



# **Neuroo Miletstone Integration User Guide**

Version 1.0.0

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# 1 Introduction

This document aims to provide a comprehensive step-by-step guide to integrate Neuroo's AI application with an existing Milestone XProtect installation.

Upon completing the steps described in this document, users will have successfully integrated Neuroo's AI application with their existing XProtect installation, including importing cameras from XProtect to be analyzed in Neuroo's application and receiving analytical events and alarms for specific detections in XProtect Smart Client.

## 2 Prerequisites

Before following the steps described in this document, you should make sure that your infrastructure meets the necessary requirements listed below :

- You have access to a fully installed, configured and working Milestone XProtect installation with one of the following supported product : XProtect Essential+, XProtect Express+, XProtect Professional+, XProtect Expert or XProtect Corporate.  
The version of the XProtect software should be 2020R3 or higher.
- You have access to a fully installed, configured and working Neuroo installation.  
Neuroo's software should be in version 2.13.0 or higher.
- You have all the required accounts with sufficient rights to configure Milestone XProtect Management client, Neuroo's application interface and Neuroo's cluster administration tool (Rancher).

## 3 Configuration in Milestone XProtect Management Client

### 3.1 Events configuration

We will start by defining, in the XProtect Management Client, the events we'll want to receive from Neuroo's application.

An event is a predefined incident that can be configured to trigger an alarm. Events are either predefined system incidents or user-defined events, for example analysis events or generic events. Events are not necessarily related to an alarm, but they can be.

To configure a new event in XProtect Management Client, in the main menu, go to "Rules and events" then click on "Analytical Event" (scroll down with the "+" on the left side of the section) as shown in Figure 1.

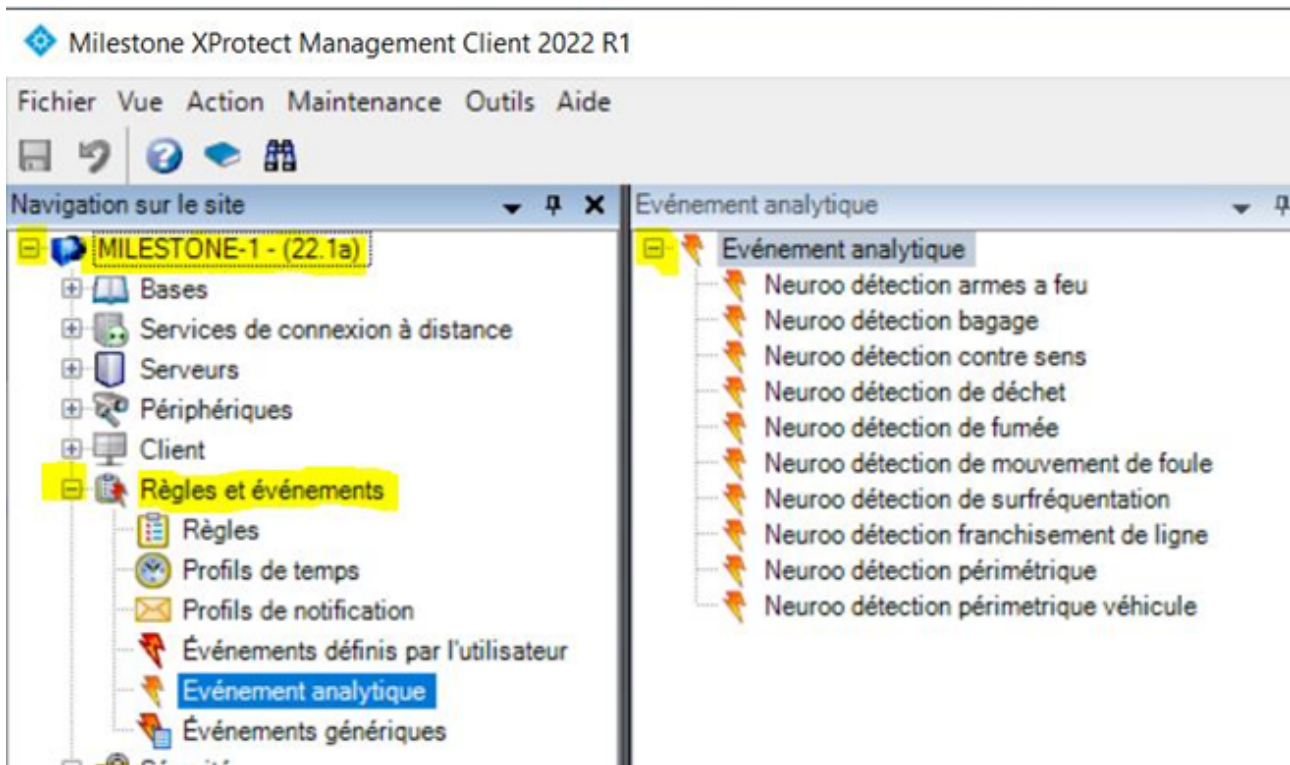


Figure 1: Navigate to the event section.

Right click on "Analytical event", then click on "Add new".  
 In the "Name" section, specify the name you want for this event. For example: "Neuroo firearms detection" (Figure 2). Optionally, you can add a description.

The screenshot shows the 'Renseignements Événement analytique' form. The 'Nom' field contains the text 'Neuroo détection arme a feu'. The 'Description' field is empty. A button labeled 'Événement test' is visible on the right side of the form.

Figure 2: Create an event.

Save the modifications using the save icon at the top left of the window. Repeat the same procedure with each of the desired detections.

## 3.2 Alarms settings

It is possible to configure almost any type of incident or technical problem - event - to trigger an alarm.

*Note: The most common use case for alarm configuration is to display the video that triggered the alarm, starting 10 seconds before the event and ending 15 seconds after. This video will be played in a loop.*

### 3.2.1 Permanent alarms

In the main menu, click on "Alarms" then "Alarm Setting" (scroll down with the "+" to the left of the section). Now, right click on "Alarm Setting" then "Add New" (Figure 3).

Check the "Enable" box and specify the name you want for your this alarm. For example: "Neuroo Firearms Detection".

In the "Instruction" section, add a message to display whenever the alarm is triggered.

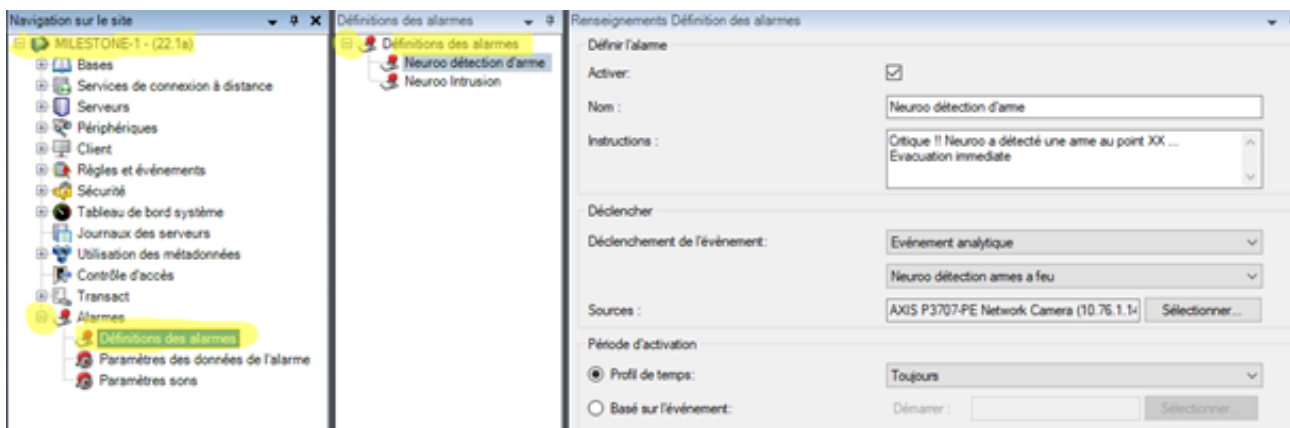


Figure 3: Configure a new alarm.

Specify the event that will trigger this alarm. Choose "Analytical event" then the corresponding event that will be linked to your alarm (that you defined earlier).

The "Source" field corresponds to the equipment that will trigger the event, then the alarm. Neuroo sends events to Milestone with a reference to the relevant camera. You can, thus, select all cameras that are configured in Neuroo or "all cameras" in the tab "server" (Figure 4). Milestone will be able to display the right video stream whenever an alarm is triggered.

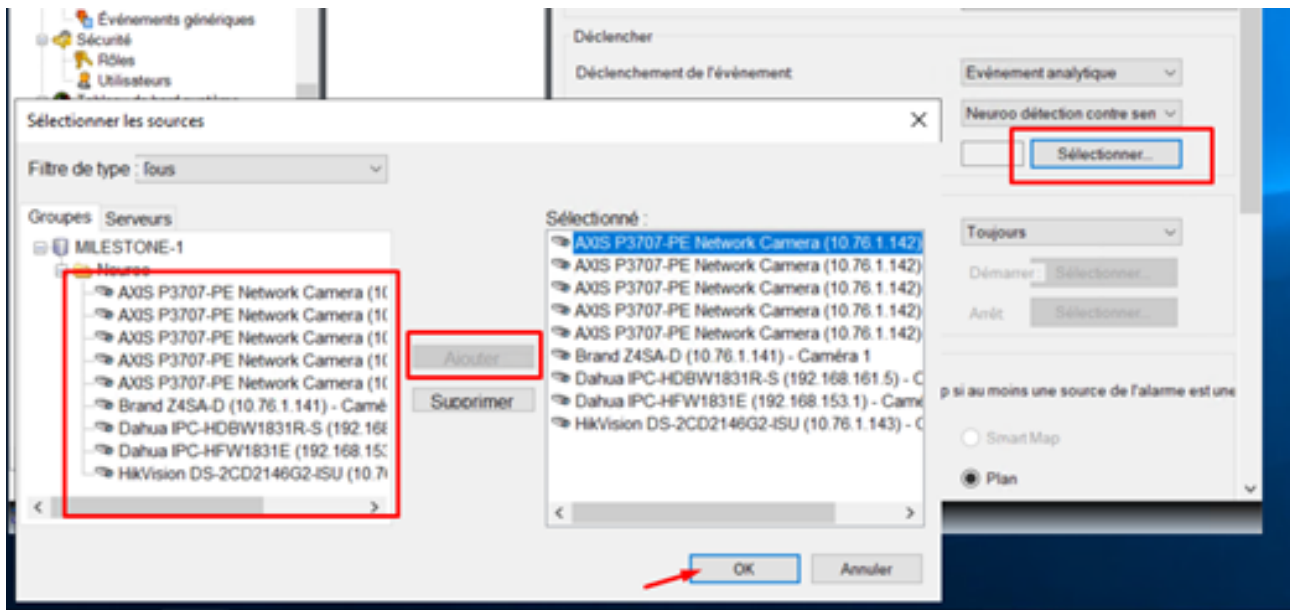


Figure 4: Select the alarm source.

Then click on "OK" and in "Activation period" select "Time profile": "Always" and validate the changes by clicking on the save icon at the top left. Perform the same operation for the different alarms you want to set up.

### 3.2.2 Alarms on a time range

If you want to trigger alarms only for certain time slots and only for certain cameras, then you need to create a time profile. In the main section, unfold "Rules and events" then click on "Time Profiles". Right click on "Time Profiles" and click on "Add a time profile". Follow one of the procedure below, depending on which one matches your use case.

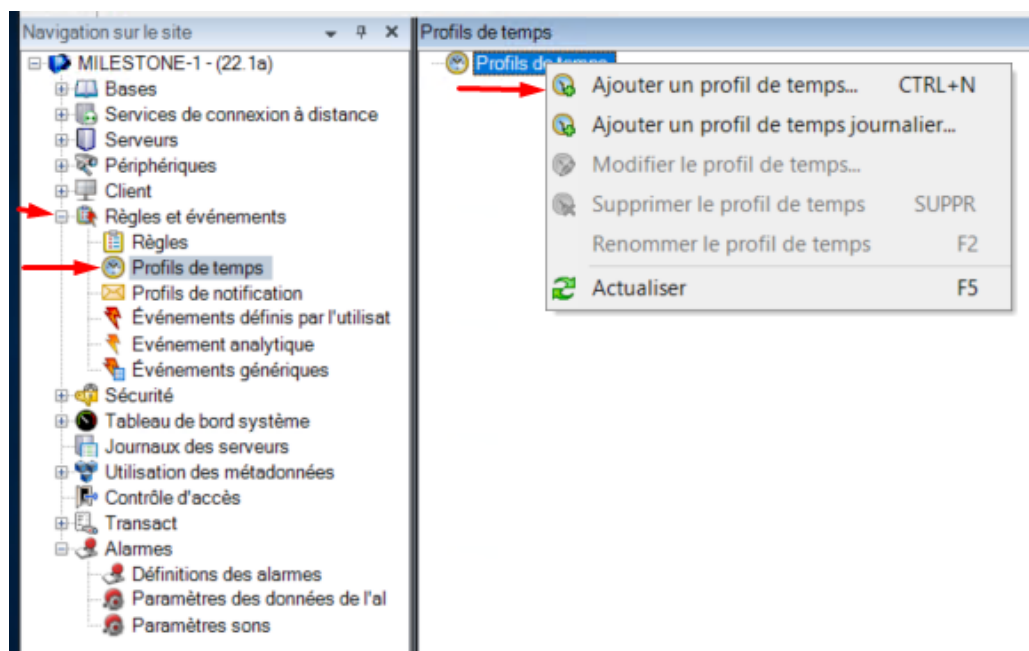


Figure 5: Create a time profile.

### 3.2.3 Unique time range

Put the name you want in "Name", optionally add a description. Right-click on a time and then "Add a unique time range".

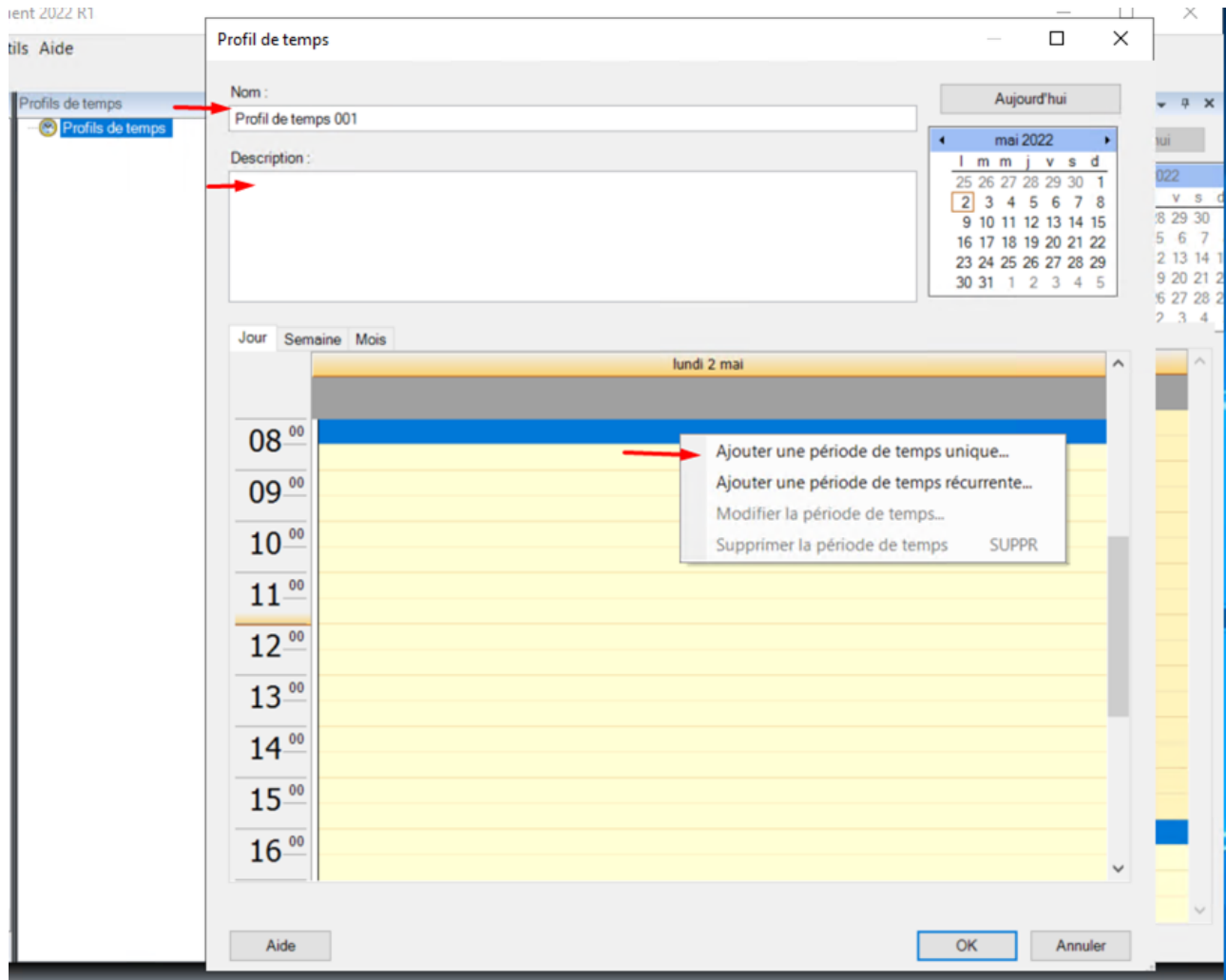


Figure 6: Create a unique time range.

In "Object" choose the title that will be displayed to the right of the hour if "Whole day" is not selected, otherwise it will be displayed below the date of the day.

"Start time" corresponds to the start date and its time on the right, "End time" corresponds to the end date and its time on the right, here the selection of the box "Whole day" prevents the choice of a precise time, after configuration, press "OK" and then press "OK" again.

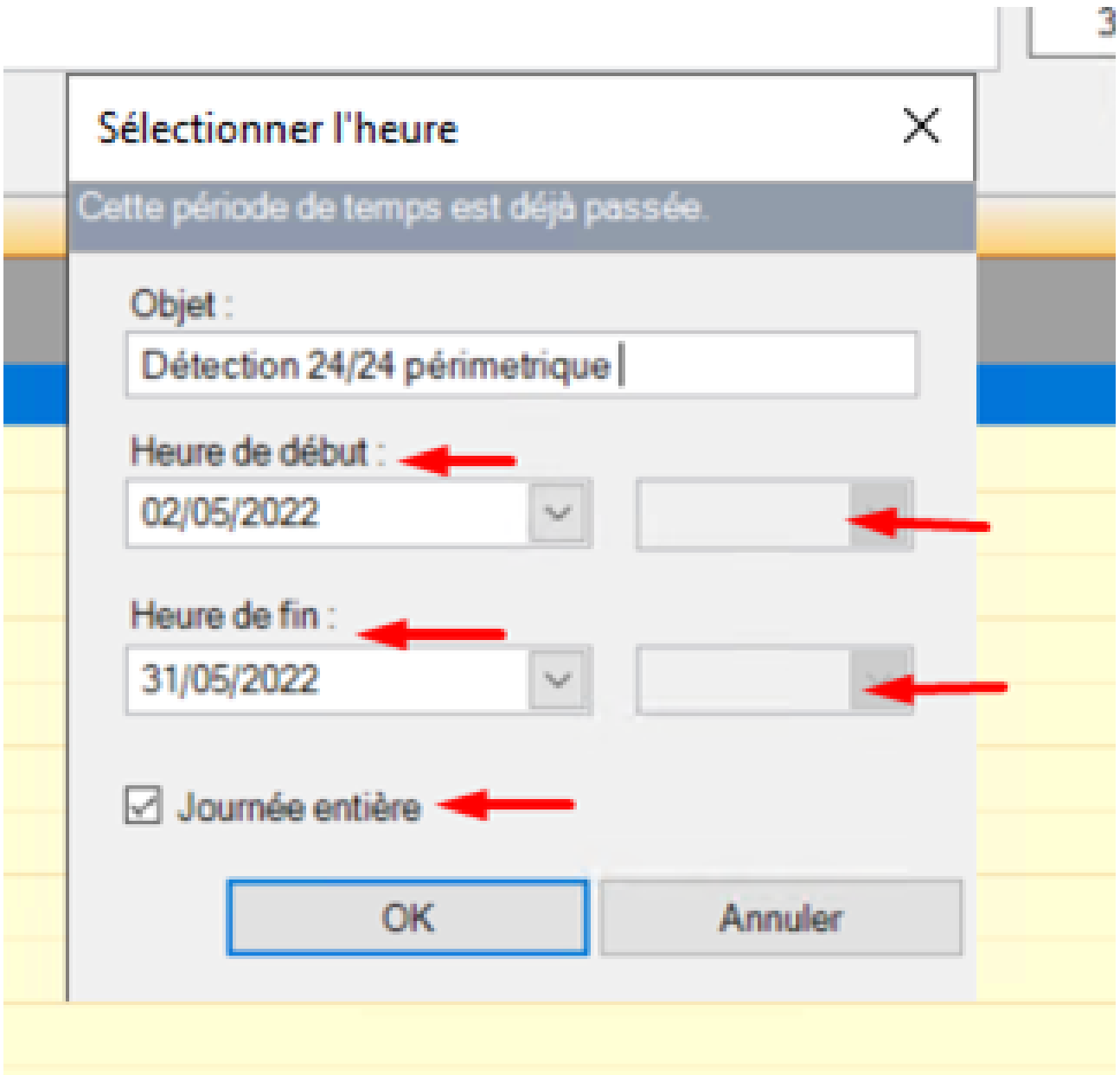


Figure 7: Select the time.

The time range is created. Create an alarm as seen previously.

By default, select all the different sources for the alarm. If the activation time range for an alarm differs from one source to another, select the relevant source.

*Note: Remove the particular source from the global alarm in "Permanent alarm" by selecting it and pressing "delete".*



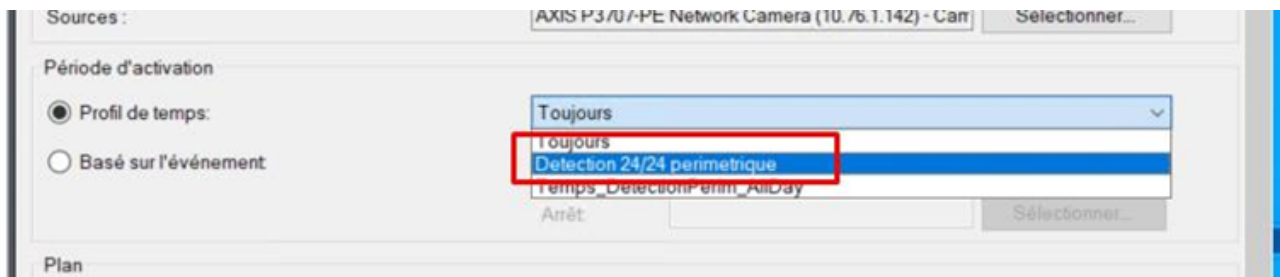


Figure 8: Apply the time range to the alarm.

Choose the time profile previously created in "Activation period".  
Validate the changes by clicking on the save icon at the top left. The alarm is now created and depends on your time range.

### 3.2.4 Recurring time range

Put the name you want in "Name", optionally add a description. Right-click on a time and then "Add a recurring time range". Select the periodicity.

Figure 9: Select the periodicity.

Press "OK" then press "OK" again. The time range is created. Now create an alarm as seen previously.

## 4 Configuration in Rancher

Connect to the Rancher interface provided by the Neuroo server. Click on the name of your cluster, usually "neuroo" and click on the "Default" project. Now go to "Resources" > "Workloads" (Figure 10).

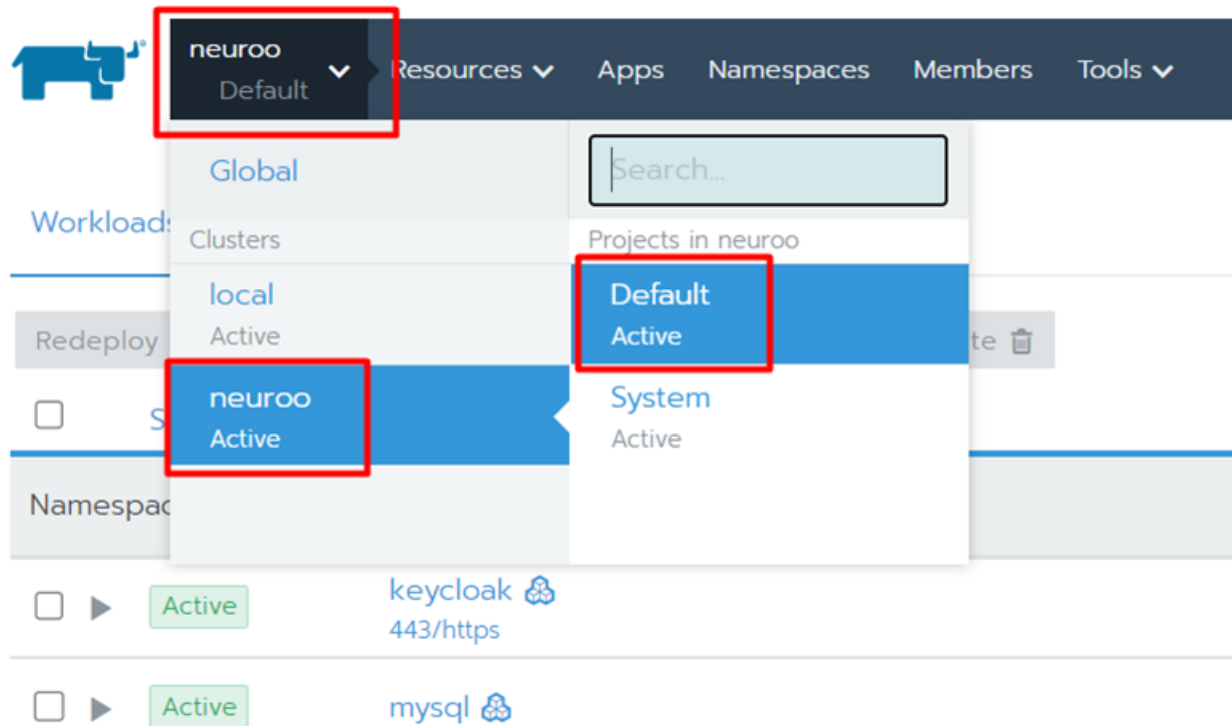


Figure 10: Select your cluster's default project.

To edit the configuration of the alarms, click on the three small dots in the "neuroo-api" row, then click "Edit".



Figure 11: Edit the configuration for "neuroo-api".

Unfold the "Environment Variables" section. Scroll down and look for the "MILESTONE\_EVENT\_" variables.

MILESTONE_EVENT_ABANDONED_LUGGAGE	=	e.g. bar	-
MILESTONE_EVENT_CROWD_MOVEMENT	=	e.g. bar	-
MILESTONE_EVENT_DRIVING_DIRECTION	=	e.g. bar	-
MILESTONE_EVENT_GUN_DETECTION	=	e.g. bar	-
MILESTONE_EVENT_LINE_CROSSING	=	e.g. bar	-
MILESTONE_EVENT_OVERCROWDING	=	e.g. bar	-
MILESTONE_EVENT_PERIMETER	=	e.g. bar	-
MILESTONE_EVENT_SMOKE	=	e.g. bar	-
MILESTONE_EVENT_TRASH	=	e.g. bar	-
MILESTONE_EVENT_URL	=	e.g. bar	-
MILESTONE_EVENT_VEHICLE_PERIMETER	=	e.g. bar	-

Figure 12: Milestone events.

Configure the variables to match the events you previously defined in XProtect Management Client.

**!** "MILESTONE\_EVENT\_URL" is in the format `http://<IP>:<PORT>` where <IP> is the IP of the Milestone XProtect Event Server and <PORT> is the port of the Milestone XProtect Event Server.

Scroll down and click the "Save" button to apply the changes.

## 5 Configuration in Neuroo

### 5.1 Import cameras from Milestone

Import cameras from your Milestone installation for them to be analyzed in Neuroo. In order to do so, follow the steps below :

- Connect to Neuroo with a user that has access to the "Camera management" section
- In the "Settings" section in the top right corner, click "Camera management" > "Add a new camera"
- In the "Type" field, select "Milestone"

Fill in the form with the required information :

Field	Value
<b>Name</b>	The name of the camera you want to add
<b>Type</b>	Milestone
<b>Status</b>	Whether the camera is activated or not. By default, choose activated
<b>Description</b>	A description of the camera
<b>Camera ID</b>	The ID of the camera inside Milestone. This information can be found in XProtect Management Client
<b>Connection Type</b>	The type of connection to be used when accessing the video stream. If the user you will use to access the stream is in an Active Directory, select "API server", otherwise if the user is a local user, select "Manager server"
<b>URL</b>	IP address of the XProtect Management Server
<b>Recording server URL</b>	IP address of the XProtect Recording Server that handles the camera
<b>Recording server Port</b>	Port of the XProtect Recording Server, by default : 7563
<b>Domain Name</b>	Domain name to which the user belongs
<b>Username</b>	Username of the user used to connect
<b>Password</b>	Password of the user used to connect

## Ajouter une caméra

Caméra

Tags ⚠

Nom \*

Type \*

Milestone

▼

Statut \*

▼

Description \*

Identifiant de la caméra \*

Type de connexion \*

☐ Serveur API

☒ Serveur manager

Serveur manager URL \*

[Annuler](#)

Tester la connexion

Valider

Figure 13: Insert Milestone camera.

Click the "Validate" button to insert the camera.

## 5.2 Apply filters to cameras

To configure and apply filters to a camera, please refer to the specific documentation provided by Neuroo. If you do not have the required documents, please reach out to your reseller.

## 6 Validation in Milestone XProtect Smart Client

Connect to your XProtect Management Server through the XProtect Smart Client. Click on "Alarm Manager" to see the alarms reported in Milestone.

If the Neuroo live feed shows a detection on a Milestone camera, then the alarm should appear on this screen.

If the list of alarms does not appear, go to "Configuration" (top right), then check the properties box, pull down the menu and choose "Alarm" in data source, set the maximum number of rows to be extracted and check the display navigation tree box. Also, select "Event" in data source to check the link between an alarm and an event.