R o g e r   A c c e s s   C o n t r o l   S y s t e m   5 v 2

Application note no 057

Document version: Rev. A

Polon 4000 and 6000 (POLON-ALFA) integration

Note: This document refers to RACS 5 v2.0.8 or higher

Introduction

RACS 5 system enables software integration with fire alarm panels of 4000 series and 6000 series from POLON-ALFA company. The integration enables to:

- Monitor and locate states from fire alarm system using Maps and Monitors in association with CCTV system. It concerns such states as:
  - fire alarms
  - activation/deactivation of inputs and outputs (e.g. smoke vents)
  - failures
- Keep maintenance log based on Event Log and possibly using Notes.

The integration is mainly dedicated to be used with VISO SMS system which enables monitoring and visualization of various security systems as explained in AN055 application note. Fire alarm cancelling, resetting, etc must be performed from the level of the fire panel. It is also necessary to apply valid license in the VISO EX software.

Preliminary configuration of RACS 5

In order to conduct preliminary configuration of RACS 5:

- Install VISO software and create database according to AN006 application note.
- Install RogerSVC software and select not only Communication Server but also License Server and Virtual Controllers Server. If servers are supposed to be operated on individual computers then install RogerSVC on each computer selecting required servers.

Note: If License Server and Virtual Controllers Server are supposed to be operated on individual computers then during installation of Virtual Controllers Server, the License Server must be deselected. Only in such case it will be possible to indicate external License Server when Virtual Controllers Server is configured.

- When RogerSVC is launched then its icon is displayed in Windows tray. Click the icon 🖳. The RogerSVC icon in tray can also be launched from Windows menu *Start ->Roger-> RogerSVC.*

- In the RogerSVC window select *Database Connection* tile and then *Configuration* to indicate previously created RACS 5 database. Return to the main window.
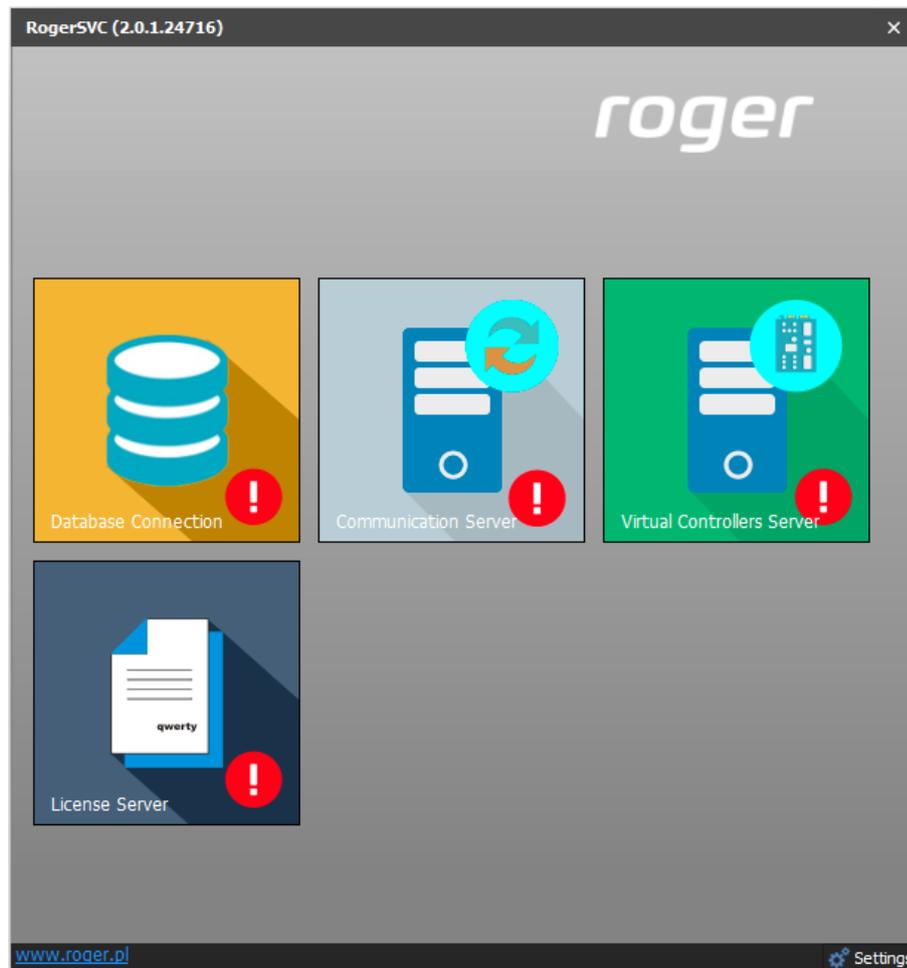
- In the RogerSVC window select *Communication Server*, click *Configuration,* enter IP address of the computer with the server installed e.g. 192.168.11.13 and define port (8890 by default).
- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.
- Connect RUD-6-LKY hardware key to USB port of computer with License Server installed or connect RLK-1 hardware key to LAN and enter its IP address.
- In the RogerSVC window select *License Server* tile, click *Configuration,* enter IP address of the computer with the server installed e.g. 192.168.11.13 and define port (8891 by default).
- Select *Load license file* and indicate purchased license file for the hardware key.
- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.
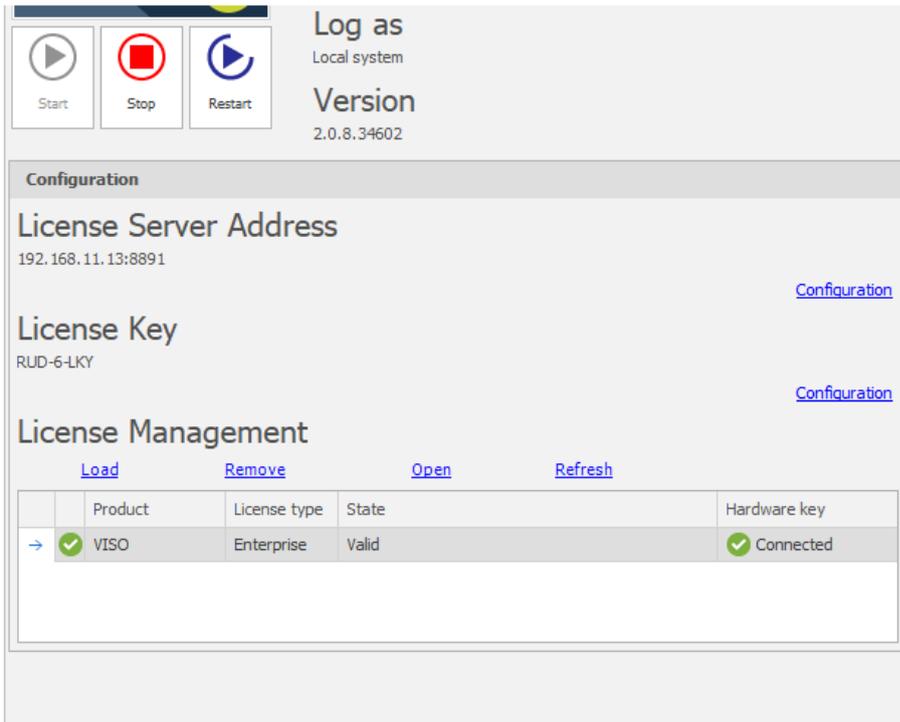
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- In the RogerSVC window select *Virtual Controllers Server* tile, click *Configuration*, enter IP address of the computer with the server installed (e.g. 192.168.11.13) and define port (8895 by default).
- If contrary to previously presented configuration steps, the License Server is installed on a computer with exemplary 192.168.11.23 address while Virtual Controllers Server is installed on computer with exemplary 192.168.11.13 address then it is possible to indicate external License Server for virtual controllers as below.
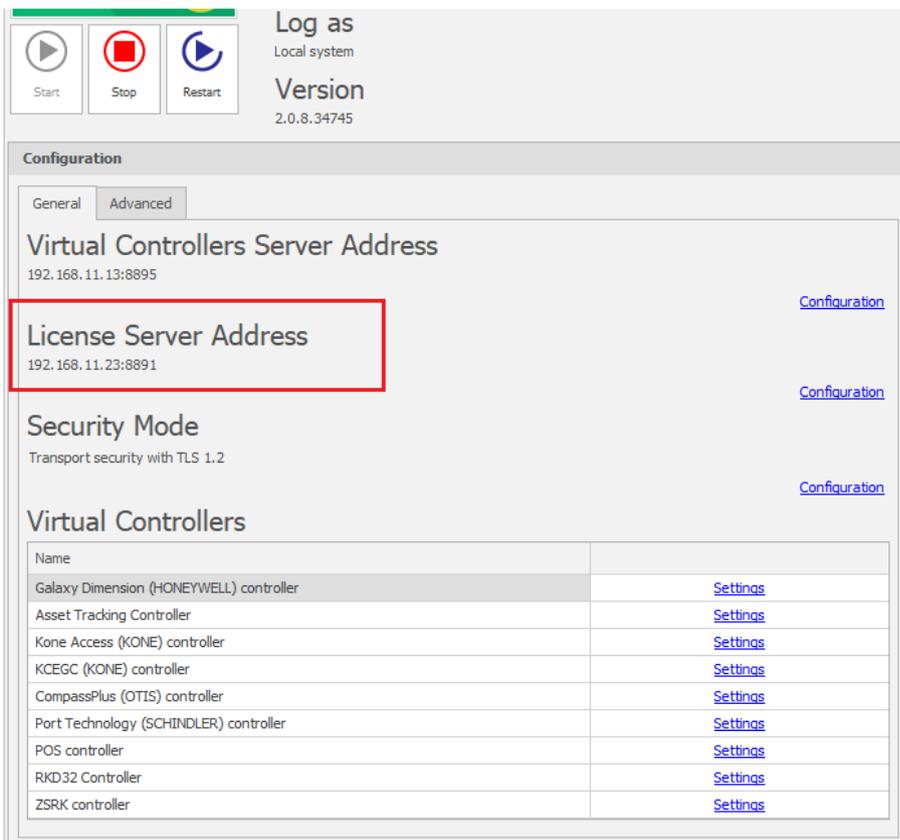
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- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.
- Start VISO software, in the top menu select *System*, then *Select License Server* and indicate previously defined License Server from RogerSVC software in order to start the VISO program in licensed version.

Fire alarm system configuration

Configure the fire alarm system with Polon 4000/6000 panels according to manufacturer manuals and guidelines.

Polon 4000 fire panel

Configure the fire panel and then save settings in XML file for further use in the integration.
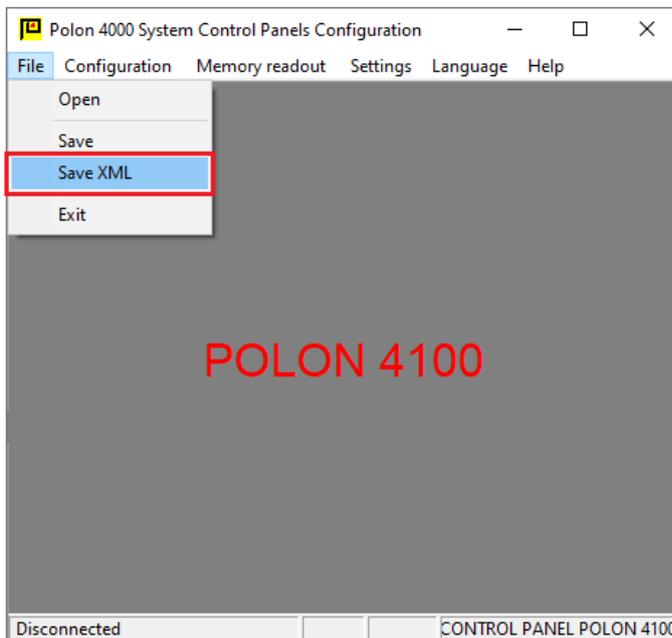
In order to prepare the panel for integration:

- Log in to the panel using account with level 4 privileges.
- Select *MAIN MENU > SYSTEM CONFIGURATION > HARDWARE DECLARATION > SERIAL PORT DECLARATION.*
- Configure the RS232 port as type 2: POLON MONITORING – PMC 4000.
- Connect Polon 4000 fire panel directly to RS232 port of the computer with Virtual Controllers Server installed (RogerSVC software) or via Ethernet using MOXA Nport 5110 converter.

MOXA NPort 5110 converter

It is possible to monitor the Polon 4000 fire panel using the MOXA NPort 5110 serial port server. The NPort device receives data in RS232 format and then further transmits via the Ethernet network to the server where NPort Windows Driver Manager software is installed. The Virtual Controllers Server from the RogerSVC software package should also be installed on the same computer.

In order to configure the converter:

- Connect the converter to computer network and log in via web browser entering factory default IP address and default login: admin as well as default password: moxa.
- Configure the converter as below.

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- On the computer with Virtual Controllers Server (RogerSVC) download and install drivers and NPort Windows Driver Manager software from www.moxa.com.

Windows Driver Manager (Windows 11 and Server 2022 and later, WHQL certified)

Windows Driver Manager (Windows 7 to 10 and Windows Server 2008 R2 to 2019, WHQL certified)

- After installation and starting NPort Windows Driver Manager detect NPort converter and map virtual COM port for communication. This COM port will be further indicated for the communication with fire panel.

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Polon 6000 fire panel

In order to prepare the panel for integration:

- Log in to the panel using account with level 4 privileges.
- Select *Menu > PSO Configuration > Network settings* and then define network settings of the fire panel.
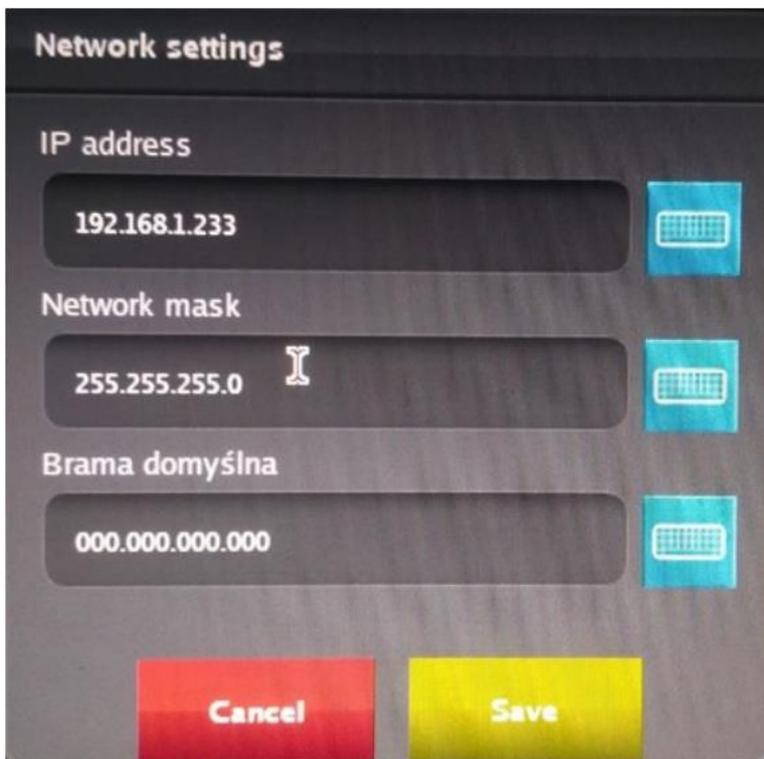
- Select *Menu > PSO Configuration > Monitoring settings* and define monitoring settings.
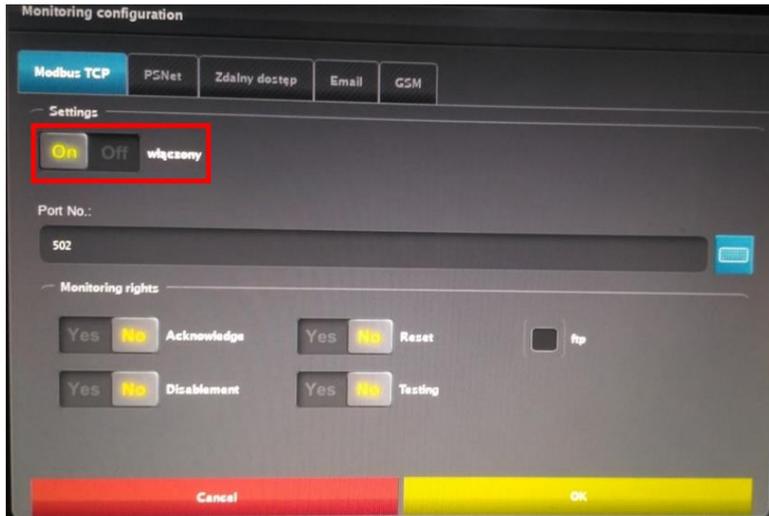
- Connect the fire panel to Ethernet network where server with installed Virtual Controllers Server (RogerSVC) is available.

Note: Restart the panel after enabling Modbus TCP connection.

Connection with fire alarm system

In order to configure virtual controller:

- If Communication Server is not already configured in VISO software then in the navigation tree of VISO software right click *Networks* command and select *Add Communication Server*.
- In the opened window enter parameters of Communication Server previously configured in RogerSVC program and close the window with *OK* button. It is recommended to apply TLS 1.2 mode to encrypt the communication.
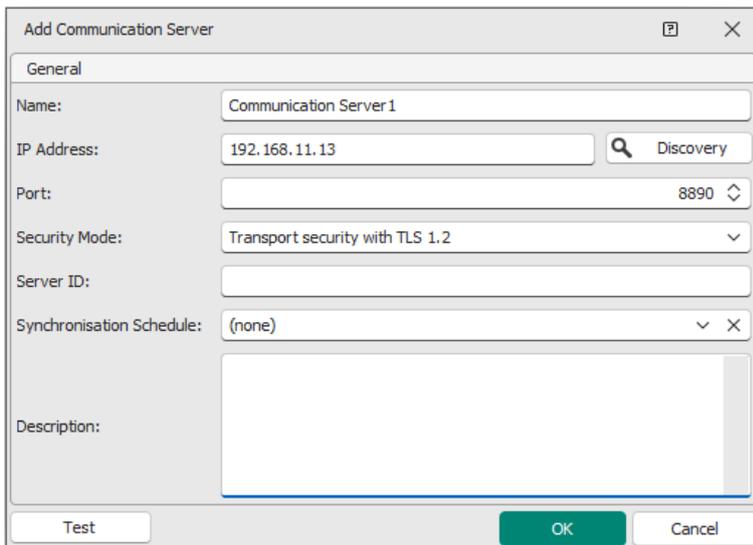
- In the navigation tree right click *Virtual Controllers Server* and select *Add Server*. In the opened window enter parameters of Virtual Controllers Server previously configured in RogerSVC program and click *OK*. It is recommended to apply TLS 1.2 mode to encrypt the communication.
- In the navigation tree right click the server and select *Add Virtual Controller*. In the section *Fire Alarm Systems* select *Polon 4000 (POLON ALFA) controller* or *Polon 6000 (POLON ALFA) controller* depending on installed fire panel. If the controller is not on the list then most

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probably there is license error on the level of VISO software or RogerSVC software. Close the window with *OK* button.

- In the navigation tree double click respectively *Polon 4000 controller* or *Polon 6000 controller* and in the opened window select *Add*.
- In case of Polon 4000 panel in the opened window enter parameters for the connection with the panel including COM serial port and baud rate as well as indicate previously exported XML file. Verify the connection with *Test* button.

- In case of Polon 6000 panel in the opened window enter parameters for the connection with the panel including IP address and port (502 by default). Port 21 (ftp) is also used for communication with the panel. Verify the connection with *Test* button.

- Select *Initialize* and then *Run* in the opened window to download such objects as zones (groups), inputs (e.g. detectors) and outputs (e.g. sirens) defined in the fire panel.

Note: Every modification of fire panel configuration requires the initialization in VISO software and in case of Polon 4000 additionally it is necessary to export new configuration to XML file and then to indicate new file in VISO software.

Application of the integration

The integration mainly facilitates maintenance and monitoring of fire alarm system especially in regard of alarms. It is mainly applied in VISO SMS system which is used to monitor and visualize security systems in buildings. Fire panel objects such as detectors can be placed on Maps. More information on this subject is given in AN055 application note.

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