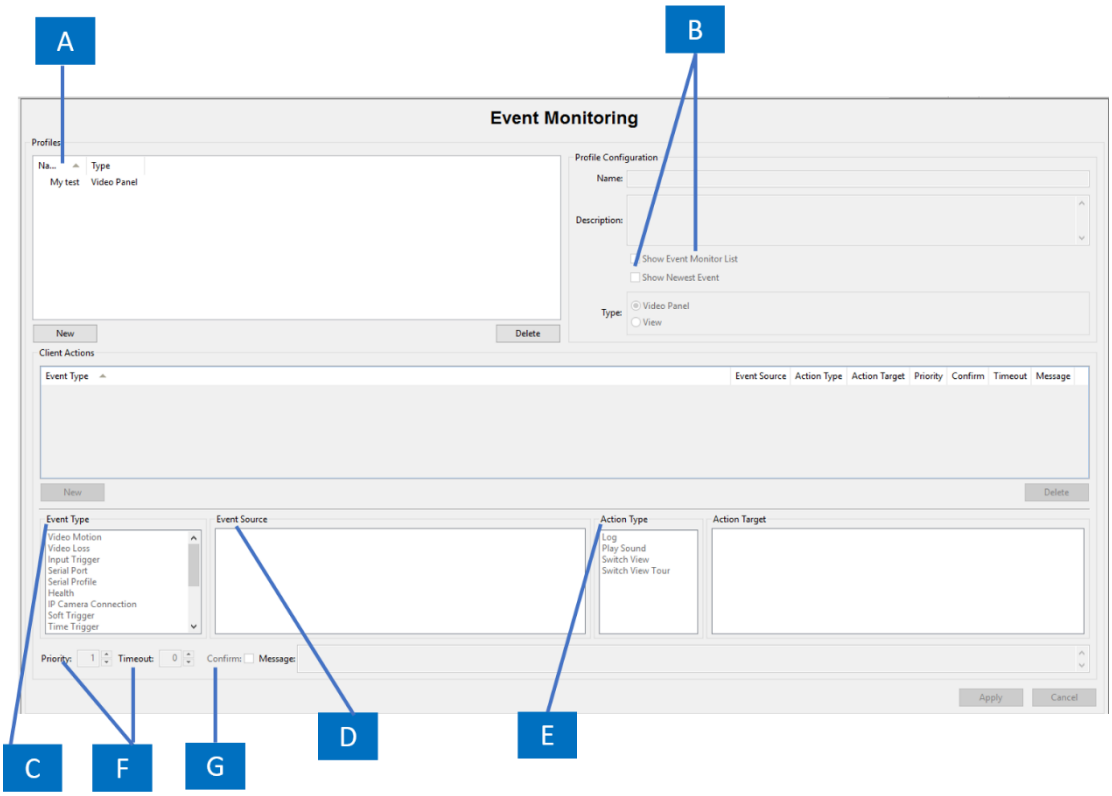

Figure 17: Defining new event monitoring

16. Under the **Profiles** section, click **New**.
17. Carry out the steps specified below:
    A. Under the *Profile Configuration* section, use the *Name* field to enter a name of your choice.
    B. Select the check boxes *Show Event Monitor List* and *Show Newest Event*.
    C. Use the *Event Type* column to select the type *Serial Port*.
    D. Use the *Event Source* column to select from the list one of the sources you created.
    E. Use the *Action Type* column to select the type *Log*.

> **NOTE**
>
> While it is possible to select other types except for *Log*, the selection of other types requires configuring advanced settings and is therefore beyond the scope of this guide.

    F. Optionally, select the priority of the event (by default, 1), and the requested timeout before the event takes place.
    G. Select the check box *Confirm* and enter a message of your choice.
    H. Click **Apply**.

The new profile will now be added to the **Client Actions** section.

3.3 SETTING UP THE WEB VIEW

You can add the Mass as a view in the video panels in the live window.

For adding the Mass to the live window, please carry out the steps specified below:

1. . In the Web Panels window, click New.
2. In the Web Panel Configuration pane, enter a preferred name.
3. In the URL field, enter the IP address of the MASS server. For example: http://127.0.0.1.
4. From the Navigation Style list, select one of the following options:
    A. Display only: You can interact with the web page, but cannot redirect to another page.
    B. Filtered: You can interact with the web page, and access any configured links. For more information on how to add a link, see Adding a web site navigation style filter.
    C. Fully Navigable: Has the same functionality as a functioning web browser.
5. From the Auto Refresh Rate list, select how often you want the web site to refresh.
6. Click **Apply**.

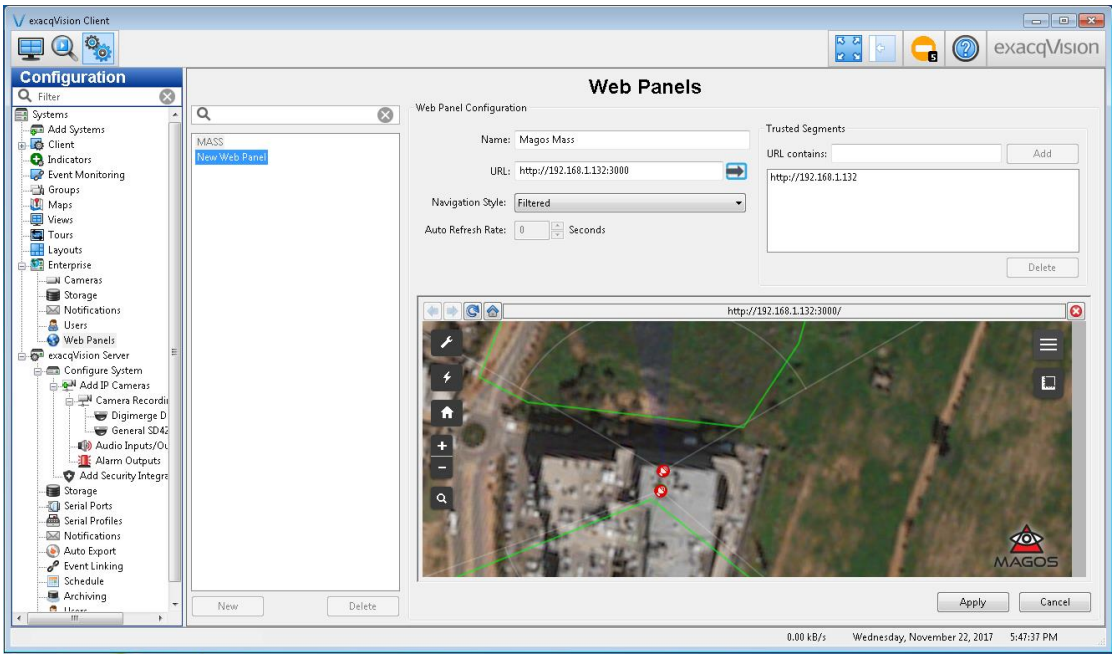

Figure 18: Adding Mass Web view

NOTE

The Web View feature is available for Exacq Enterprise version 8.8 and up.

3.4 SETTING UP THE VIEW WINDOW

In the live window, you can create a view with the entire solutions: Mass, Cameras, Events.

To create a view, please carry out the steps specified below:

1. In the Live window, select a camera layout from the toolbar.
2. From the navigation tree, drag the cameras and Mass web view.
3. Right click on a preferred tile and then select Mass Event monitoring list to open the Mass alerts.
4. From the navigation tree, click Save View.
5. Enter a name and description of the view in the Save View window, and then click Save.

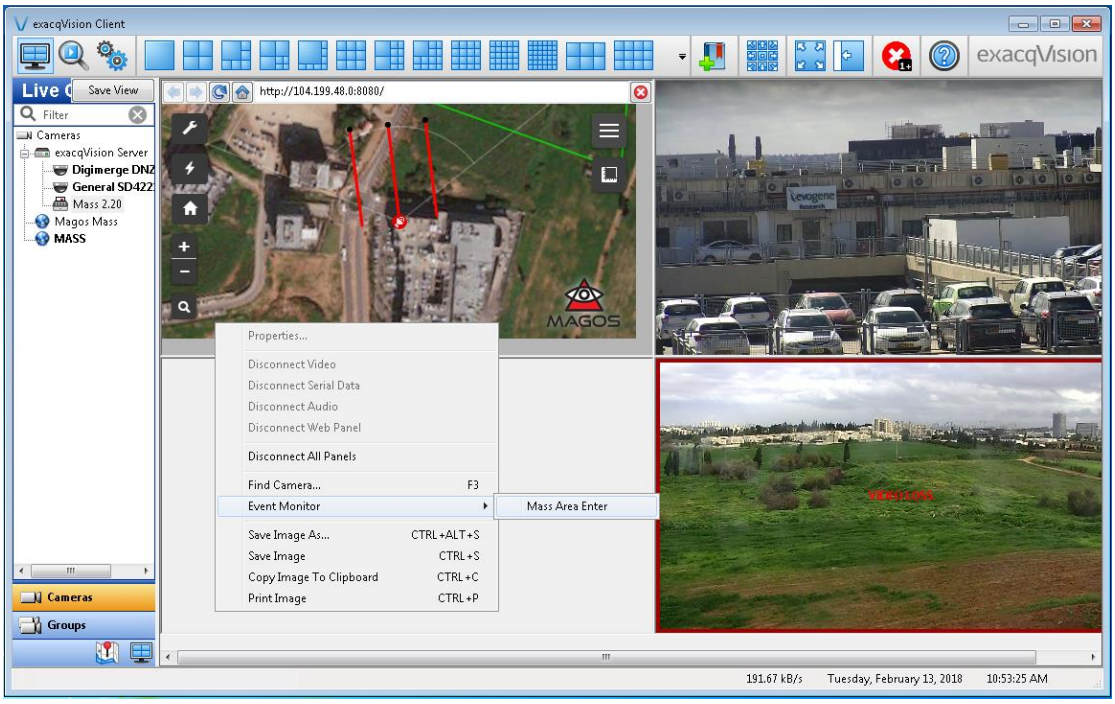

Figure 19: Adding Mass Event Monitoring List

At this point, ExacqVision is integrated with MASS. All events configured to be displayed in ExacqVision will appear at the Event Monitor List in the ExacqVision Client live page.

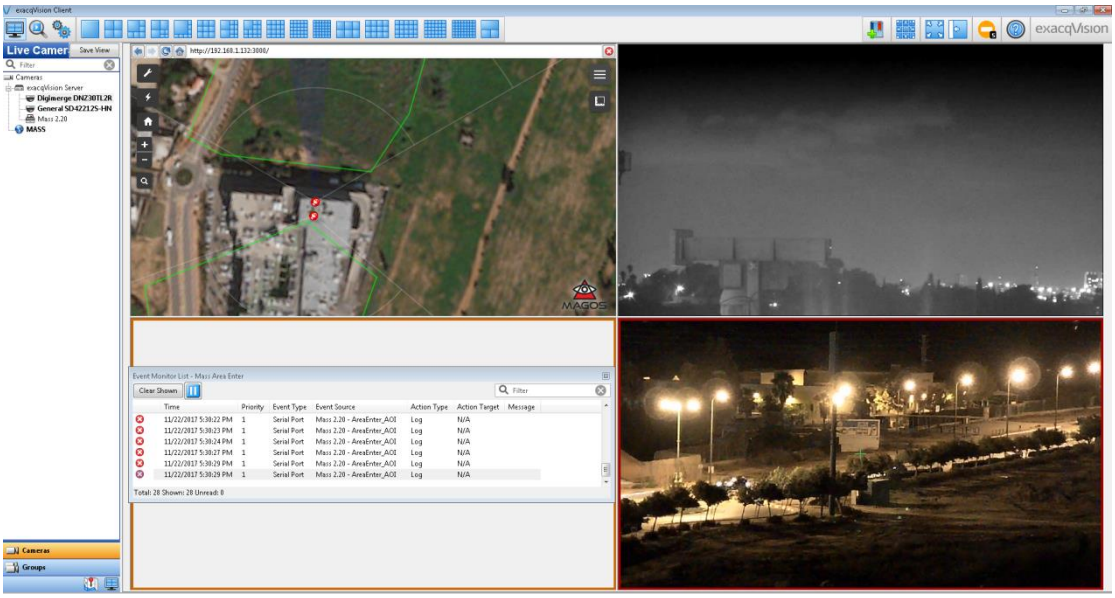

Figure 20: View window with Mass Events, Cameras and Mass web