ADISRA SmartView Event System

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ADISRA SmartView is an HMI/SCADA software package designed for industrial automation and control systems. One of the features of ADISRA SmartView is its event system, which allows users to store and display events at runtime. In this document, we will explain how to create a project, store events, and display them in real-time using ADISRA SmartView.

1. Scope

The scope of this document is to provide users with step-by-step instructions on how to create a project, store events, and display them using ADISRA SmartView. This document is intended for users who want to leverage the powerful event system of ADISRA SmartView to monitor and control their industrial processes.

2. Summary

The topics covered in this document include creating a project in ADISRA SmartView, defining and storing events with custom messages, and displaying events at runtime using graphical representations such as trend charts and alarms. By following the instructions in this document, users will be able to create an event-driven application in ADISRA SmartView and monitor their industrial processes more effectively.

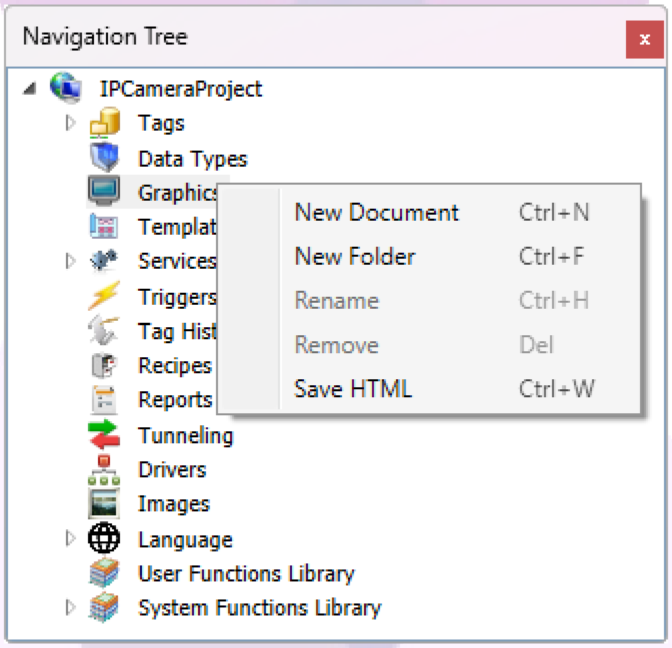
3. Project configuration

The following subtopics will teach you how to create a project, how to enable the ADISRA SmartView event system, how to save event messages, and how to display them in your project at runtime.

3.1. Creating a project

If you already have a project and just want to enable the event system and learn how to store event messages, skip to the subtopic '3.2. Enabling the event System' or '3.3. Storing event messages'.

1. Create a new project.
2. Create a graphic document.



3. Configure the properties of the graphic document as follows:
   - Graphic1 - Window Size Width: 705; Height: 430;
4. Add the following objects to the graphic document:
   - AlarmEvent Object - Location Top: 0; Left: 0; Size Width: 705; Height: 350; Type: Event; GridConfig: Group, Priority, Message, Event Time;

     This object will be used to display the events that will be stored.

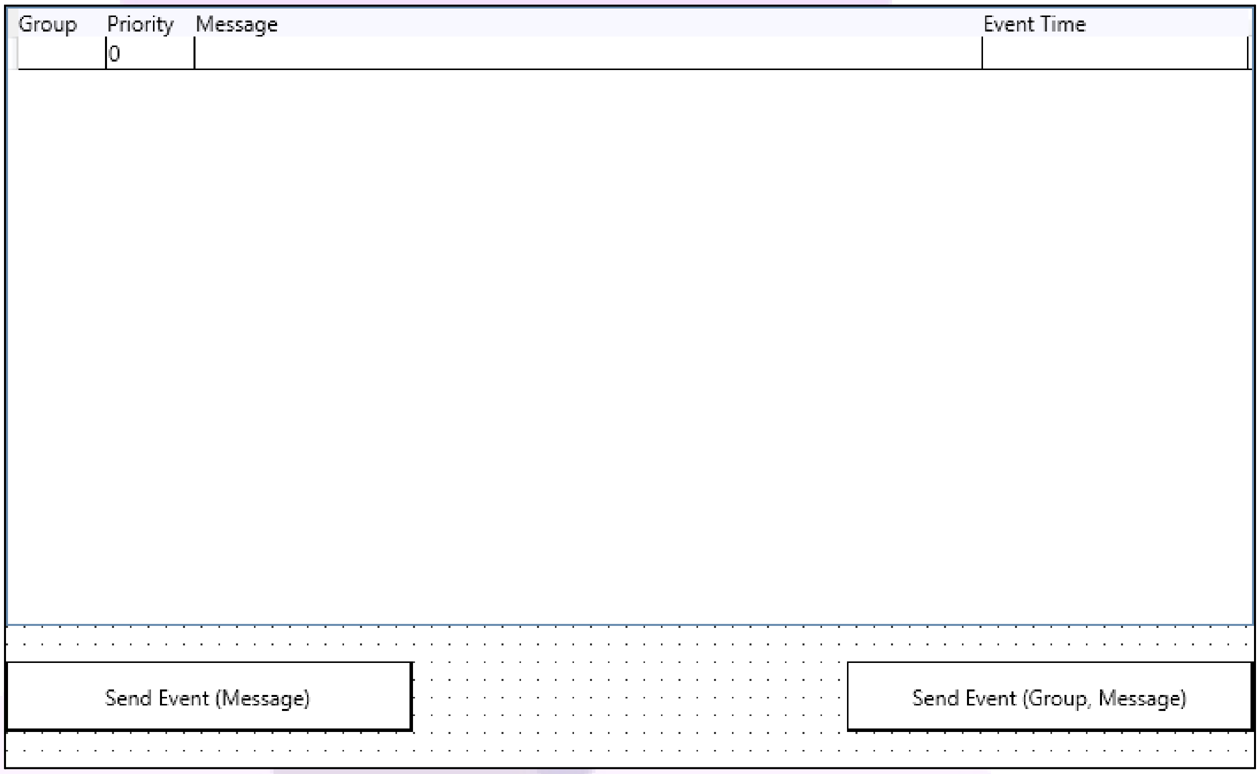
- Button1 Object - Location Top: 370; Left: 0; Size Width: 230; Height: 40; Text: Send Event (Message)

  This button will be configured later to send an event message when pressed.

- Button2 Object - Location Top: 370; Left: 475; Size Width: 230; Height: 40; Text: Send Event (Group, Message)

  This button will be configured later to send an event message when pressed.

The Graphic document should resemble the following.



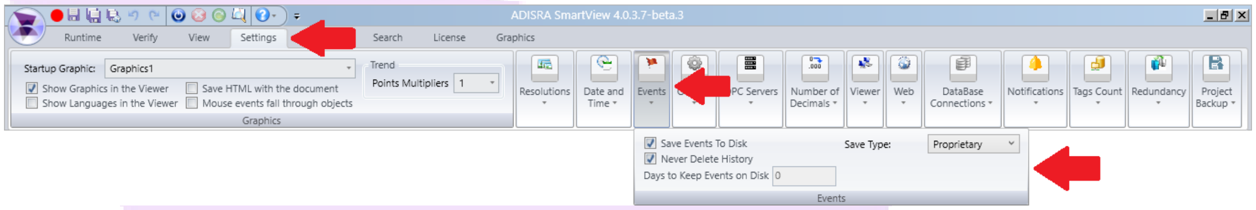
5. Create another graphic document named 'Graphics2'. This graphic will be used to demonstrate a good usage of the event system's functionality.

   With the project created and configured correctly, please proceed to the next topic to learn how to enable the ADISRA SmartView event system.

3.2. Enabling the event system

This subtopic will demonstrate how to enable the event system, its configuration options and how it works.

First, to enable the ADISRA SmartView event system you have to access the ‘Settings’ in the engineering area and open the ‘Events’ tab.



Startup Graphic: Graphics1
[✓] Show Graphics in the Viewer
[ ] Show Languages in the Viewer
[ ] Save HTML with the document
[ ] Mouse events fall through objects
Trend
Points Multipliers 1

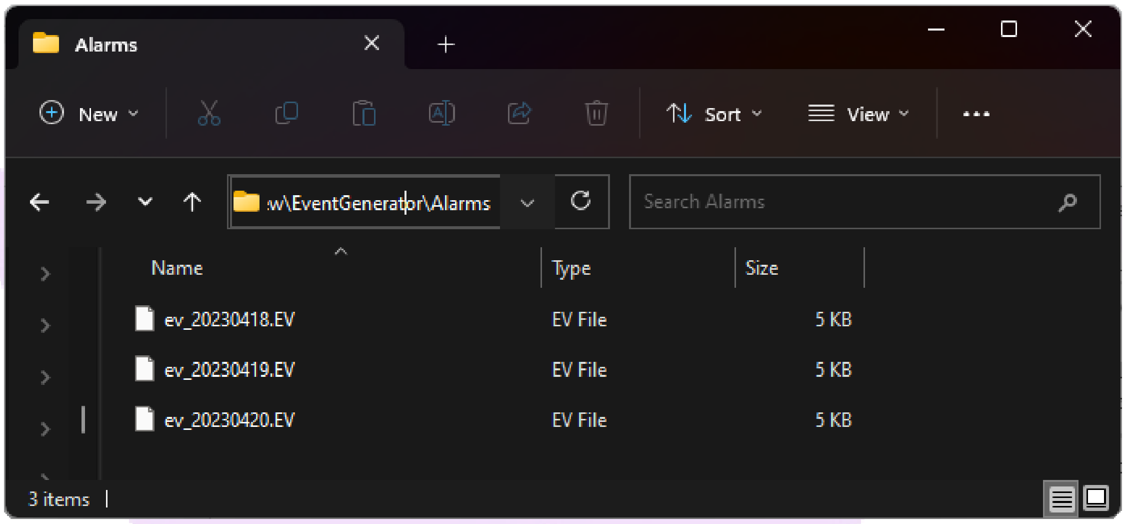
[✓] Save Events To Disk
[✓] Never Delete History
Days to Keep Events on Disk 0
Save Type: Proprietary

With the tab open, you will be presented with the following configurations. Read the following items to learn what each one of them does.

- Save Events to Disk: This option enables/disables the event system. It needs to be enabled for event messages to be stored.

  If you enabled the event system before, saved some event messages, and then disabled it again, the saved event messages will not be deleted. They will only be deleted if the number of days set for 'Days to Keep Events on Disk' has passed.

- Never Delete History: This option enables/disables whether the event messages will never be deleted or if they will be deleted if the number of days set for 'Days to Keep Events on Disk' has passed.
- Days to Keep Events on Disk: This field sets the number of days for which the files storing the event messages will remain stored in the system before being deleted.
- Save Type: This field sets whether the event messages will be stored in files inside the project folder (Proprietary) or in a database (Database).
  - Proprietary: When this option is selected, a file will be created in the 'Alarms' folder inside the project folder whenever a message is saved. The file will store all event messages of that day. If the day changes, another file is created to store the messages of the new day.

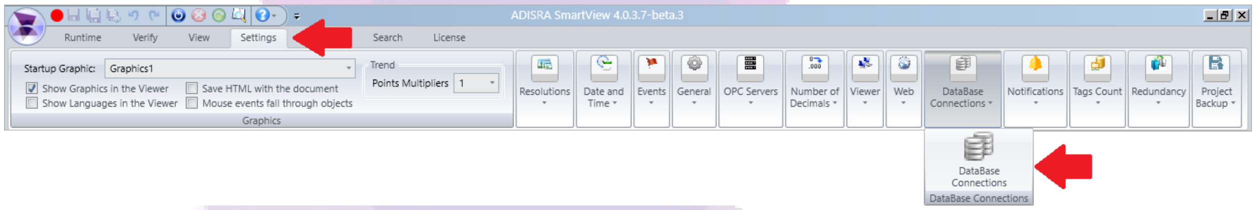


w\EventGenerator\Alarms

Name	Type	Size
ev_20230418.EV	EV File	5 KB
ev_20230419.EV	EV File	5 KB
ev_20230420.EV	EV File	5 KB

3 items

- Database: When this option is selected, a new field will appear, allowing the user to select one of the database connections included in the project. The database connections are added in the following area:



With the configurations explained, enable the Event System and specify how long you want the event files to remain in your system. When enabled, proceed to the next subtopic to learn how to send and save event messages.

3.3. Storing event messages

To send event messages, ADISRA SmartView uses a function included in the System Function Library SVEvent. The function is SVEvent.Send and it has three versions.

- void Send(string sMessage)

  This version sends the event message with only the message specified in the string parameter 'sMessage'.

- void Send(string sGroup, string sMessage)

  This version sends the event message with the message specified in the string parameter 'sMessage' and the name of a group that the user wants to specify in the parameter 'sGroup'.

- void Send(string sGroup, int nPriority, string sMessage)

  This version sends the event message with the message specified in the string parameter 'sMessage', the name of a group the user wants in the parameter 'sGroup' and an integer value to indicate the priority of the message in the parameter 'nPriority'.

Access the help documentation to learn more about its parameters and acceptable values.

With the presented functions, open the graphic document and access the Button1 'MouseUp' event. Add the following script to it:

```
SVGraphics.Open("Graphics2");
SVEvent.Send("Graphics2 was opened.");
```

This will cause Button1 to open Graphics2 when pressed, and save an event message with the message 'Graphics2 was opened' configured to indicate the action.

Access the Button2 'MouseUp' event and add the following script to it:

```
SVGraphics.Close();
SVEvent.Send("Graphics Group", "Graphics1 was closed.");
```

This will cause Button1 to close Graphics1 when pressed, and save an event message with the message 'Graphics1 was closed' configured to indicate the action.

Access the Graphics2 'OnClose' event and add the following script to it:

```
SVEvent.Send("Graphics Group", 1, "Graphics2 was closed.");
```

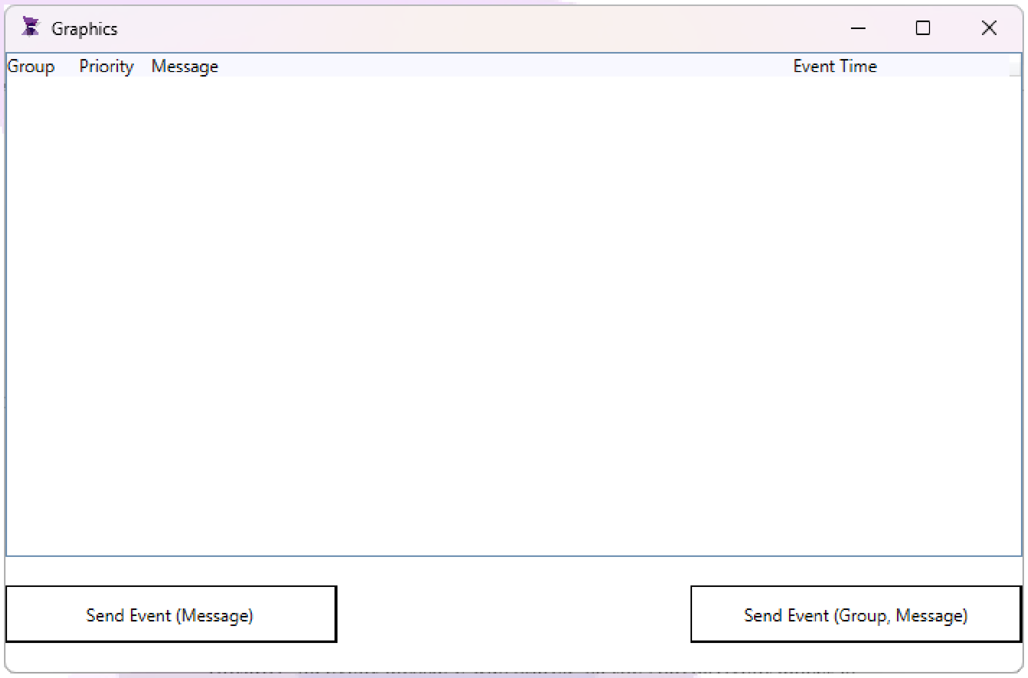
This will cause an event message with the group name 'Graphics Group', priority level 1, and message 'Graphics2 was closed' to be saved whenever Graphics2 is closed.

With everything configured, let's test the project.

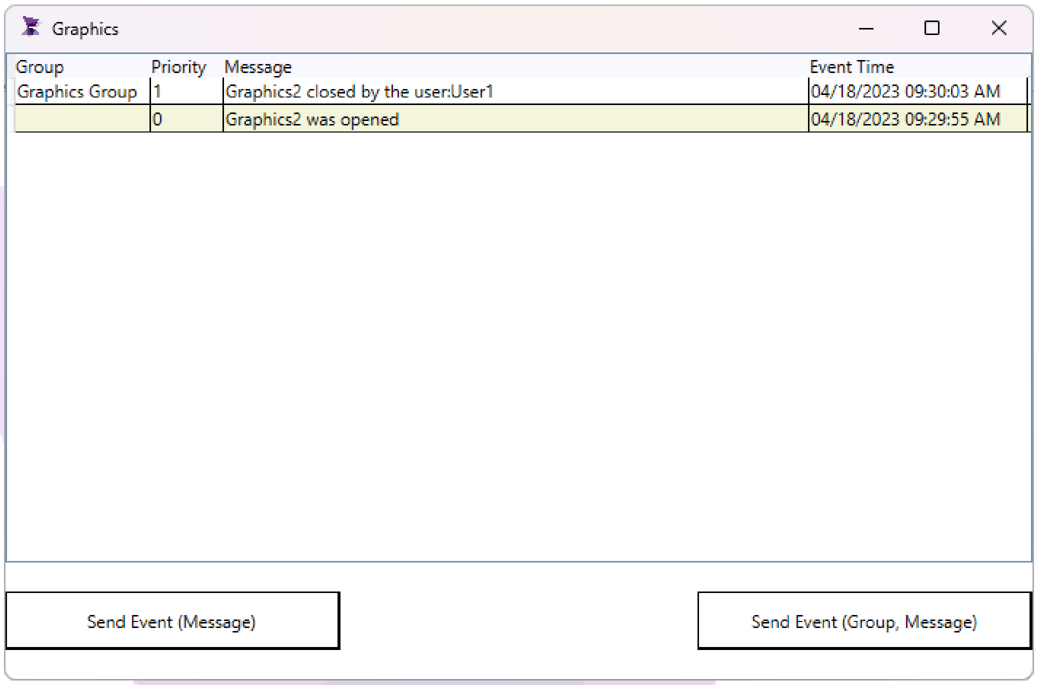
3.4. Testing the project

To test the project, configure the 'Startup Graphic' to Graphics1, and then start the project runtime.

Initially, no event message was stored, so the Alarm/Event object will be empty.

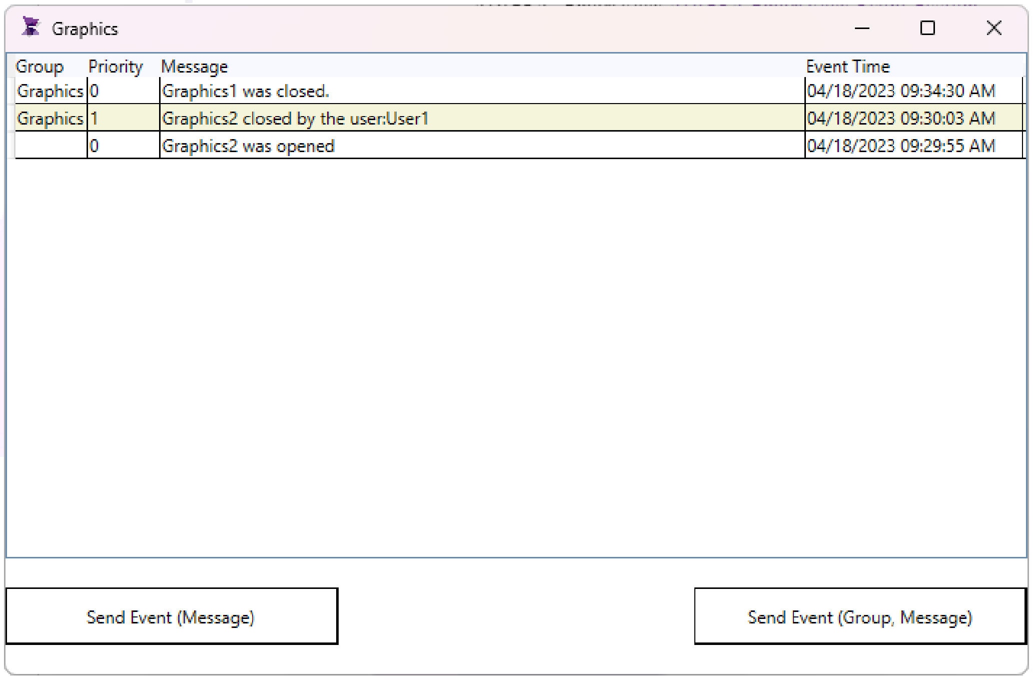


Press Button1 to store the first message. This action will also open Graphics2. Once you're done, close Graphics2.



Group	Priority	Message	Event Time
Graphics Group	1	Graphics2 closed by the user:User1	04/18/2023 09:30:03 AM
	0	Graphics2 was opened	04/18/2023 09:29:55 AM

Finally, press Button2 to close Graphics1. After reopening it, the new message will be displayed.



Group	Priority	Message	Event Time
Graphics	0	Graphics1 was closed.	04/18/2023 09:34:30 AM
Graphics	1	Graphics2 closed by the user:User1	04/18/2023 09:30:03 AM
	0	Graphics2 was opened	04/18/2023 09:29:55 AM