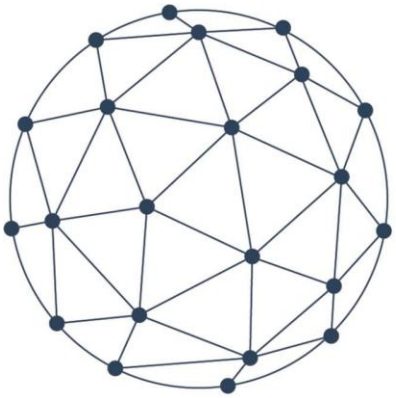

SGSE

Soluciones Globales de Seguridad Electrónica

KUNAK PLUGIN

Advanced user guide

User Guide for Installing the Kunak Plugin and Interacting with Probes in Milestone XProtect

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1. Versions

Version	Date	Author	Comments
1.0	27/03/2023	JCR	Initial version

2. Introduction

The objective of this document is to explain the functionality, installation, and usage of the plugin solution called "SGSEKunak" for use in Milestone XProtect.
This solution consists of a plugin that allows monitoring and interaction with the Milestone software included in the solution, from the user interface and the working environment of the Milestone XProtect® platform.

The "SGSEKunak" plugin application is specifically designed to provide the management procedure from the Milestone XProtect software to Kunak sensors (Temperature, Humidity, Pressure, Wind Speed, Battery, Charge, CO_GC, CO_GCc, CO2_GCc, Humidity_ext, ĮAeq, O_GC, O_GCc, O2_GCc, Ox_GCc, O3_GC, Temp, Temp_ext, W_Speed_AVG, W_Speed_MAX, W_Vane_AVG, Dew_Point, etc.). It acts as the bridge between the Milestone system and Kunak measurement devices.

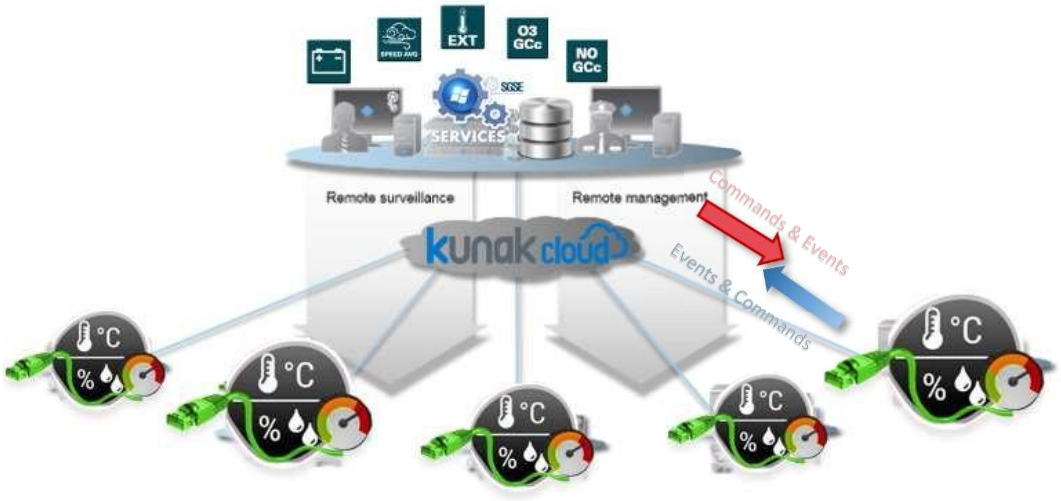
The plugin enables interaction with data collected from Kunak sensors through the Milestone Smart Client application. Additionally, it allows interaction with devices for their configuration via the XProtect Management application. The user can configure alarms for these events in the Milestone Management Client.

Simplicity: When the plugin establishes a connection with the sensors, it can retrieve the configuration data of the probe and include it as part of the XProtect devices, incorporating descriptive text and all relevant probe data. Only four parameters need to be entered: IP, port, username, and password.

This way, management starts within the XProtect system and ends at the PROBE devices. The software sends and receives relevant data (alarm, pre-alarm, disable, enable, etc.) to facilitate interaction between the two systems, XProtect (Milestone) and PROBE, creating a unified system environment.

3. Architecture

The Plugin + Service and the sensors communicate using the Third-Party Protocol. The plugin can manage the states of the sensors and their elements, such as maximum temperature, minimum wind speed, etc. In essence, it listens to sensor events such as failures, alarms, etc. When an event is triggered, the Plugin and its service communicate it to Milestone. Then, based on the configured settings, Milestone triggers an alarm and also highlights the event's source element on a map.



The solution consists of a service that can be installed on any machine or within Milestone itself, a plugin responsible for managing the functionalities implemented in Milestone, and a database where the collected data and configuration are stored.

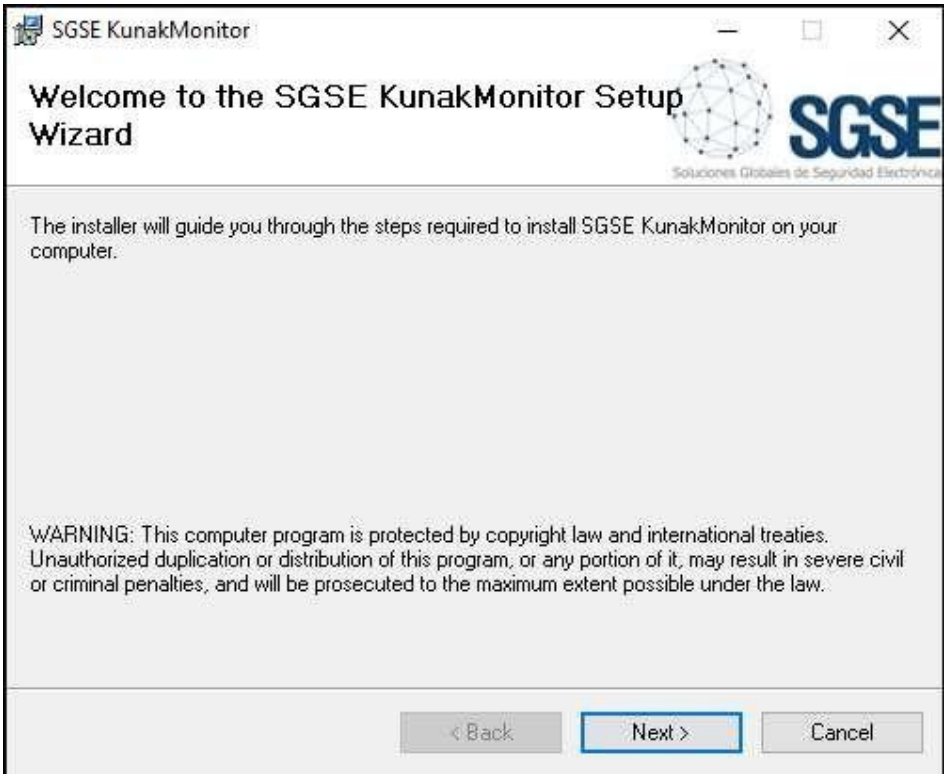
Thanks to this architecture, communication with the sensors allows data retrieval and interaction from anywhere in the world.

4. Installation

The plugin consists of two applications: one is the service responsible for communicating with the sensors and storing the information for later processing. The other is MIPS, which handles internal interactions within Milestone.

MIPS Installation

To install the plugin, simply run the installer "SGSE_Kunak_MIPS_Installer.msi" provided by SGSE with administrator privileges. The process is automatic. During the different installer screens, you will only need to accept the End User License Agreement, a mandatory condition for using the plugin.



Click "Next >" to begin the installation process.

You must read and accept the End User License Agreement to proceed with the installation.

Click "Next >" to proceed and install the plugin files.

If Windows User Account Control is enabled, you may need to allow the installer to proceed with the installation.

Once the process is complete, click "Close". The plugin is now installed!

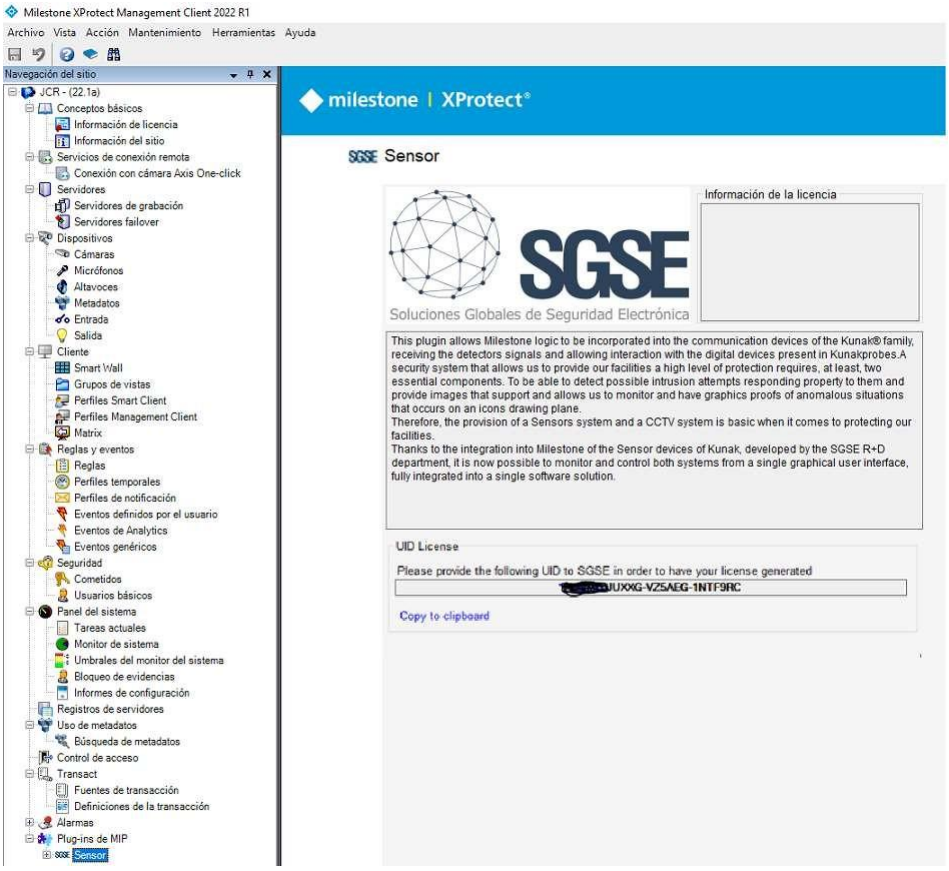
Plugin Licensing Process – Obtaining a UID

The plugin requires a license to function. Each sensor must have a license. These licenses are generated by SGSE. Below is the procedure to obtain the license file corresponding to the purchased license.

To generate the license, you must provide the corresponding UID. This UID is a unique identifier to which the license is linked.

To obtain this code, open XProtect® Management Client after installing the plugin and go to the corresponding menu option. On that screen, if the plugin is not licensed, you will see the associated UID.

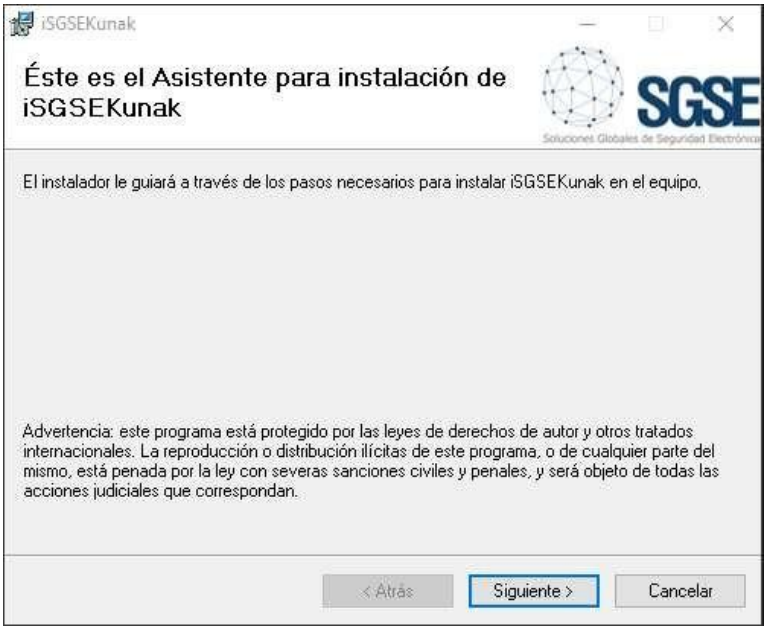
The configuration user must provide this UID to SGSE, and we will supply the license.



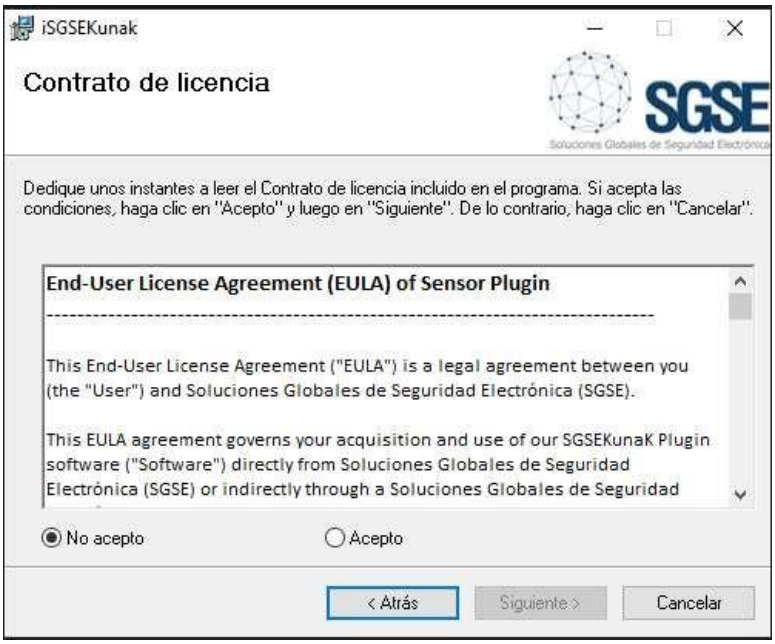
Once the license is installed, the Plugin will be available.

Service Installation

To install the service, simply run the installer "iSGSEKunak.msi" provided by SGSE with administrator privileges. The process is automatic.

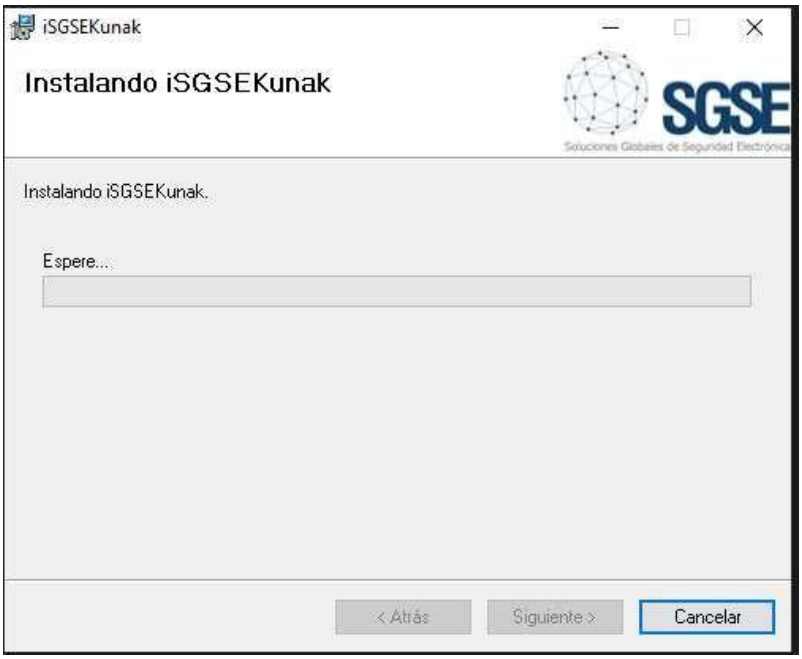


Click "Next >" to begin the installation process.



You must read and accept the End User License Agreement to proceed with the installation.

Click "Next >" to proceed with the installation.



If Windows User Account Control is enabled, you may need to allow the installer to proceed with the installation.

Once the process is complete, click "Close". The service is now installed!

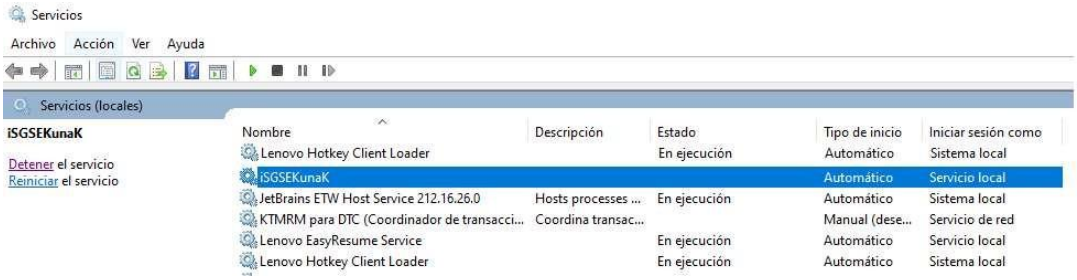
5. Configuration

The service and MIPS have been designed to simplify the configuration process as much as possible, ensuring that the setup is as easy as possible for the installer.

If the MIPS, the service, and the license have been installed correctly, the user must follow these steps:

Configuring the Service

The service starts automatically, so the first step is to stop it. Navigate to the Service Manager and stop the service.



Verify that the service is stopped.

Once the service is stopped, open File Explorer and go to the directory: “C:\Program Files (x86)\SGSE\iSGSEKunaK” Then, edit the SGSEKunak.exe.config file, where you will find the following fields:

```
<userSettings>
  <SGSEKunak.Properties.Settings>
    <setting name="Url_prefix" serializeAs="String">
      <value>https://sgse.com/openAPIv0/v1/rest</value>
    </setting>
    <setting name="Url" serializeAs="String">
      <value>https://sgse.com</value>
    </setting>
    <setting name="User" serializeAs="String">
      <value>sgse</value>
    </setting>
    <setting name="Password" serializeAs="String">
      <value>sgsex@sgse@2023</value>
    </setting>
    <setting name="ConnectionSql" serializeAs="String">
      <value>Data Source=Sgse; Initial Catalog=Survillance;User ID=sa;Password=sgse2017;Persist Security Info=False;</value>
    </setting>
    <setting name="minutos" serializeAs="String">
      <value>10</value>
    </setting>
```

Each tag or field such as Url_prefix, Url, User, Password, ConnectionSql, and Minutes must be set with the corresponding values. For example, in the case shown below, Url, User, and Password correspond to the connection details for the sensors.

```
<setting name="Url_prefix" serializeAs="String">
  <value>https://sgse.com/openAPIv0/v1/rest</value>
</setting>
<setting name="Url" serializeAs="String">
  <value>https://sgse.com</value>
</setting>
<setting name="User" serializeAs="String">
  <value>sgse</value>
</setting>
<setting name="Password" serializeAs="String">
  <value>sgsex@sgse@2023</value>
</setting>
```

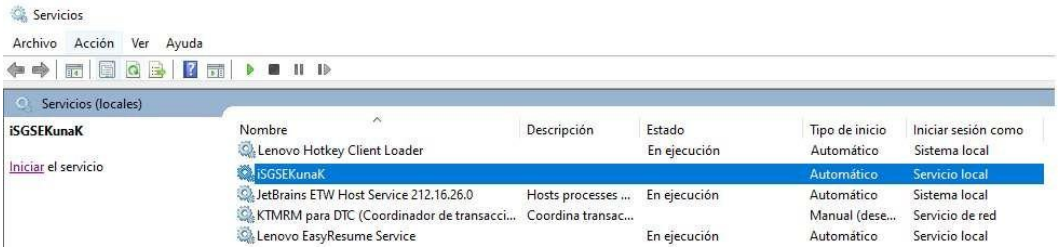
Next, configure the connection details for the SQL Server, considering that the database will be "Surveillance".

```
<setting name="ConnectionSql" serializeAs="String">
  <value>Data Source=Sgse; Initial Catalog=Survillance;User ID=sa;Password=******;Persist Security Info=False;</value>
</setting>
```

Finally, set the time interval between sensor readings. In this example, the interval is set to 10 minutes.

```
<setting name="minutos" serializeAs="String">
  <value>10</value>
</setting>
```

Save the data and proceed to start the service.

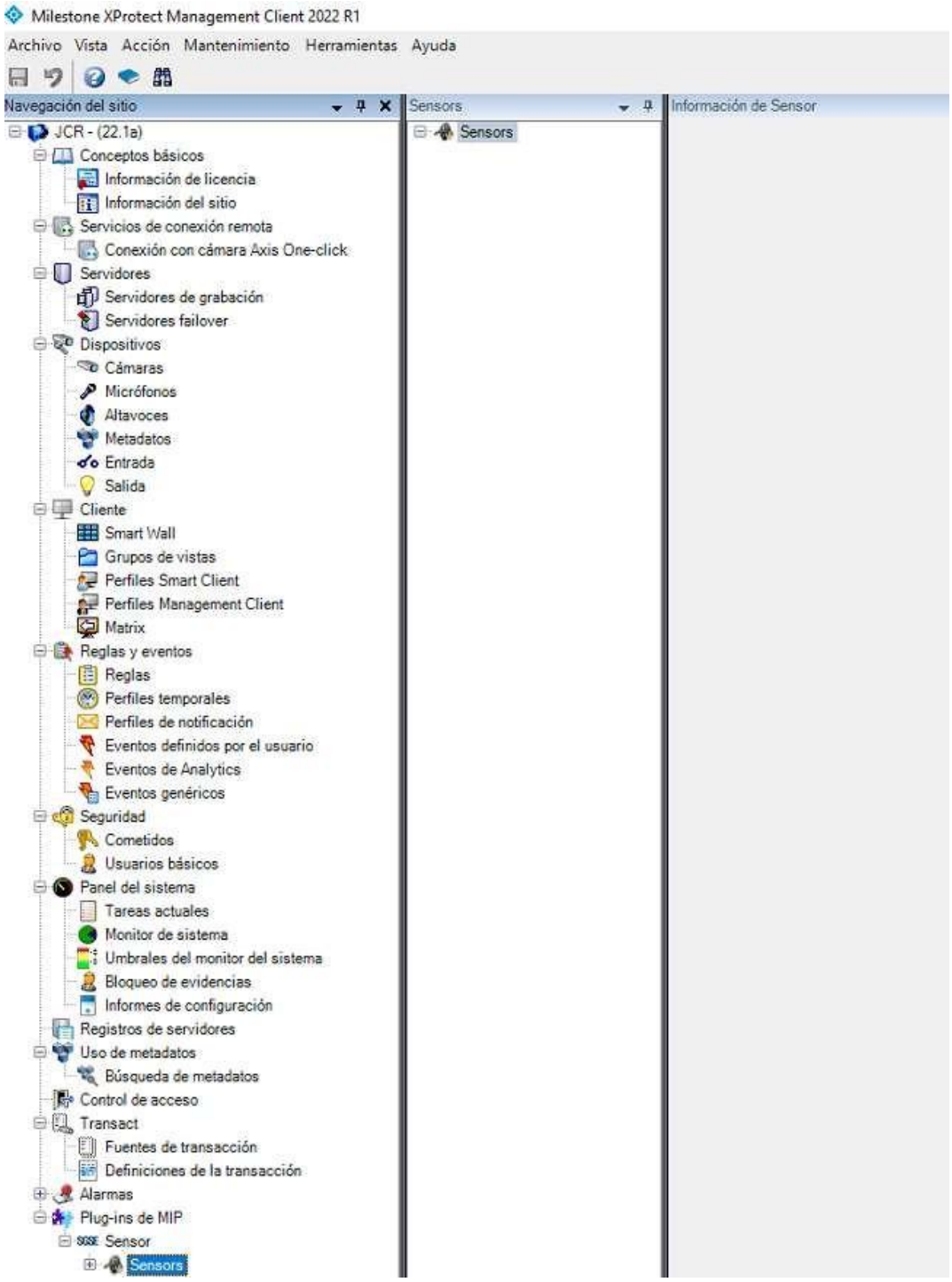


Configuring the SGSE Kunak Plugin

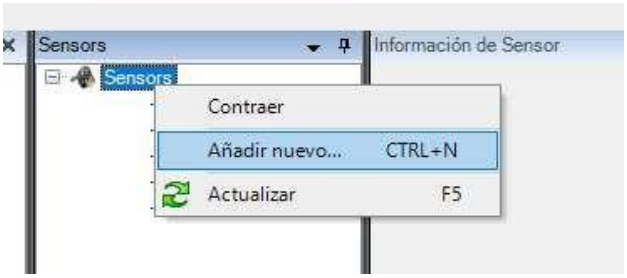
To configure a PROBE in Milestone, the procedure is extremely simple.Abra la aplicación

Open the XProtect Management application and select the corresponding option.

The following screen will appear.



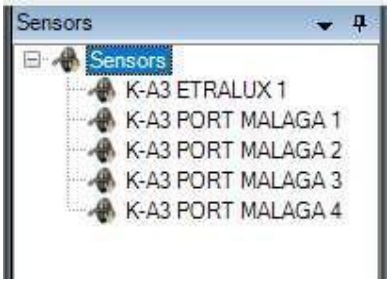
Position yourself in the second column, right-click, and you will see the following content:



Select Add New.

When selecting New, a new management interface will appear, where you must enter the required data: Connection URL, Username Password.

Click Accept, and if the data is correct, the sensors associated with your sensor management account will appear.

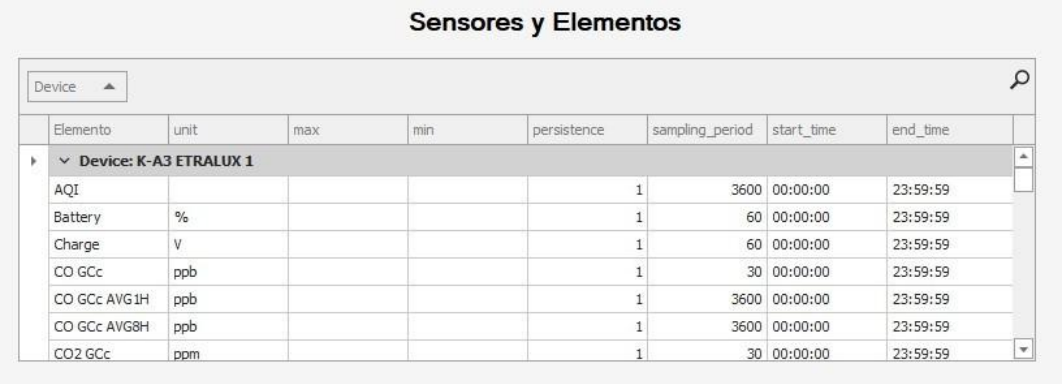


Clicking on any of them will open a configuration environment where you must fill in the URL, User, and Password fields under the Configuration block. These details are necessary to extract the configuration parameters of the different sensors.

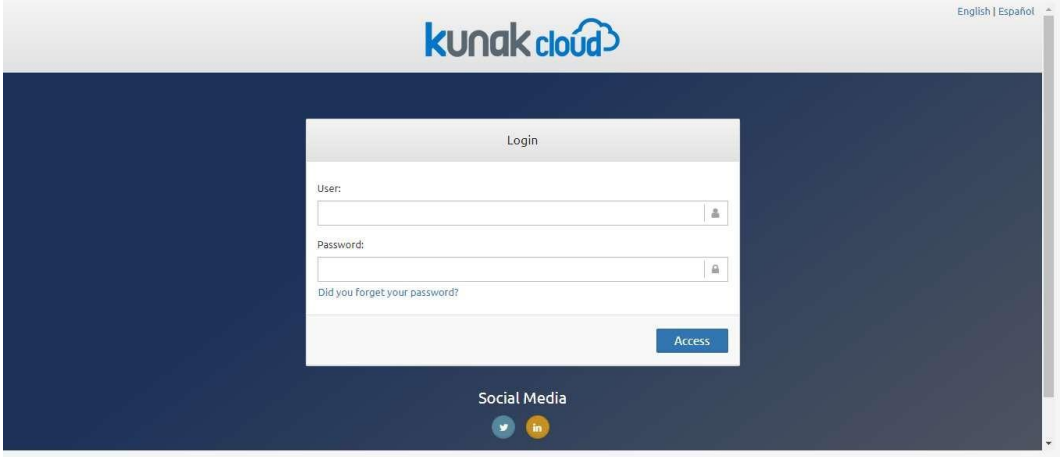
Press the Synchronize button to retrieve the configuration data. After synchronization, you can review all the sensor parameters under the Sensors and Elements section.

Verify that the data obtained after synchronization matches your expectations using the table under the Sensors and Elements heading.

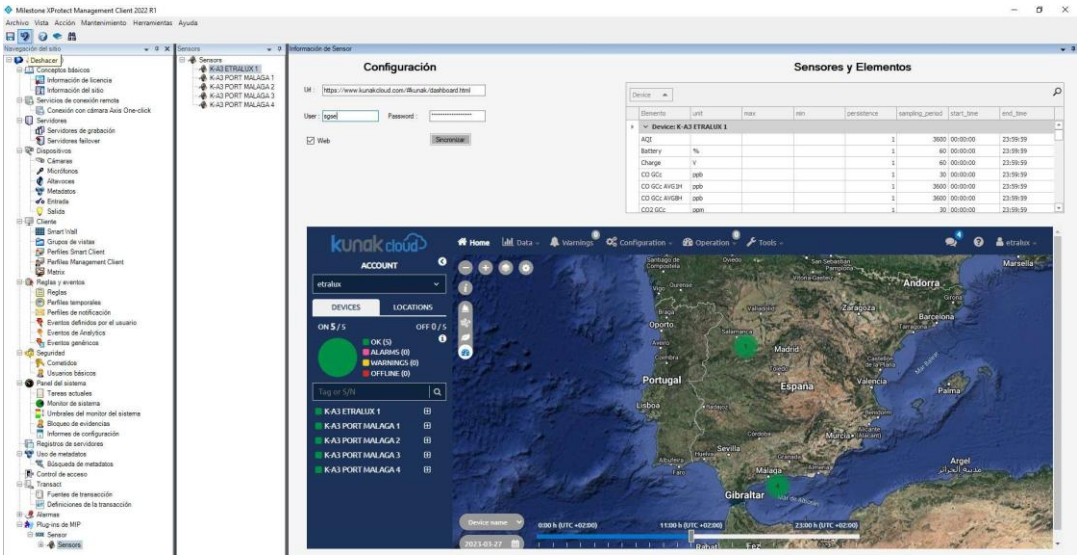
This table allows for custom and general searches. Clicking on any of the listed sensors will display a table with the values of the different elements that make up the selected sensor.



The parameterization of each sensor element must be done within the Kunak environment. For this, the Kunak Cloud block is available. Enter your username and password to proceed with the device configuration.



After entering the User and Password, click the Access button to configure your sensors.

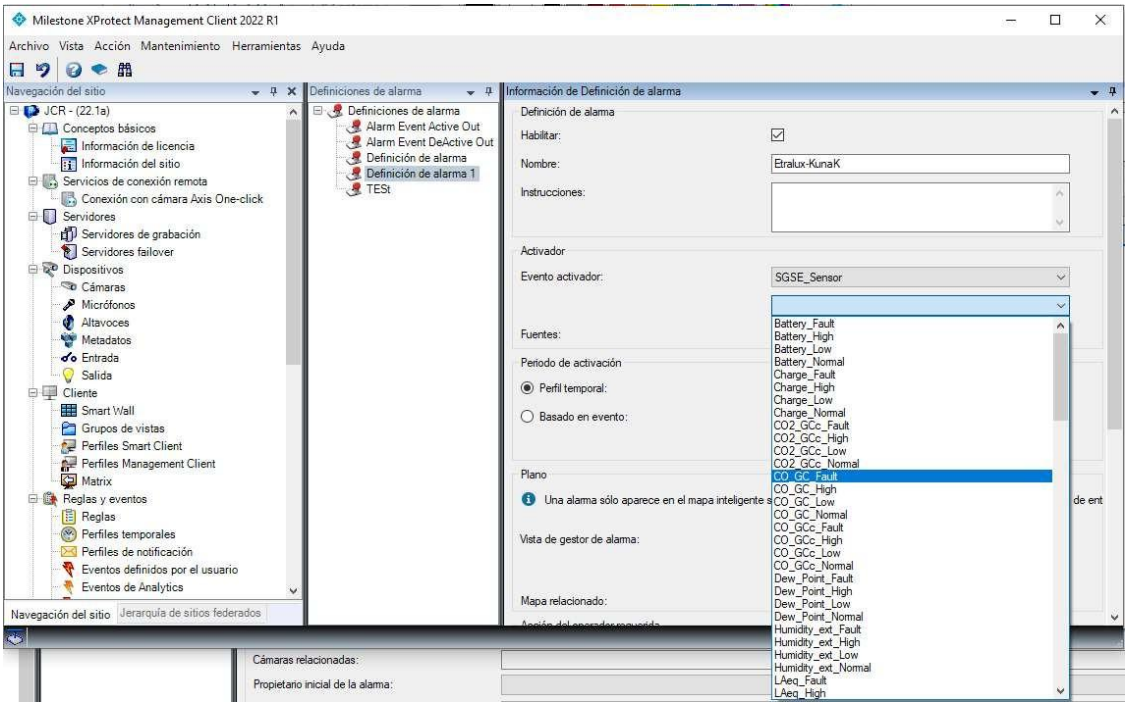


We recommend referring to the "Kunak Manufacturer Configuration Manual" for further details.

Milestone Alarms

After installation, the configuration user will see a new set of events in Milestone.

This list contains all the possible events that can be triggered based on the information provided by the sensors and their elements. Thanks to this flexibility, the configuration user can set up an alarm for each event listed.

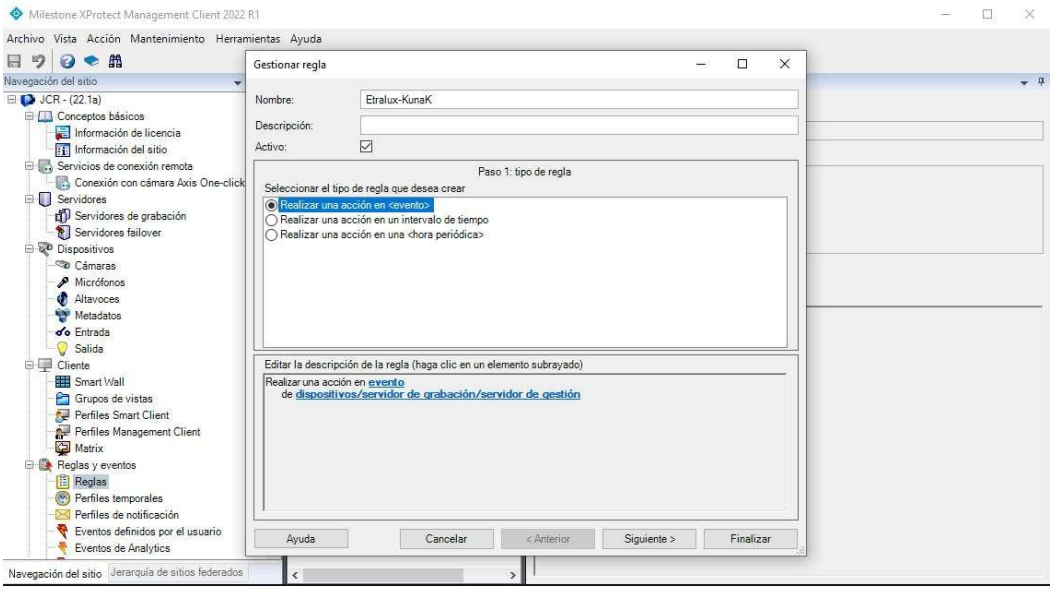


Managed Events:

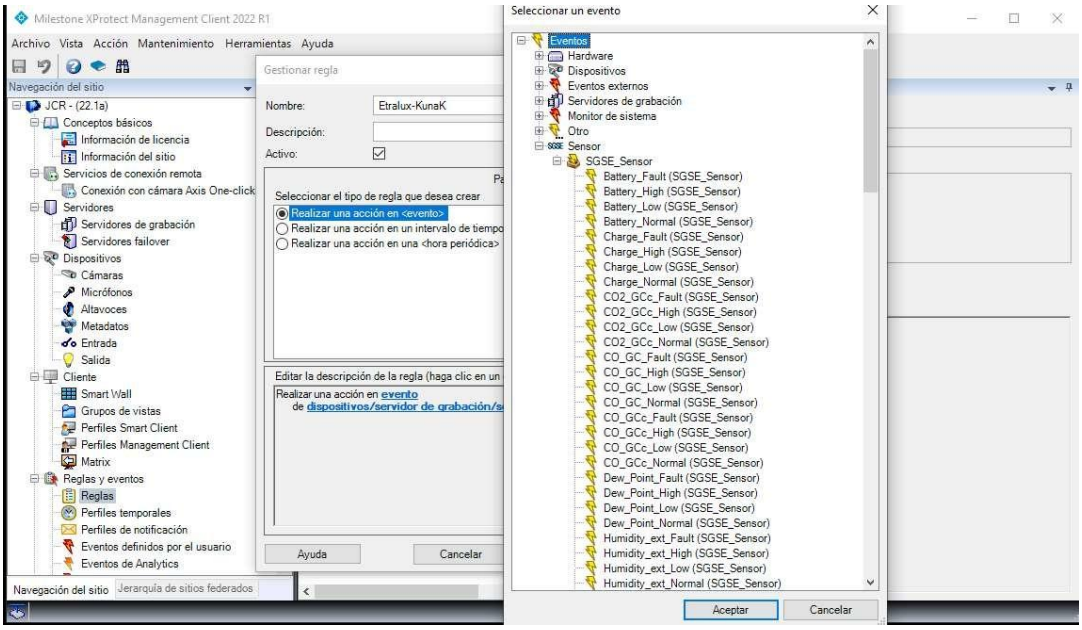
Battery_High,Battery_Normal,Battery_Low,Battery_Fault,Charge_Normal,Charge_High,Charge_Low,Charge_Fault,CO_GC_Normal,CO_GC_High,CO_GC_Low,CO_GC_Fault,CO_GCc_Normal,CO_GCc_High,CO_GCc_Low,CO_GCc_Fault,CO2_GCc_Normal,CO2_GCc_High,CO2_GCc_Low,CO2_GCc_Fault,Humidity_ext_Normal,Humidity_ext_High,Humidity_ext_Low,Humidity_ext_Fault,LAeq_Normal,LAeq_High,LAeq_Low,LAeq_Fault,NO_GC_Normal,NO_GC_High,NO_GC_Low,NO_GC_Fault,NO_GCc_Normal,NO_GCc_High,NO_GCc_Low,NO_GCc_Fault,NO2_GCc_Normal,NO2_GCc_High,NO2_GCc_Low,NO2_GCc_Fault,NOx_GCc_Normal,NOx_GCc_High,NOx_GCc_Low,NOx_GCc_Fault,O3_GC_Normal,O3_GC_High,O3_GC_Low,O3_GC_Fault,O3_GCc_Normal,O3_GCc_High,O3_GCc_Low,O3_GCc_Fault,PM_SFR_Normal,PM_SFR_High,PM_SFR_Low,PM_SFR_Fault,PM1_Normal,PM1_High,PM1_Low,PM1_Fault,PM10_Normal,PM10_High,PM10_Low,PM10_Fault,PM2_5_Normal,PM2_5_High,PM2_5_Low,PM2_5_Fault,PM4_Normal,PM4_High,PM4_Low,PM4_Fault,Pressure_Normal,Pressure_High,Pressure_Low,Pressure_Fault,Signal_Normal,Signal_High,Signal_Low,Signal_Fault,SO2_GC_Normal,SO2_GC_High,SO2_GC_Low,SO2_GC_Fault,SO2_GCc_Normal,SO2_GCc_High,SO2_GCc_Low,SO2_GCc_Fault,Temp_Normal,Temp_High,Temp_Low,Temp_Fault,Temp_ext_Normal,Temp_ext_High,Temp_ext_Low,Temp_ext_Fault,TPC_Normal,TPC_High,TPC_Low,TPC_Fault,TSP_Normal,TSP_High,TSP_Low,TSP_Fault,W_Speed_AVG_Normal,W_Speed_AVG_High,W_Speed_AVG_Low,W_Speed_AVG_Fault,W_Speed_MAX_Normal,W_Speed_MAX_High,W_Speed_MAX_Low,W_Speed_MAX_Fault,W_Vane_AVG_Normal,W_Vane_AVG_High,W_Vane_AVG_Low,W_Vane_AVG_Fault,Dew_Point_Normal,Dew_Point_High,Dew_Point_Low,Dew_Point_Fault.

Rules in Milestone

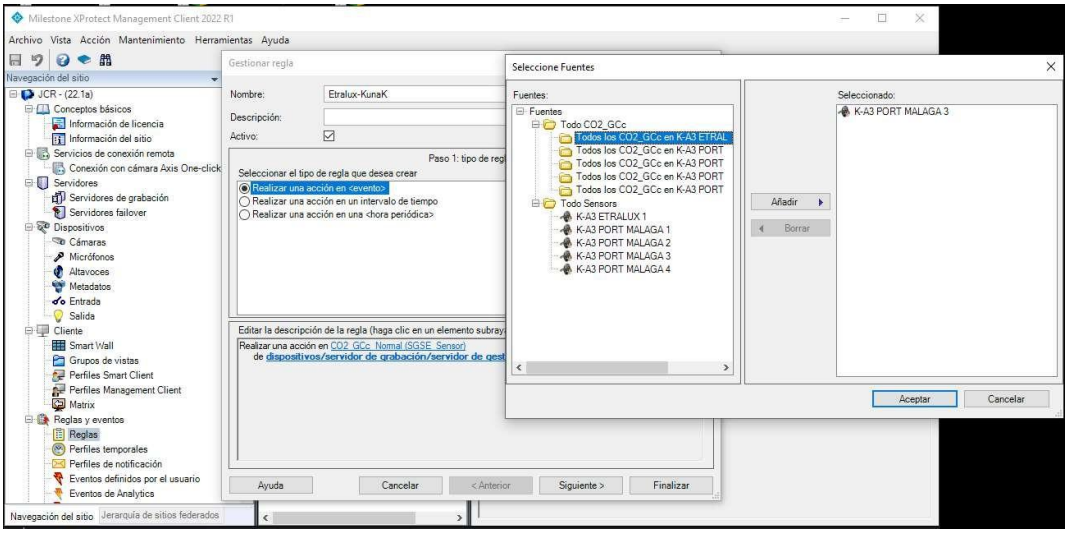
Additionally, the configuration user can use these events to trigger specific rules:



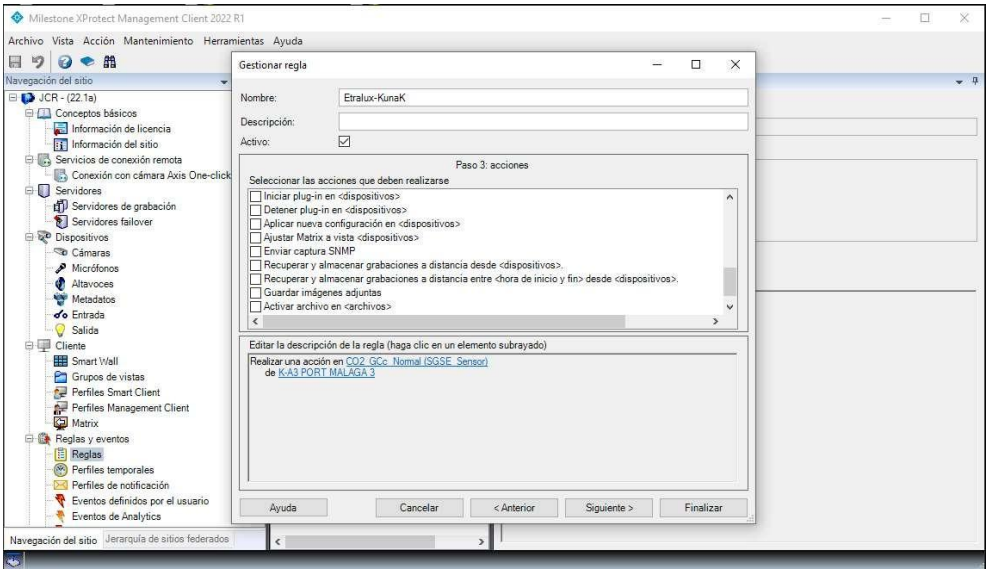
From the Run an Action on Event menu, you can select the state of your rule to perform:



Select the device or devices that make up the rule's configuration.



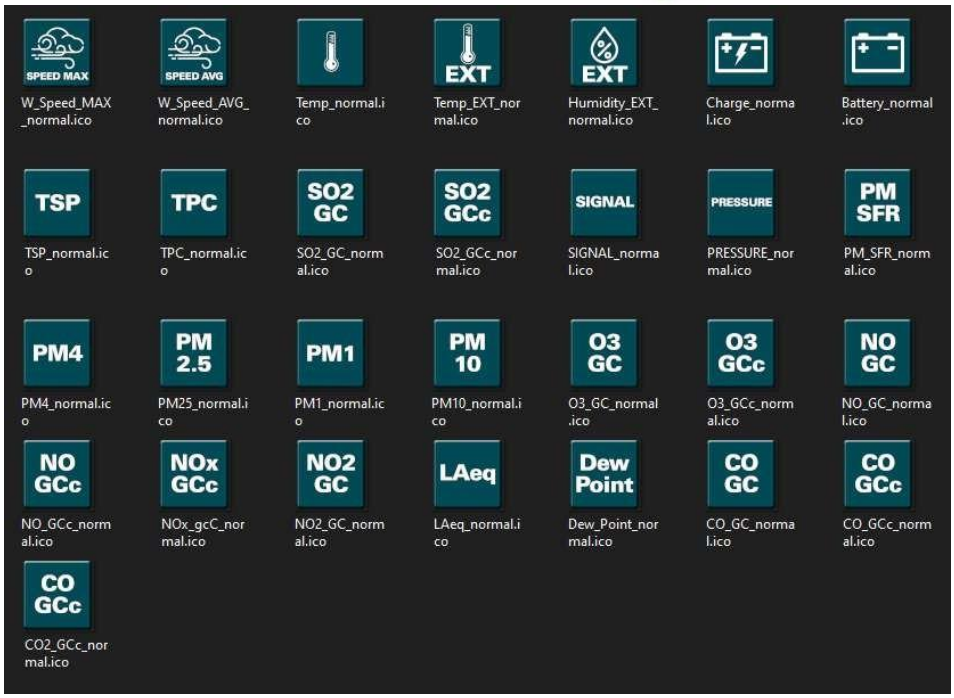
Continue with the process through the Rule Manager, selecting the actions you deem necessary.



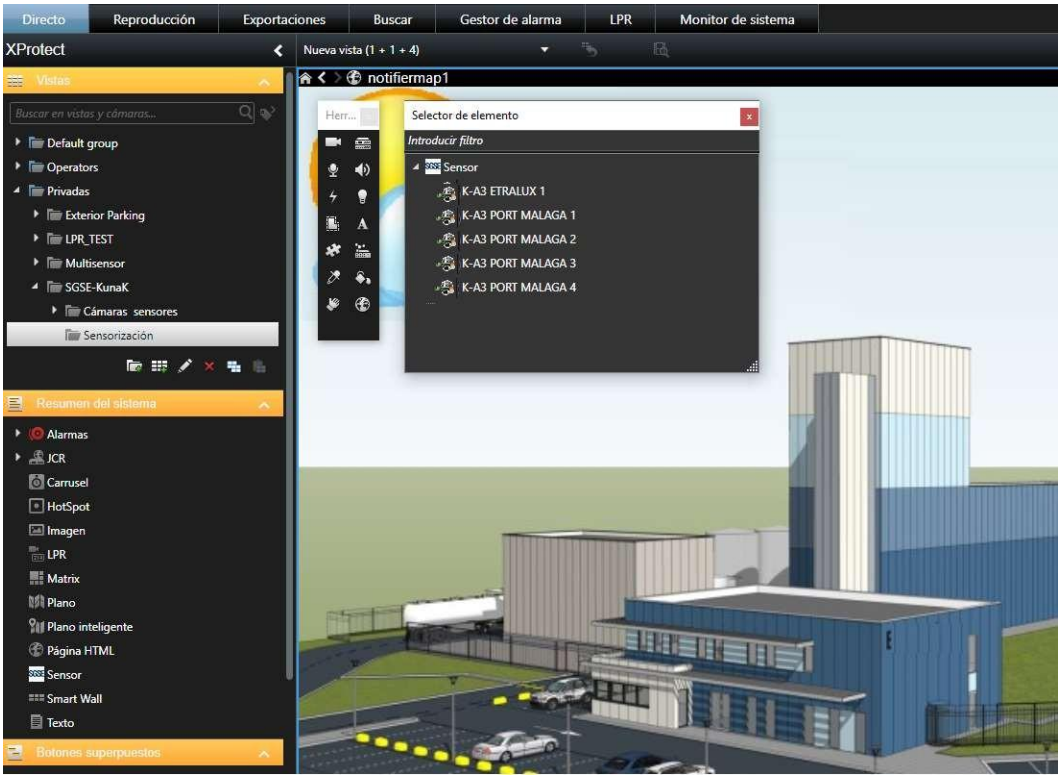
If you need help configuring your rules, you can consult the help section of the XProtect software by pressing F1.

Milestone Smart Client

The plugin also allows us to retrieve the type of sensor configured on the probe monitor, so the icon displayed on the map provides the clearest interpretation of the probe's installation.



Once created correctly, the configuration user will be able to drag and drop elements (temperature sensor, humidity sensor, pressure sensor, etc.) from a map into Milestone Smart Client:



Creation of a visual scenario to control sensor operations.

You can always see the values read from the sensor.

If an alarm is triggered, the operator will see that the source element of the alarm is marked with a flashing red circle:

All collected information can be represented graphically, showing everything that is happening.

6. Troubleshooting

- Plugin does not receive events

Check the network configuration.
To confirm that the problem may be the network, connect to the Kunak cloud from the machine where the Milestone Event Server is running and check if you can access it.

- The map in Milestone Smart Client shows crosses instead of the correct icon

Delete the icon and add it again. This happens when an element is deleted in the Milestone Management Client and recreated.

- No alarms

Check in Milestone Management Client that the alarm is linked to the correct event.

- No events or alarms

Check that the username and password are correct in the XProtect Management Configurator, specifically for the Kunak sensors (Plugin) section.

Restart the Milestone Event Server and check the network.

For technical information or assistance, send an email to the following addresses:

sat@sgse.eu

Or call the following phone number:

+34 91 0564405