

SGSE

Soluciones Globales de Seguridad Electrónica

MONITOR GALAXY

Installation and user manual

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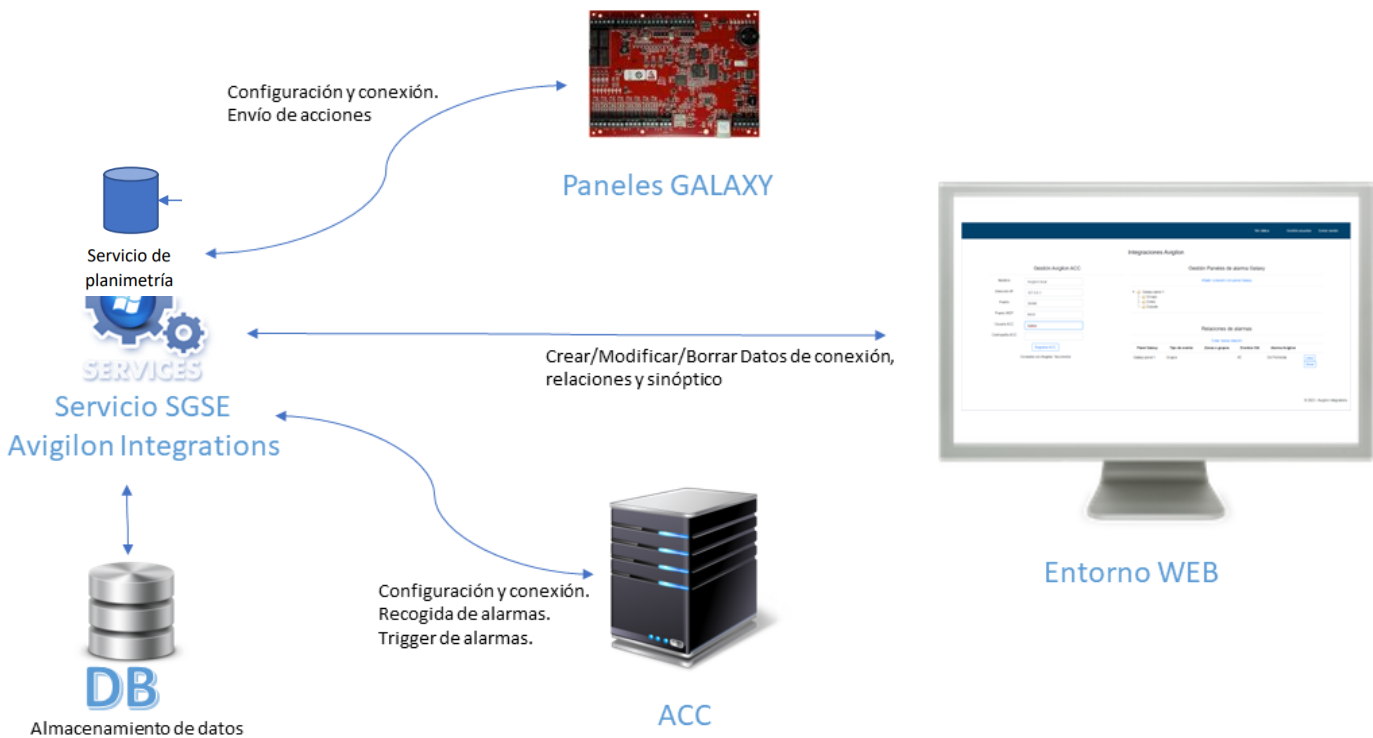
1. Document versions

Version	Date	Author	Version description
1.0	09/2023	JAFUNES	First document version

2. Introduction

Galaxy Monitor is an application that enables seamless integration of Galaxy intrusion panels, in any of their models, as part of the Avigilon Unity platform. This integration allows the establishment of connections between alarms generated in Avigilon and events triggered by Galaxy intrusion panels.

Moreover, the Galaxy Monitor is interactive, facilitating the execution of actions on partitions, zones, and outputs configured in different Galaxy panels through a synoptic panel. This panel also aids in real-time monitoring of the panel status. The solution is complemented by a web service that allows graphical representation of various integrated devices on one or multiple floor plans, along with their statuses, enabling user interaction with them.



3. Requirements

The following outlines the resources required for the application.

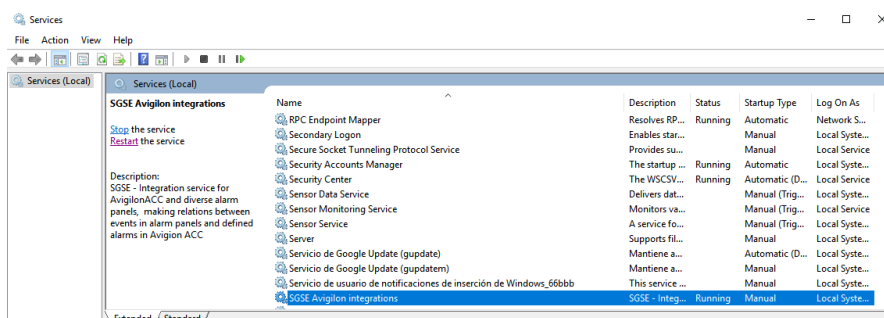
Resources	Description
License	License per Panel and Number of Elements
CPU	Minimum i3 1 Core or similiar
Operation system	Minimum Windows 10
Storage	Minimum 300MB
RAM	Minimum 8Gb
ACC Version	ACC7 or higher
SQL	SQL 2019 or higher

4. Architecture

The application is presented in two distinct environments:

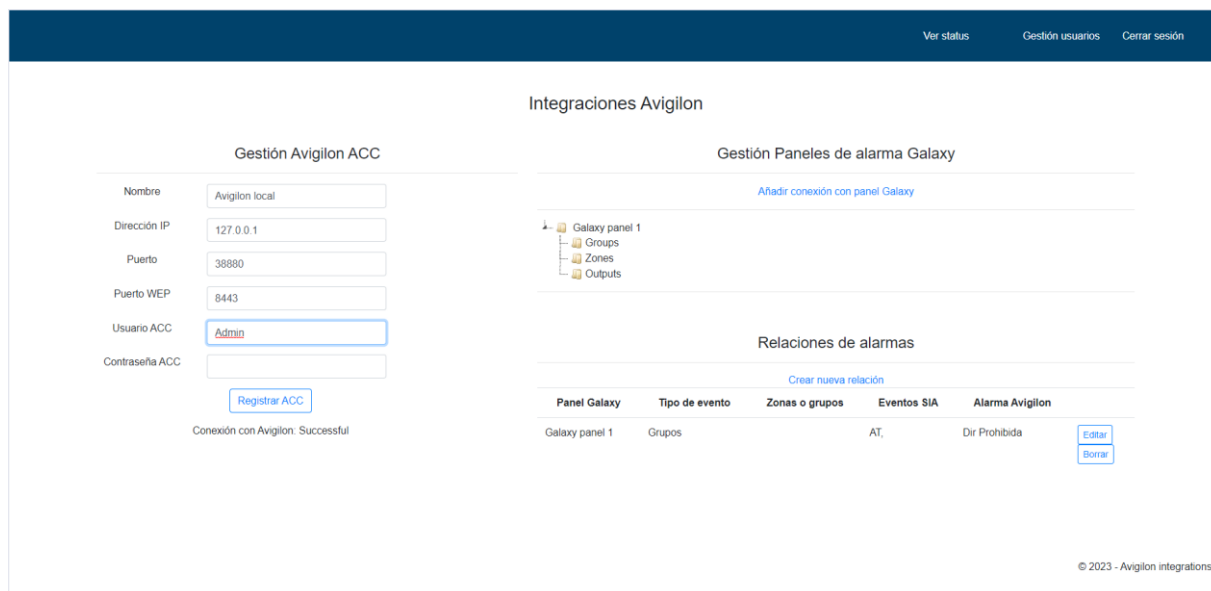
- **Avigilon integrations service.**

This is the primary integration application that stores all registered data, initializes communications with alarm panels, connects with ACC, and manages the relationships between ACC alarms and panel events. It triggers these alarms, allowing them to be managed from the ACC client.



- **Web-based Management Application:**

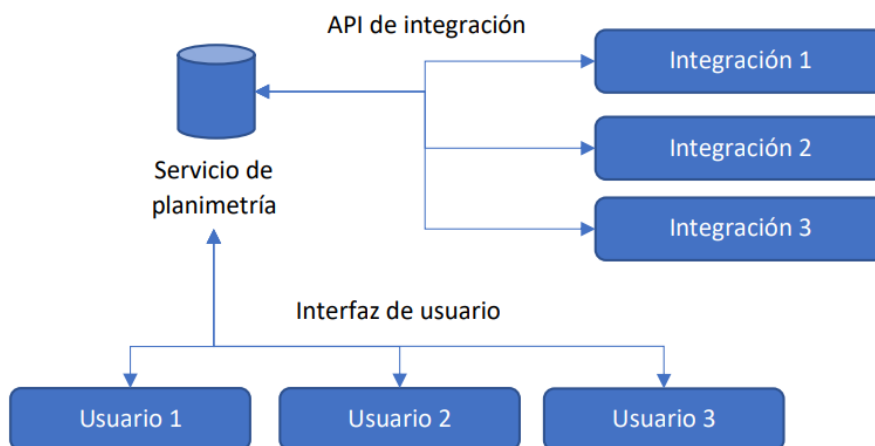
This web application serves as a management interface between intrusion panels and the ACC platform. It facilitates the creation, modification, updating, and deletion of relationships between panel events and ACC alarms.



The web management application will not function if the Avigilon Integrations service is not active. It is essential to always check that the service is running and operational to ensure that the web management application can display all the information.

- Floor Plan Service

The solution's architecture is depicted in the following diagram.



On one hand, the web service exposes an integration API used to transmit data about devices intended for integration to the floor plan service. On the other hand, it provides a user interface through which floor plans can be created, and devices registered via the integration API can be represented.

5. Installation

Installation of SGSE Avigilon Integration Service

Before initiating the installation, it is imperative to have the following software installed on your system:

- Internet Information Services (IIS)

[Plan an ASP.NET Website on IIS | Microsoft Learn](#)

- SQL Server 2018 (or later)

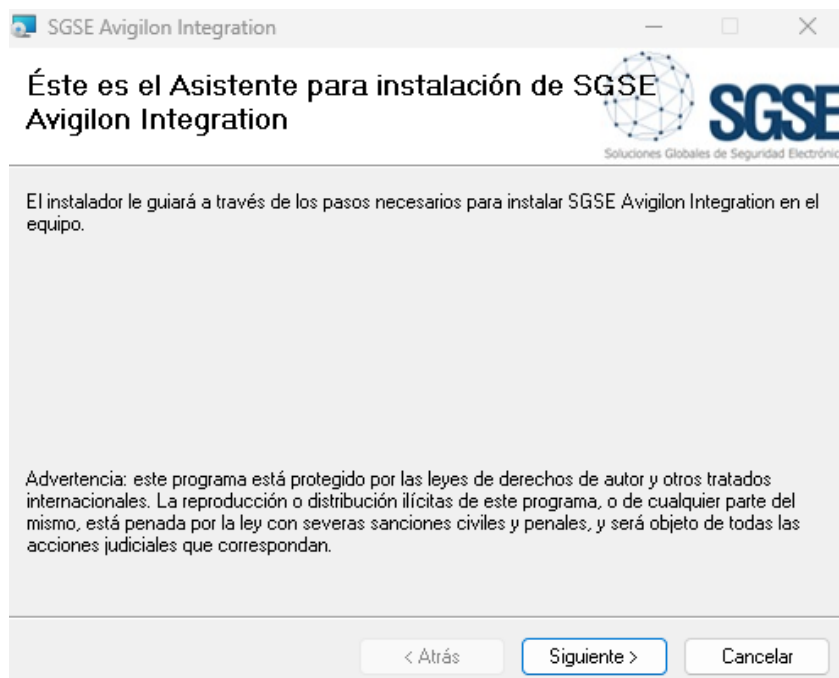
[SQL Server Downloads | Microsoft](#)

- SQL Server Management Studio (2018 or later)

[Download SQL Server Management Studio \(SSMS\) - SQL Server Management Studio \(SSMS\) | Microsoft Learn](#)

Once both software packages are installed, we can proceed with the service installation. Follow these steps:

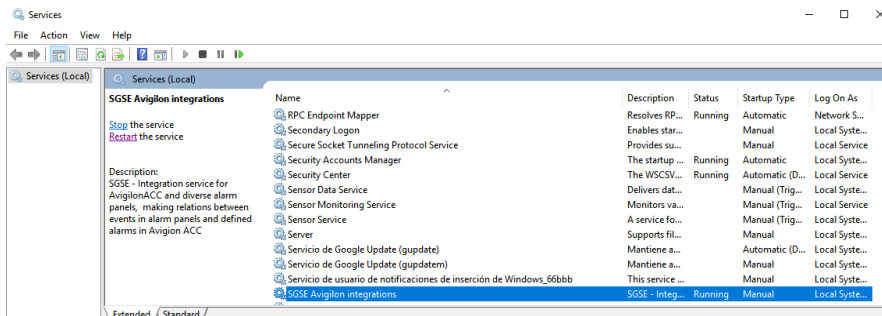
Run the installation MSI file.



Choose the installation path for the database tables by entering the database connection string where everything will be installed:



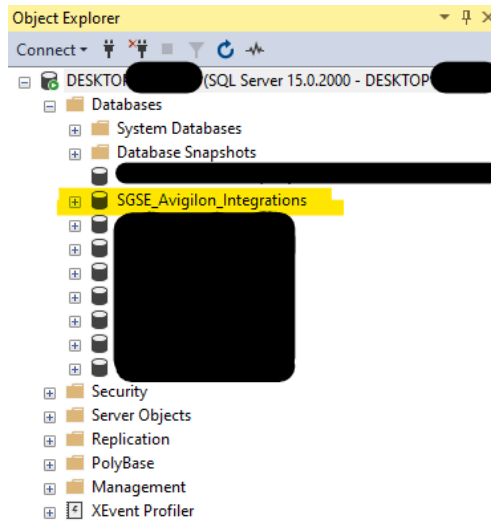
We conclude by confirming the installation. Once completed, the service will appear in the Windows services. You can access them by pressing "Windows + R" keys and running the command "services.msc", or by searching for the "Services" application in the "Start" menu.



In addition to creating the service, the installer generates a new database and an application in Internet Information Services (IIS), both of which are essential for the proper functioning of the integration. You can verify the creation of both in the following programs:

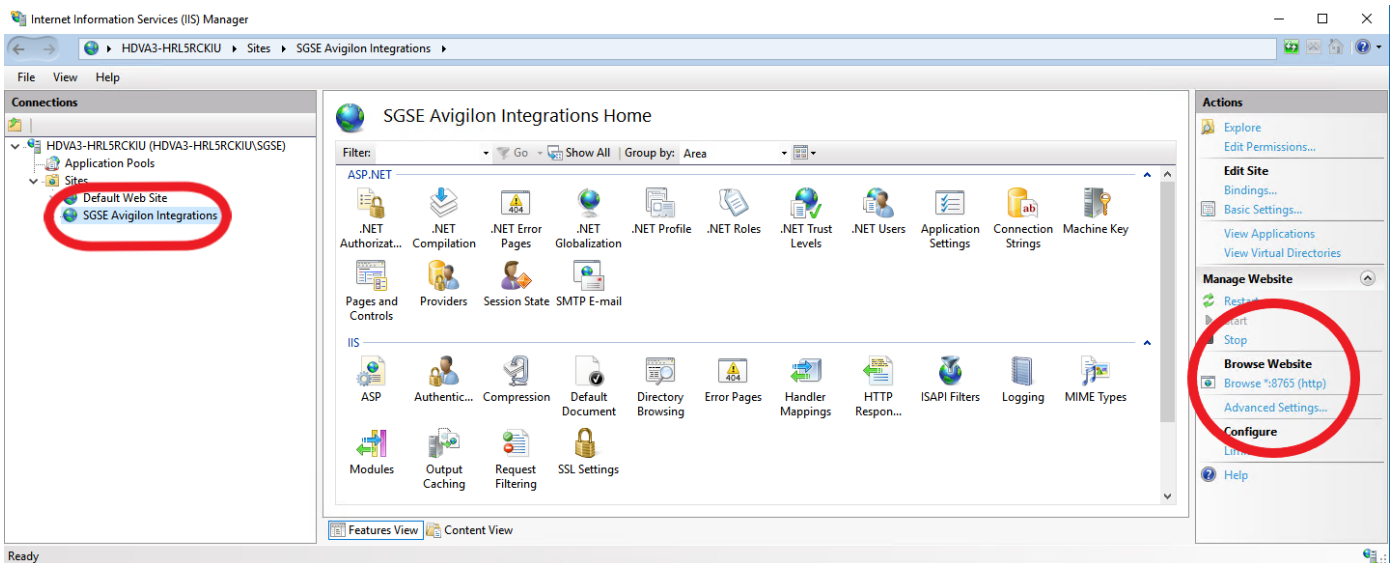
SQL Server Management Studio (Sql Database Management Tool):

Access the configured server using SQL Server Management Studio as set up during the installation. After logging in, you will observe that the SGSE_Avigilon_Integrations database has been successfully created in the "Databases" section.



Internet Information Services:

Open Internet Information Services (IIS) and verify that the web application has been created. Under the "Sites" section, you should locate the application named "SGSE Avigilon Integrations." In the left section (Browse Website), you can confirm that the service is running on port 8765.



To test the newly created site, browse the website from IIS. If everything is functioning correctly, you should see the login page of the application in your default web browser.

Iniciar sesión

Nombre de usuario

Contraseña

¿Recordar cuenta?

La licencia no es válida para este equipo.

Proporcione el siguiente UID a SGSE para que se genere su licencia

1SLY071-166Q8VB-1ICOZD5-1WGMK53



AVIGILON™

The application will only operate with a valid license generated by SGSE. Users must provide SGSE with the code displayed on the screen, referred to as "UID." SGSE will then provide the necessary license for activation.



Iniciar sesión

Nombre de usuario

Contraseña

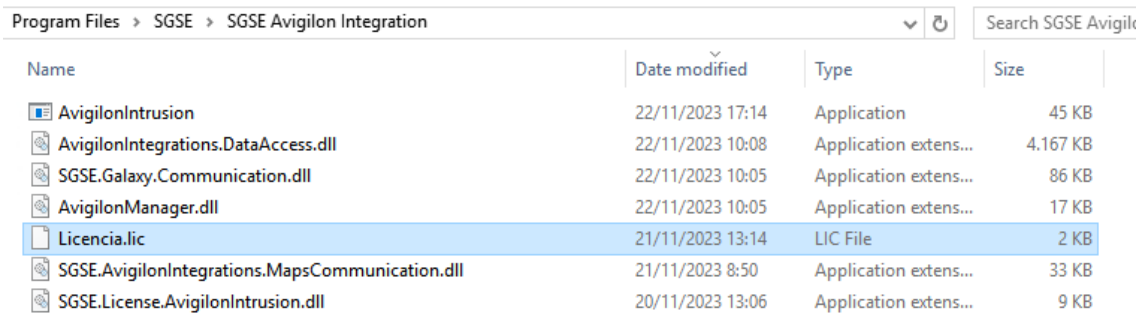
¿Recordar cuenta?

Iniciar sesión



AVIGILON™

Upon receiving the license, it is necessary to include it in the folder "C:\Program Files \SGSE\SGSE Avigilon Integration" or in the chosen directory if its default location has been changed.



Name	Date modified	Type	Size
AvigilonIntrusion	22/11/2023 17:14	Application	45 KB
AvigilonIntegrations.DataAccess.dll	22/11/2023 10:08	Application extens...	4,167 KB
SGSE.Galaxy.Communication.dll	22/11/2023 10:05	Application extens...	86 KB
AvigilonManager.dll	22/11/2023 10:05	Application extens...	17 KB
Licencia.lic	21/11/2023 13:14	LIC File	2 KB
SGSE.AvigilonIntegrations.MapsCommunication.dll	21/11/2023 8:50	Application extens...	33 KB
SGSE.License.AvigilonIntrusion.dll	20/11/2023 13:06	Application extens...	9 KB

After completing the aforementioned steps, it is necessary to restart the service to ensure that the license reading takes effect and the service operates with the updated licensing information.

Installation of Floor Plan Service

To install the service, simply run the installer "SGSE Maps Service Installer.msi" with administrator permissions, as provided by SGSE. The process is automatic. Through the various screens of the installer, you will need to accept the End User License Agreement, which is a mandatory condition for using the plugin. Additionally, specify the connection string to a SQL Server database server, which will be used for creating a database and a user. Let's review the different screens that will appear during the installation process of the mentioned applications.



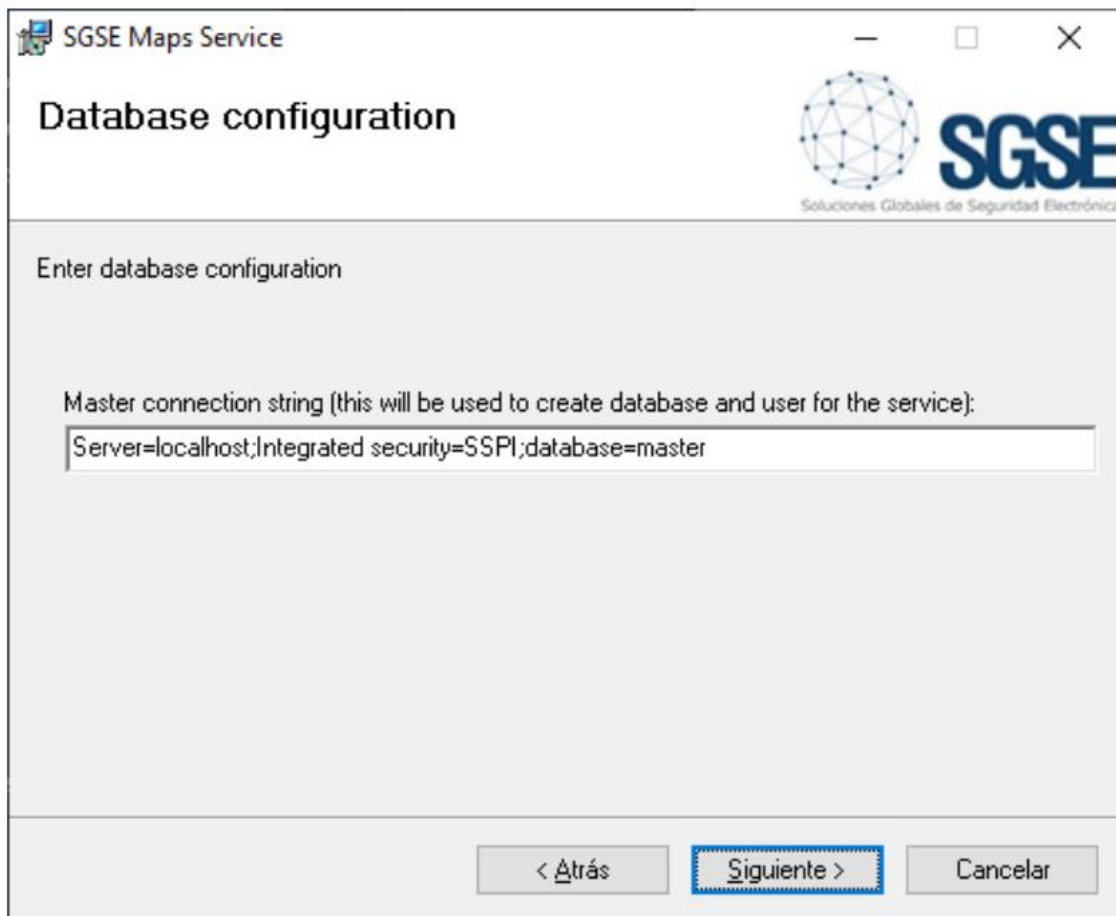
Click "Next >" to start the installation.



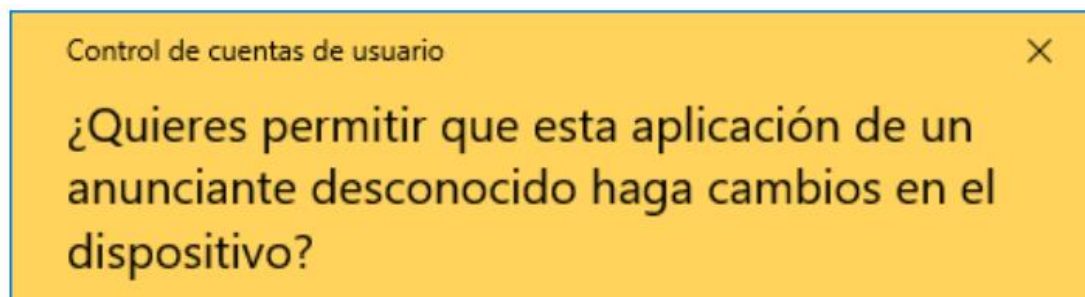
It will be necessary to read and accept the End User License Agreement to proceed with the installation.



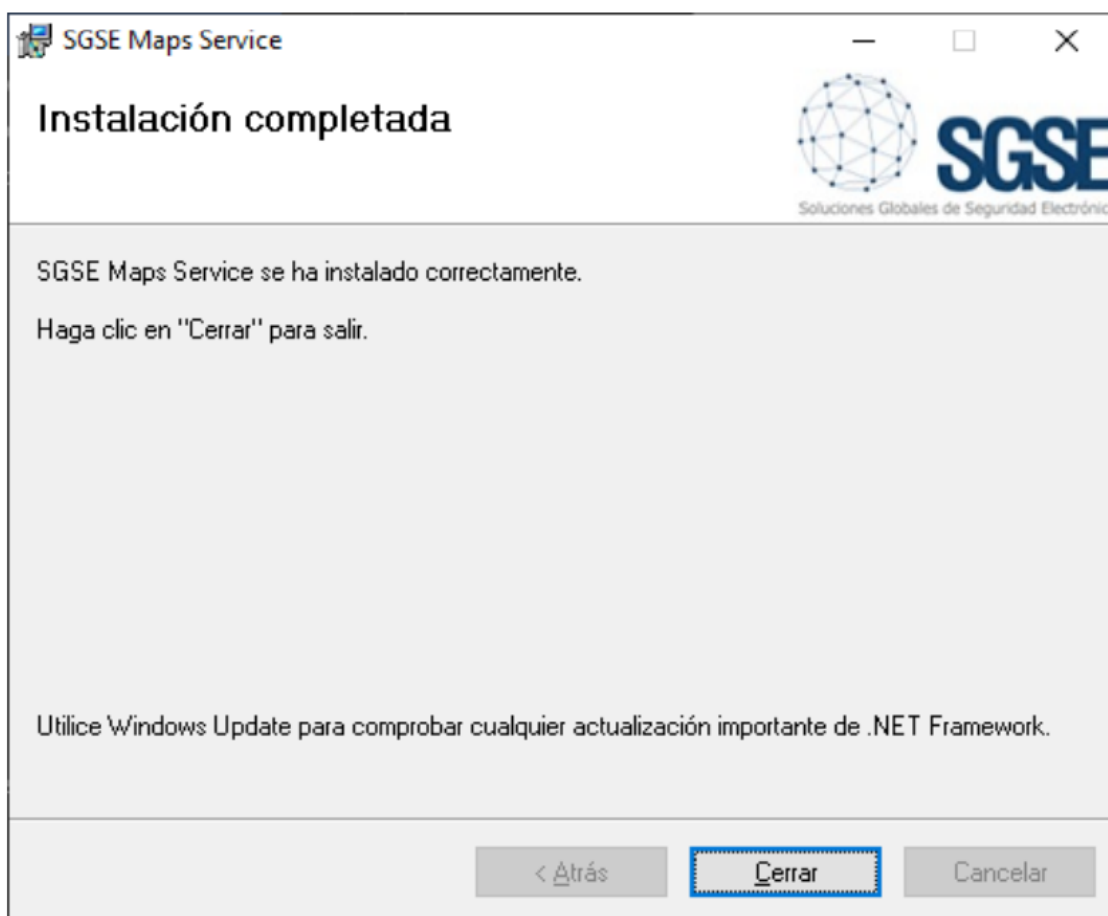
Click "Next >" to proceed.



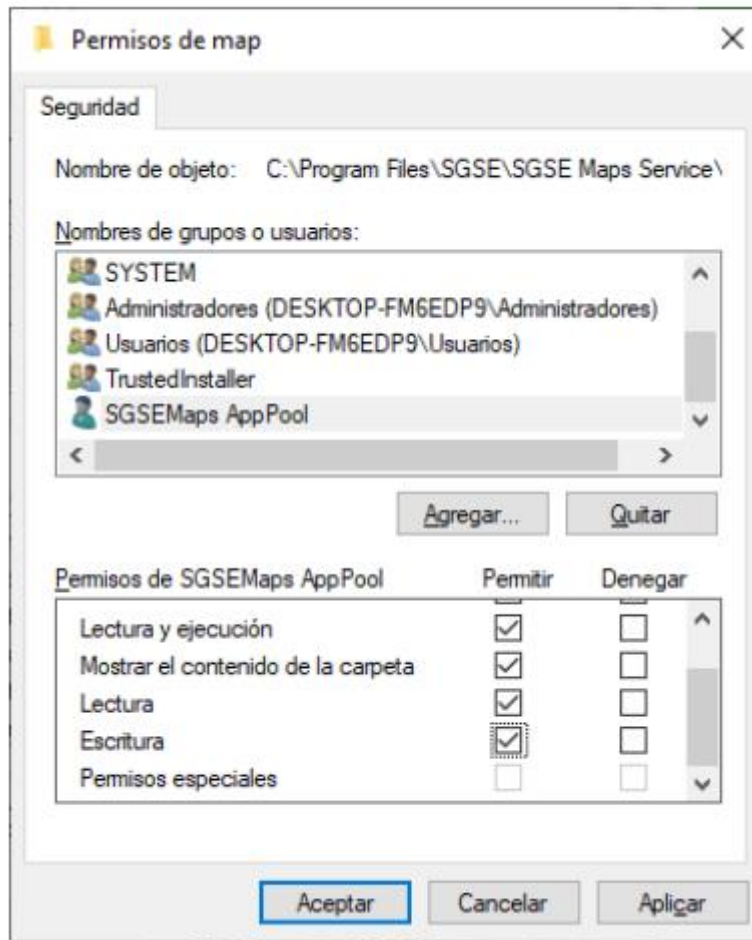
On this screen, enter the connection string or leave the default one if applicable. Click "Next >" to proceed with the installation of the software files.



If Windows User Account Control prompts, allow the installer to continue with the installation.



Once the installation is complete, click "Close," and the service will be installed. To ensure the proper functioning of the service, it is necessary to assign write permissions to the directory "C:\Program Files\SGSE\SGSE Maps Service\wwwroot\img\map" for the user "SGSEMaps AppPool."



6. Configuration

Configuration of SGSE Avigilon Integration Service

Firstly, it is necessary to create an administrator user. This can only be set the first time the service is run, and its information can be modified afterward.

Access the site created in IIS (by default, <http://localhost:8765>) and click on the link "Register as a new user."

Iniciar sesión.


Nombre de usuario

Contraseña

¿Recordar cuenta?

[Registrarse como usuario nuevo](#)

Create a new user by filling in the details on the form, and click the "Register" button.



Crear una cuenta nueva.

Nombre de usuario

Contraseña

Confirmar contraseña

With the Administrator user data set, you can access the main configuration page of the service.

First, you need to connect to your Avigilon Control Center by adding the connection details.

[Ver status](#) [Gestión usuarios](#) [Cerrar sesión](#)

Integraciones Avigilon

Gestión Avigilon ACC

Nombre	<input type="text"/>
Dirección IP	<input type="text"/>
Puerto	<input type="text"/>
Puerto WEP	<input type="text"/>
Usuario ACC	<input type="text"/>
Contraseña ACC	<input type="password"/>

[Registrar ACC](#)

Gestión Paneles de alarma Galaxy

[Añadir conexión con panel Galaxy](#)

Relaciones de alarmas

[Crear nueva relación](#)

© 2023 - Avigilon integrations

We add the details and click the "Register ACC" button.

Next, we proceed to add a connection to a Galaxy panel by clicking on the "Add Galaxy Panel Connection" link.

[Ver status](#) [Gestión usuarios](#) [Cerrar sesión](#)

Integraciones Avigilon

Gestión Avigilon ACC

Nombre	<input type="text"/>
Dirección IP	<input type="text"/>
Puerto	<input type="text"/>
Puerto WEP	<input type="text"/>
Usuario ACC	<input type="text"/>
Contraseña ACC	<input type="password"/>

[Registrar ACC](#)

Gestión Paneles de alarma Galaxy

[Añadir conexión con panel Galaxy](#)

Relaciones de alarmas

[Crear nueva relación](#)

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Configure the different Galaxy panels based on the panel model and communication type.

Create

GalaxyPanel

Name

ModelCode

CommunicationModuleType

ProtocolPIN

[Back](#)

Groups

Select All

- A1
- A2
- A3
- A4
- A5
- A6
- A7
- A8

Zones

Select All

- 1001
- 1002
- 1003
- 1004
- 1005
- 1006
- 1007
- 1008
- 1011
- 1012
- 1013
- 1014
- 1015
- 1016
- 1017
- 1018

Outputs

Select All

- 1001
- 1002
- 1003
- 1004
- 1011
- 1012
- 1013
- 1014
- 1021
- 1022
- 1023
- 1024
- 1031
- 1032
- 1033
- 1034

With both sections completed and connections established with both ACC and a Galaxy panel, you can set up alarm relationships in the "Relationships" section.



Integraciones Avigilon

Gestión Avigilon ACC

Nombre

Dirección IP

Puerto

Puerto WEP

Usuario ACC

Contraseña ACC

Gestión Paneles de alarma Galaxy

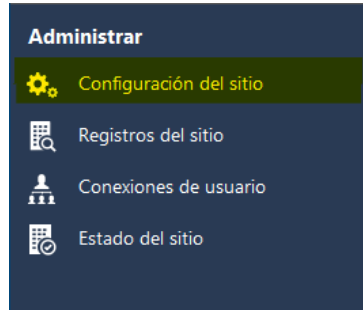
[Añadir conexión con panel Galaxy](#)

Relaciones de alarmas

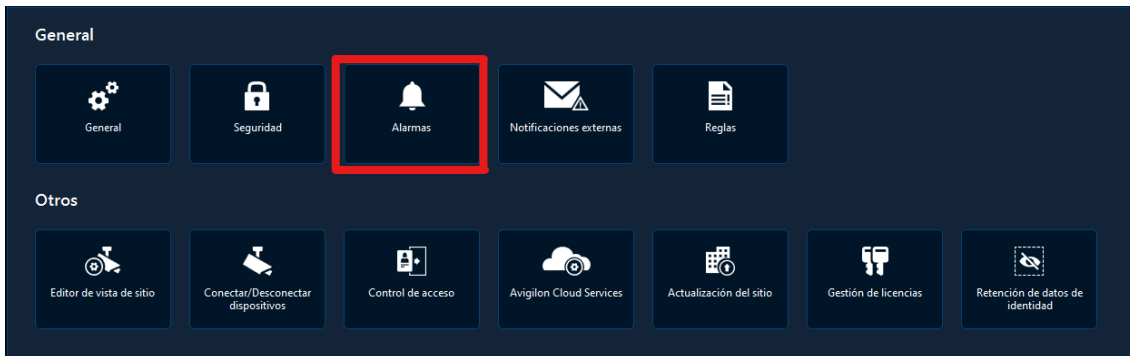
[Crear nueva relación](#)

To establish relationships, it is necessary to create alarms in the Avigilon platform first.

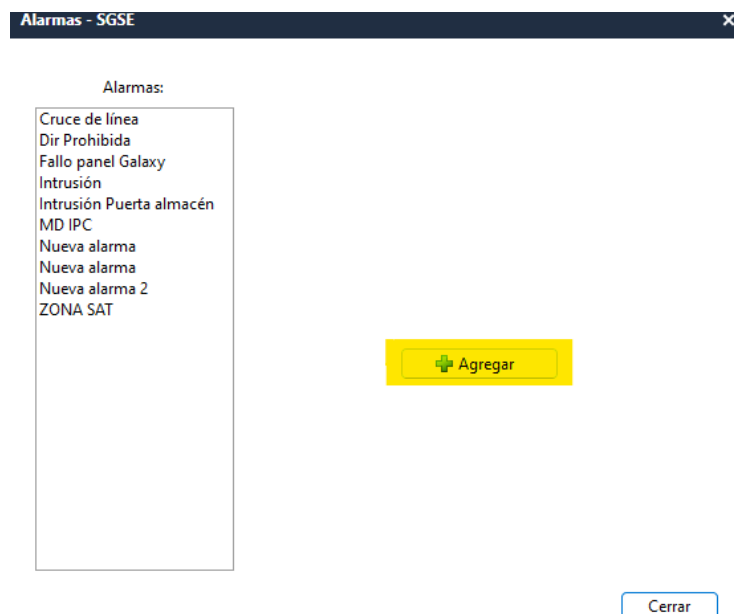
Access the site configuration:



Access the alarm management:



Follow the steps to generate a new alarm:



Once you have parameterized alarms in Avigilon, you can proceed with creating relationships. Select the Galaxy panel event that will trigger alarms in Avigilon.

Crear relación Cancelar

Panel Galaxy (Galaxy panel 1)	Zona de acción Galaxy (Zona) <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Select All <input checked="" type="checkbox"/> Cristal exterior 	Evento SIA (Galaxy) <ul style="list-style-type: none"> <input type="checkbox"/> ACPower_Trouble <input checked="" type="checkbox"/> Burglary_Alarm <input type="checkbox"/> Burglary_Trouble <input type="checkbox"/> Closing_ClosingReport <input type="checkbox"/> Fire_Alarm <input type="checkbox"/> Fire_Trouble <input type="checkbox"/> Holdup_Alarm <input type="checkbox"/> Holdup_Trouble <input type="checkbox"/> PhoneProgram_LineTrouble <input type="checkbox"/> Opening_OpenReport 	Alarma Avigilon Dir Prohibida	<input type="button" value="Crear"/>
----------------------------------	--	---	----------------------------------	--------------------------------------

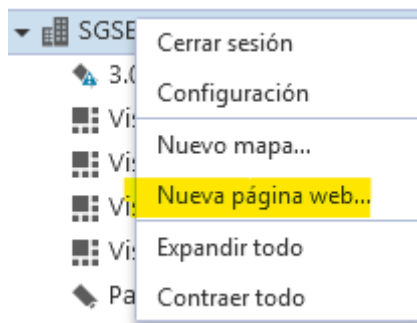
Configuration of the "Floor Plan" web service

By default, the web service will have the following configuration values: Database connection string: By default, it will try to connect to the local machine with the credentials created during installation. This connection string can be changed in the appsettings.json file located at "C:\Program Files\SGSE\SGSE Maps Service."

7. Operation

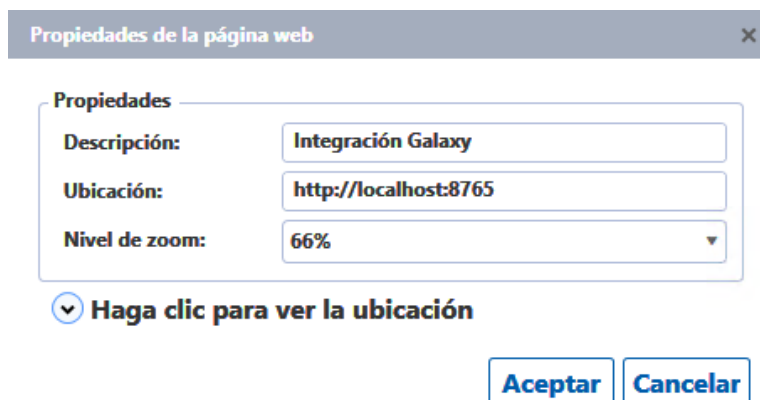
Operation on the Avigilon platform

In ACC, you can establish multiple views that load a web page, and you can configure the URL for accessing your management application.



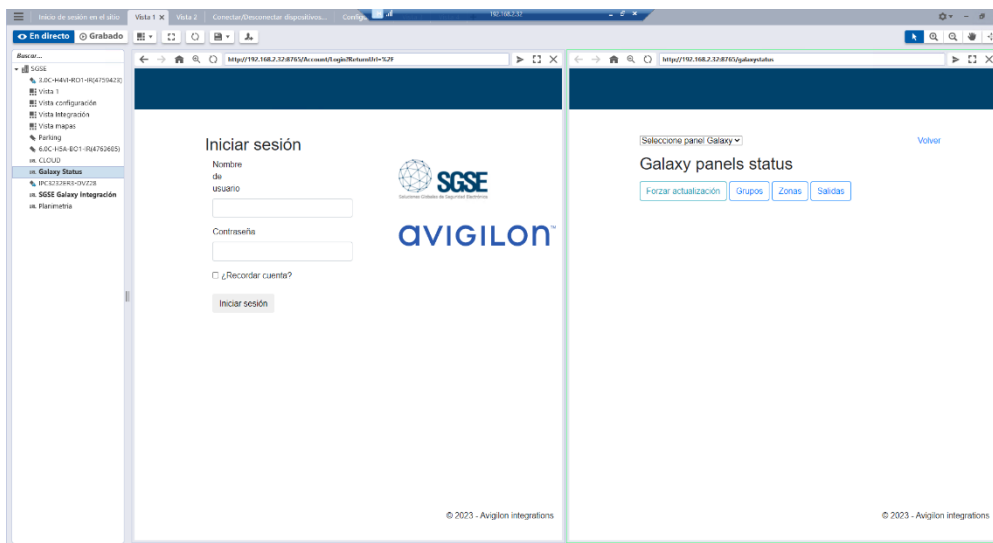
In the "Location" text, change the URL to access your service.

Thanks to this action, you will see all the alarm panel management from ACC.



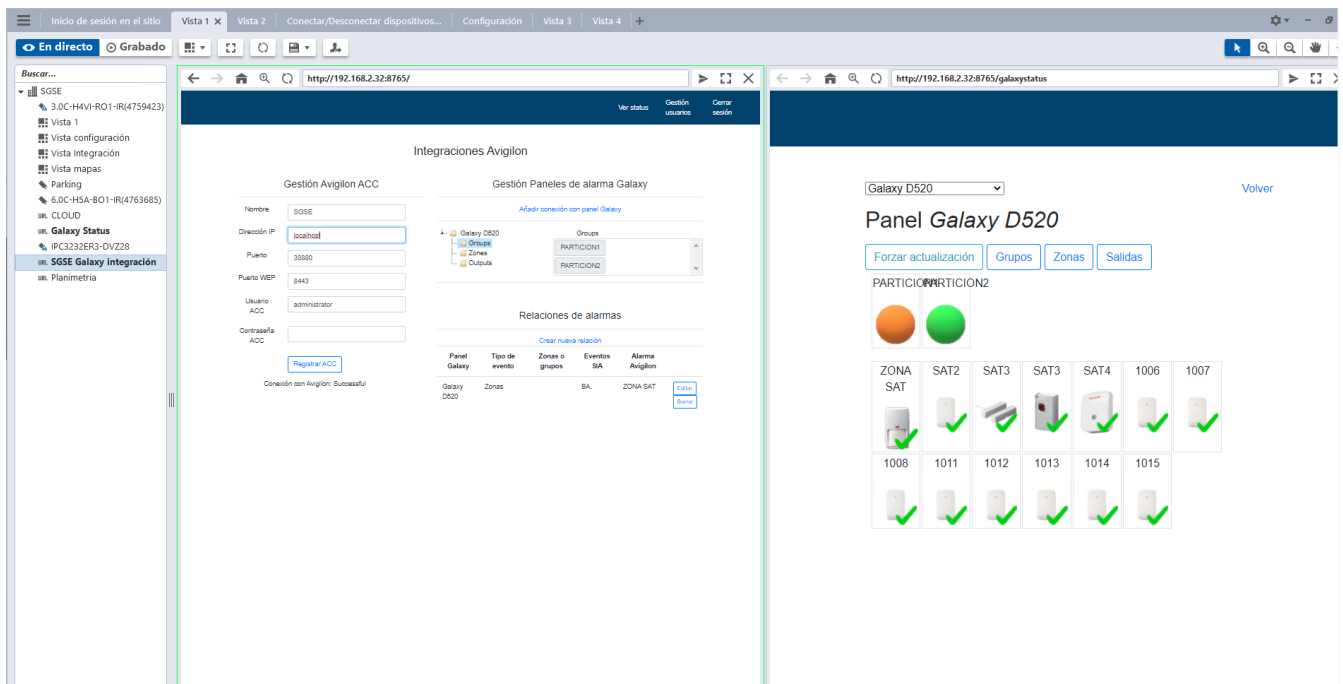
Once the view is established, you can drag it to any quadrant to display the information.

To access the view of the synoptic that displays the alarm panel states, simply enter the URL..



<https://{URL or DNS}:8765/galaxystatus>

In this view, you will see the current state of the zones, groups, and outputs configured on the panel, and you can take actions on these elements.



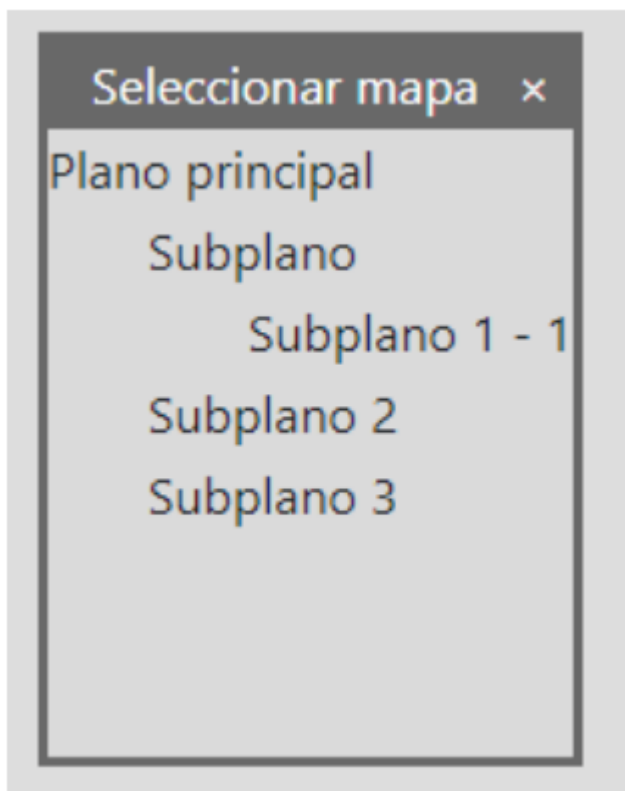
Operation with the Floor Plan Manager

You can access the application via the URL <http://<hostname>/SGSEMaps/> or embedded within another application. If the user is not authenticated, they will be presented with a login screen where they can log in with a username and password..

By default, there will be an admin user with the password Admin-123. There are two user profiles: administrator and user.

User Profile

If you access the user interface without specifying any floor plan, a popup will appear to select the main floor plan.


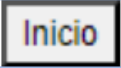




Once a floor plan is selected, the chosen plan will be displayed on the screen.

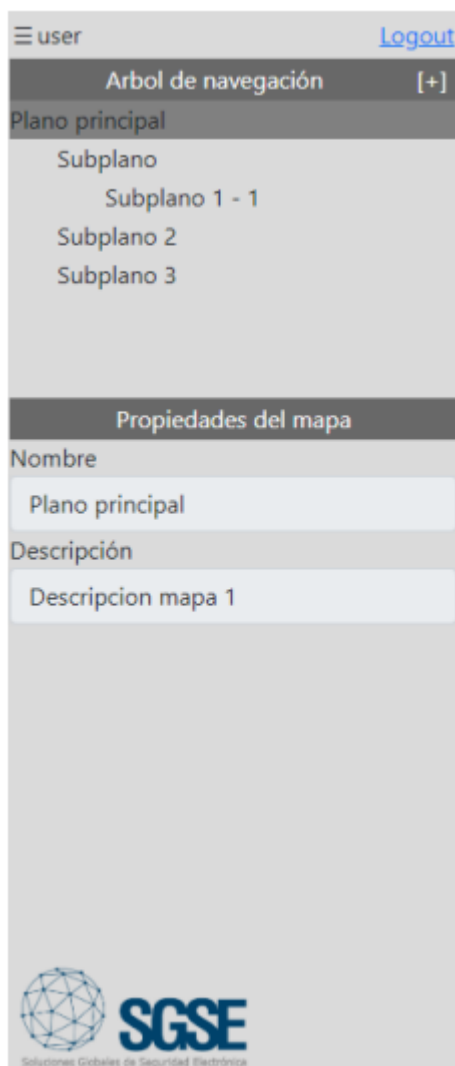


Navigation Buttons

In the upper-left corner, you will find the following buttons.

	Muestra u oculta el panel lateral
	Sitúa la navegación en el plano inicial
	Sitúa la navegación en el plano anteriormente seleccionado
	Sitúa la navegación en el siguiente plano si anteriormente se usó el botón de atrás

Sidebar



The sidebar displays user information and the navigation tree containing the main floor plan and its sub-plans.

Clicking the button **[+]** will close the current navigation tree and display a popup to select a new main floor plan.

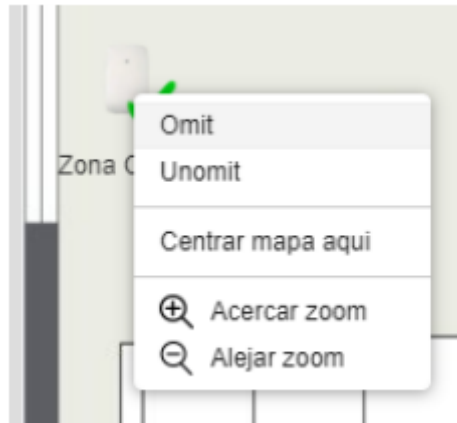
In the navigation tree, the names of the floor plans may appear marked with a color depending on the state of the devices contained in that map.

Below the navigation tree, information associated with the currently selected floor plan will be displayed

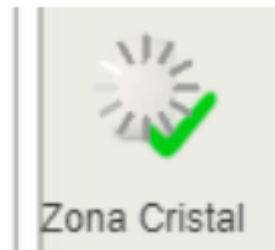
Within the Floor Plan

Within the floor plan, two types of elements may exist: the devices themselves and hot zones. Devices are categorized by type and may have commands. To send a command to a device, hover the mouse over the icon and right-click.

A contextual menu will appear with various actions.



When you click on one of the actions, an indicator will appear over the icon to show that the command has been sent. It will disappear once the action is completed.



If the device supports video preview, placing the mouse over it will display the live image.

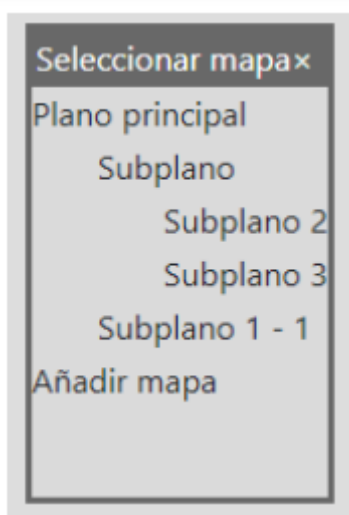


Hot zones represent an area on the floor plan and allow you to navigate to that plan by clicking on them.



Administrator profile

The administrator profile has all the functionalities of the user profile, but it also includes tools for creating and modifying floor plans. Both the popup window and the navigation tree will have the option to add a new floor plan.



Clicking on "Add Map" will create a new map that will be a child of the currently selected floor plan. If you create it in the popup window, it will become a main floor plan.

Once a floor plan is selected, it will be displayed on the screen with an interface similar to the user profile.

Sidebar

Within the sidebar, in the map properties section, there will be an option for the background image among the floor plan details. This option allows you to select a new image for the floor plan background. The image will not be set until the floor plan is saved.



Editing Mode

In the upper-right corner, you will find the **Editar** button.

Clicking on it will activate the editing mode for the currently selected floor plan.

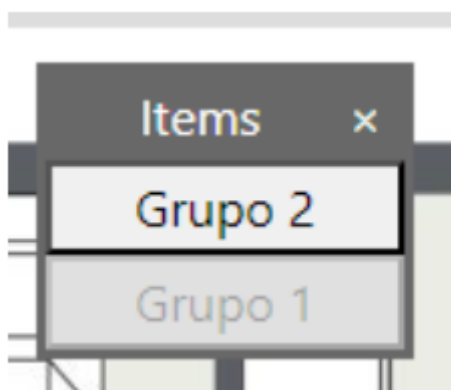
In edit mode, the **Editar** button will be replaced by the following buttons:

Borrar	Elimina el plano actual
Descartar	Descarta los cambios efectuados en el plano y sale del modo edición
Guardar	Guarda los cambios efectuados en el plano y sale del modo edición

A tool window will also appear to enable the addition of new elements to the floor plan.



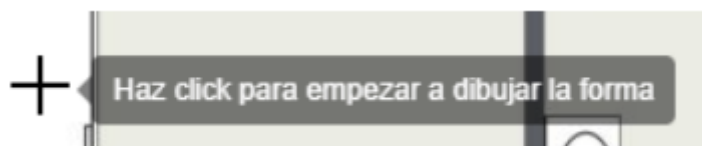
The content of this window depends on the various types of devices specified through the integration API. When you click on one of the types, another window will appear with a list of registered devices of that type.



From this window, you can drag a device to the area of the floor plan where you want to place it. To remove an element from the floor plan, click on it and then press the delete key on the keyboard.

The "Hot Zone" option is independent of the integration, and its operation is as follows:

After clicking the "Hot Zone" button, the mouse cursor will turn into a cross, and the following message will appear next to it.



In this mode, you can define polygonal areas by clicking multiple times on the floor plan. It is mandatory to select the first point created as the last point to close the polygon. Once the polygon is created, clicking on it will display boxes at the vertices that allow you to modify the polygon. Like with icons, the polygon can be deleted by pressing the delete key on the keyboard while it is selected for editing.

Right-clicking on a polygon will show the option "Select Submap," which opens a popup to choose the map to which the user will be redirected upon clicking on the area.



8. Troubleshooting

The service does not seem to connect with Avigilon:

Verify that the connection details, username, and password are correct.

Failure to connect to different alarm panels:

Confirm that the connection data and connection type are accurate.

Unable to create relationships:

Ensure that Avigilon is connected, and various connections to alarm panels are established.

Avigilon alarms do not appear when creating relationships:

Check the accuracy of the connection details with Avigilon ACC, including the username and password.

Verify in ACC that there are created alarms to associate with events.

The service remains loading without fully executing:

Review the communication status with both Avigilon ACC and the panels.

Ensure that ports are accessible and IP addresses are correct.

Error al cargar la imagen de fondo

If an error "Error loading the background image" occurs after selecting an image for the floor plan, ensure that the web service has write permissions for

Additional Information

For further information: Please refer to the online documentation or contact SGSE via email at info@sgse.eu.