EVI

External Video Integration

Security Center

Installation and Operation Manual

Revision History

Version	Date
1.0.0	2015/07/13
1.0.1	2015/09/26

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1. Glossary

Acronym	Description
GUI	Graphic User Interface
EVI	External Video Integration
SCADA	Supervisory Control And Data Acquisition

2. Introduction

This is a User Manual for the EVI Genetec Security Center. EVI – External Video Integration - communicates with Security Center system.
EVI Security Center is a software application for video, executable with certain parameters that characterize the behavior. This application has a graphical user interface (GUI) for dedicated operations of display management.
The manual is organized to give an overview of EVI technology, details on the configuration, detailed procedurally steps involved in a simple configuration.

3. About the EVI Security Center

The EVI Security Center is a Windows32-based application that allows the display of cameras connected to the Security Center system. This application can be called by SCADA systems.
EVI communicates with Genetec Security Center system through Genetec Security Center SDK (Version 5.2).
The SDK consists of a collection of ActiveX components exposing the core functionalities of the Security Center system.

The EVI Security Center reads and writes data to and from Security Center system via Ethernet. EVI has a graphical user interface (GUI) that displays, the encoders connected to the Security Center system, through different multiplexer formats.

- EVI manages the connection with the Security Center systems;
- Can be run more EVI simultaneously, but every EVI allow the connection to a single Security Center system at a time;
- Each EVI can display a single screen (on a single monitor) with the possibility to select, in various modes (1-mux, 2-mux,3-mux or 4-mux), all the cameras viewable;
- From the command line you can specify which alarmed camera view and which modes;
- The multiplexer (MUX) formats are:
  - 1x1 (1-MUX)
  - 2x2 (2-MUX)
  - 3x3 (3-MUX)
  - 4x4 (4-MUX)
- From the GUI you can choose the format of the multiplexer (a button to format) and enable /disable each camera through GUI Tree;
- With a double click on the video live you can see the encoder on which you are currently single click in a single multiplexer (1-MUX);
- Application Name : EVI-SecurityCenter.exe

4. EVI Overview

4.2 Hardware Requirements

4.2.1 Network Hardware Requirements

Since the EVI communicates with the Security Center system over Ethernet, an Ethernet network must be in place. Depending on the cabling, distances, inter connectivity requirements, etc., this system may include bridges, routers, hubs, etc.. The network itself should be fully tested and be known to operate before attaching the controllers and the EVI computers. Contact your system administrator for assistance or consult instructional documentation and manuals to setting up the network. It is beyond the scope of this Users Manual to discuss networking topics in any detail.
Once the network is in place and the EVI computers and controllers are attached, check connectivity using available network testing tools and programs such as ping.

4.2.2 Computer Hardware Requirements

The following minimum computer hardware items are required for the computer that will be running the EVI:
1. CPU – Entry level
2. 512 Mb of RAM
3. 10 Gb hard disk space
4. SVGA display adapter
5. Ethernet adapter with proper interface type to attach to the Ethernet network.

While these are considered minimums, actual requirements will vary greatly depending upon the operating system, operating system options installed and the EVI's configuration. Faster CPUs and more memory will greatly enhance the performance of the Server.

4.3 Software Requirements

The following software requirements must be met in order to configure and/or use the EVI :

- Windows Server 2003, Windows XP, Windows 7 or Windows 8.
- Genetec Security Center SDK (Version 5.2)

The computer must have DCOM and .NET Framework 4 Installed.
The EVI is a 32 bit application which can run on both 32/64 bit operating system.

4.4 Installation of the EVI

The EVI proper functioning needs the installation of the Security Center SDK (Version 5.2) and then the installation of the EVI Security Center using its specific setup.

The setup includes all the dependencies that your system must meet in order to ensure the proper functioning of the application.

Two security issues require attention:

- Installation needs Administrator rights;
- Windows Firewall must be configured;

4.5 Licensing

A proprietary software license grants the end-user permission to use one or more copies of the EVI Security Center software.

Without the software license EVI runs in demo mode with full functionality for 30 seconds.

4.5.1 How to obtain a license

A software license must be obtained from S4S and the request has to be done from the computer where is installed the EVI Security Center. From the its User Interface selecting "?" then "View license" then "Product activation".

In the 'Product Activation' the following steps have to be completed :

- Customer data:
    - User name,
    - Organization,
    - Email field,
- generate code (via the 'Generate new user code' button);
- save the code and directly send it to 'info@s4s.it ' or send it via 'Send' button if is configured a mail box on the computer.

The software license will be generated for that specific configuration and for the PC from which has been requested the software license.

4.5.2 Software license activation

To activate your license you must access to the 'Product Activation' dialog and through the 'Load New License' button you load the license file released by S4S.
A dialog will appear for feedback at the end of loading to indicate the outcome of activation.

4.6 Configuration

EVI can be performed without any parameters by connecting to the system Security Center through an appropriate dialog, or EVI can be run by passing the configuration parameters to connect directly, without the use of the Login dialog, to the system to view determined alarmed encoders.

4.6.1 Configuration parameters

Parameter	Name	Description
-ip	IP address	IP address or gateway name. Default: 127.0.0.1 Syntax: -ip IP_adress Example: -ip 192.168.0.0.2
-u	User	The name of the user to connect to the gateway. Default: user Syntax: -u User Example: -u test
-p	Password	The user's password. Default: "empty" Syntax: -p Password Example: -p test Note: If the Security Center password is empty not use this parameter.
-sv	MUX alarmed	Define the number of cameras to display. The possible value are:

		<table><tr><th>Cameras number</th><th>MUX</th></tr><tr><td>**1**</td><td>MUX 1(1x1)</td></tr><tr><td>**2 – 4**</td><td>MUX 2 (2x2)</td></tr><tr><td>**5 – 9**</td><td>MUX 3 (3x3)</td></tr><tr><td>**10 - 16**</td><td>MUX 4 (4x4)</td></tr></table> This parameter allows the display of cameras alarmed and must be used together with the 'Cameras alarmed' parameter. Default: 1 Syntax: -sv MUX -MUX= 1,2,3,4 Example: -sv 2
-t	Camera alarmed	Define which cameras to be displayed in the MUX alarmed (define by 'MUX alarmed' parameter). If you configure more cameras than you can hold in the MUX in alarm, the system will display the first and will not consider those in excess. If you configure few cameras than you can hold in the MUX alarmed, the system will display the cameras configured and will fill the remain views live with the other videos. Default: 0 Syntax: -t [IDEncoder]$^{+}$ Example: (-sv 1) -t 1 (-sv 2) -t 1 2 3 4 (-sv 3) -t 1 2 3 4 5 6 7 8 9 (-sv 4) -t 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
-e	Hide Exit Button	The exit button is not shown.
-o	Offset	Added offset value to the ID camera. Default: 0 Syntax: -o [0 to N] Example: -o 3 –sv 2 –t 1 2 3 4 (4 5 6 7 cameras alarmed)

-l	Log File	Creates a text file which lists all the connected cameras reporting ID and description of each camera. The file is created in: C:\EVI-Security Center\LOG.
-ds	Previous (Delay Seconds)	Displays the video stream of n seconds before the activation of the application. If not set this parameter, the video stream is live, otherwise if the value is greater than 0, the video stream will show the images of n seconds before the activation. Default: 0 (live stream) Syntax: -ds Seconds Example: -ds 30 (30 seconds) -ds 120 (2 minuts) -ds 3600 (1 hour)
-k	Kill EVI Process	On closing, EVI closes the port used for communication of new alarms via TCP. Kill execution of other EVI previously performed instances. With this parameter will be executed always the last call in temporal order.
-sp	Save Position	Saving the size and location of the EVI program in "Configuration.xml" file. In a new execution, the application form will have the same size and positions it had in the previous execution. This configuration no considers the windows position ("-wp") or windows monitor ("-wm").

4.6.1 Configuration examples

Example 1

Co and line
>EVI-Security Center.exe -ip 169.254.247.226 –u admin –p AAA -sv 1 –t 4

EVI connects to the Security Center system with IP address 169.254.247.226, user 'admin' and password 'AAA', showing the video camera with ID 4 into single view (1-MUX). In the GUI is shown the Exit Button.

Example 2

Command line
>EVI-Security Center.exe -ip 169.254.247.226 –u admin –p AAA -sv 2 –t 1 2 3 4 -e

EVI connects to the Security Center system with IP address 169.254.247.226, user 'admin' and password 'AAA', showing the video cameras with ID 1, 2, 3 and 4 into a multi view (2-MUX). In the GUI is hided the Exit Button.

Example 3

Command line
>EVI-Security Center.exe -ip 169.254.247.226 –u admin –p AAA -sv 2 –t 1 2 3 4 –e –o 10

EVI connects to the Security Center system with IP address 169.254.247.226, user 'admin' and password 'AAA', showing the video cameras with ID 10, 12, 13 and 14 into a multi view (2-MUX). In the GUI is hided the Exit Button.

Example 5

Command line
>EVI-Security Center.exe -ip 169.254.247.226 –u admin –p AAA -sv 2 –t 1 2 3 4 –e –o 10 –ds 60 -k

EVI connects to the Security Center system with IP address 169.254.247.226, user 'admin' and password 'AAA', showing the video cameras with ID 10, 12, 13 and 14 into a multi view (2-MUX). In the GUI is hided the Exit Button. The video stream is in preview mode and it showed the image with a delay of 60 seconds. The application checks if there is another instance already running and if there is the application kills it, in this mode there is only one instance.