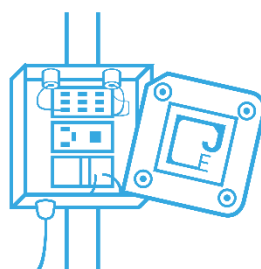




SED ONVIF Driver

V 3.11.1



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Introduction

ONVIF provides standardized interfaces for effective interoperability of IP-based physical security products. The details about ONVIF products are described on ONVIF websites: <https://www.onvif.org/>

SED Server serves as a gateway for communication with all SED devices and SED ACAP applications owned by the user. It informs the user about changes of the devices connection state and handles alerts raised by the devices. It supports audio and video streaming so the user can see information about the current alert and replay a short audio fragment that triggered alert.

SED Server implements:

- [Profile M](#) that is designed for sending analytics events and metadata.
- [Profile S](#) that is designed for video and audio streaming.



Services

SED Server implements the following ONVIF services:

Device: <http://www.onvif.org/onvif/ver10/device/wsdl/devicemgmt.wsdl>

Event: <http://www.onvif.org/onvif/ver10/events/wsdl/event.wsdl>

Media: <http://www.onvif.org/onvif/ver10/media/wsdl/media.wsdl>

Media2: <http://www.onvif.org/ver20/media/wsdl/media.wsdl>

Analytics: <http://www.onvif.org/onvif/ver20/analytics/wsdl/analytics.wsdl>

Discovery: <http://www.onvif.org/onvif/ver10/network/wsdl/remotediscovery.wsdl>

The following sections describe the services that SED Server implements and that are relevant to the user. It means they do not require administrator privileges.



Device Service

Device Service is an entry point for communication with the SED ONVIF driver. The functionality of the Device service is described in [the ONVIF Core specification](#).

The URL of the server's main entry point is http://{ip}:{port}/onvif/device_service. You can find the IP address and port in the information email you received when you purchased the devices.

User Authentication

Your login details, username and password, were sent to you via an information email. These credentials are the same for logging into user applications and for connecting to the server via the ONVIF driver. All users accessing the cloud SED Server managed by [JALUD Embedded](#) have operator privileges. If you have purchased a SED Server running on a local network, then you can also access it via an administrator account

SED Server supports all the mandatory methods of user authentication as described by the Core Specification:

- Authentication of HTTP requests using Digest authentication
- Authentication of RTSP requests using Digest authentication
- Authentication of RTSP requests tunnelled over HTTP using Digest authentication on the RTSP level.
- WSS authentication
- HTTPS

Advanced security ONVIF service integration (authentication by X509 ssl certificate) is under development and will be available in next driver version in Q1 2025.



Events Service

SED Server implements event handling as defined in Chapter 9 of [ONVIF Core specification](#). SED Server uses the ONVIF event mechanism to inform the user about:

- Detected Alerts (Gunshot, Scream, Aggression, Glass break, etc.)
- Noise Measurement
- Device State change (Connected, Disconnected, Signal lost, etc.)
- Event Localization

SED Server supports:

- Notification Subscription
- Pull point subscription
- Topic Filter
- Message Content Filter

Features under development (available in Q1 2025):

- MQTT
- Seek
- Persistent Notification Storage

SED Server creates a set of events for each device. The topic of these events includes the serial number of the device to which they belong. Apart from the serial number, the events for each device are identical. The placeholder *\$serial\$* is used in the following description instead of the serial number.

Device State event

This event informs user about a connection state of device.

Topic: tns1:VideoAnalytics/\$serial\$/SED_Device/DeviceState

Type: Property

Source:

- Serial: Device serial
- Location: Description of the source device (TBD)

Data:

- State: New device state. The device state can take on these values
- **Connected:** The device is connected.
- **Disconnected:** The device is disconnected.
- **Signal Lost:** The signal from the device was lost for a short time. If the device won't respond within a couple of minutes, it will be marked as Disconnected
- **SW Obsolete:** The SW on the device is obsolete. Contact us for an upgrade.
- Datestamp: Date ("yyyy-MM-dd") when the device state has changed.
- Timestamp: UTC Time ("hh:mm:ss.zzz") when the device state has changed

11:37:37 AM

tns1:VideoAnalytics/sed_2490481311112202112/SED_Device/DeviceState

Initialized

Serial: 2490481311112202112

State: connected
Datestamp: 2023-06-18
Timestamp: 22:08:08.924

Noise Measurement event

This event informs the user about the ambient noise level in a device's surroundings.

Topic: tns1:VideoAnalytics/\$serial\$/SED_Measure/NoiseMeasurement

Type: Property

Source:

- Serial: Device serial
- Location: Description of the source device (TBD)

Data:

- NoiseLevel: Energy level of noise in dB in device surrounding
- Datestamp: Date ("yyyy-MM-dd") when the device state has changed
- Timestamp: UTC Time ("hh:mm:ss.zzz") when the device state has changed

11:37:37 AM

tns1:VideoAnalytics/sed_2490481311112202112/SED_Measure/NoiseMeasurement

Initialized

Serial: 2490481311112202112

NoiseLevel: 32.1929

Datestamp: 2023-06-18

Timestamp: 22:07:10.095

Alert event

When the SED device detects the desired sound in the surroundings, it triggers two ONVIF events. One is generic for all the sound types the device detects, and one is specific for the detected sound type.

The reason is to give the user a choice whether they want to handle all event types in the same way and use a generic event, or whether they want to respond to each type of detected event in a different way.

Based on the SED Model (basic, full or drone), one or more types of [alerts and events](#) sound can be detected.

In the following description \$alert\$ placeholder is used instead of the sound type.

Generic Alert Event

Topic: tns1:VideoAnalytics/\$serial\$/SED_Alert/Any

Type: Stateless

Source:

- Serial: Device serial
- Location: Description of the source device (TBD)

Data:

- EventType: \$alert\$
- EnergyLevel: Energy level of the event in dB
- BackgroundLevel: Energy level of the noise in dB in device surrounding
- Datestamp: Date ("yyyy-MM-dd") when the device state has changed
- Timestamp: UTC Time ("hh:mm:ss.zzz") when the device state has changed

12:09:36 PM tns1:VideoAnalytics/sed_2491031311115202205/SED_Alert/Any

Initialized

Serial: 2491031311115202205

EventType: Gunshot
EnergyLevel: 69.1885
BackgroundLevel: 55.2406
Datestamp: 2023-06-20
Timestamp: 14:09:33.283

Specific Alert Event

Topic: tns1:VideoAnalytics/\$serial\$/SED_Alert/\$alert\$**Type:** Stateless**Source:**

- Serial: Device serial
- Location: Description of the source device (TBD)

Data:

- EnergyLevel: Energy level of the event in dB
- BackgroundLevel: Energy level of the noise in dB in device surrounding
- Datestamp: Date ("yyyy-MM-dd") when the device state has changed
- Timestamp: UTC Time ("hh:mm:ss.zzz") when the device state has changed

12:04:45 PM tns1:VideoAnalytics/sed_2491031311115202205/SED_Alert/Gunshot

Initialized

Serial: 2491031311115202205

EnergyLevel: 68.3267
BackgroundLevel: 54.5524
Datestamp: 2023-06-20
Timestamp: 14:04:42.563

Localization event

If three or more devices detect the same event, it is possible to triangulate the position of the sound source (attacker in case of a gunshot, victim in case of a scream, etc.) based on the difference in the time stamps.

Localization event is used to inform user which devices were used for the triangulation and what are the sound source coordinates.

Topic: tns1:VideoAnalytics/SED_Localization**Type:** Stateless**Source:**

- Device1: Serial of the first device
- Device2: Serial of the second device
- Device3: Serial of the third device

Data:

- Radius: Calculation precision in meters
- Latitude: Calculated latitude of sound source
- Longitude: Calculated longitude of sound source



Media Service

SED Server ONVIF supports the Media service version 1 and 2. The services are defined in [Media2 specification](#) and [Media specification](#). Media service is used to configure so called Media Profiles. User can perform actions within the operator's permissions.

Supported Configurations:

- Video Source
- Video Encoder
- Audio Source
- Audio Encoder
- Metadata

Not Supported Configurations:

- PTZ
- Analytics
- Audio Output
- Audio Decoder

SED Server supports multiple options for audio and video streaming. Some of the options are available only if SED Server purchased and running on a local network and they're not available on the cloud SED Server managed by JALUD Embedded. These options are marked in [blue](#) color in the options list.

Video Options

Supported:

- Resolutions: [320 x 240, 640x480, [1280 x 960](#), [1920 x 1080](#)]
- Encoding: [JPEG, MPEG, H.264, [H.265](#)]
- Framerates: [1, 2, 5, [25](#)]
- GOV Range: [0 - 32]

Not Supported:

-
- Rotation
 - OSD Mask
 - Imaging

Audio Options

Supported:

- Encoding: [G.711, G.726, AAC]
- Samplerate [kHz]:
 - G.711: [8]
 - G.726: [8]
 - AAC: [8, 16, 32]
- Bitrate [kbs]:
 - G.711: [64]
 - G.726: [24, 32, 40]
 - AAC: [32, 48, 64, 96, 128]

Metadata Options

Supported:

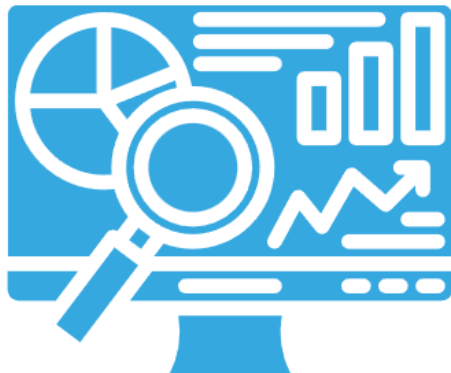
- Topic Filter
- Message Content Filter

Not supported:

- Compression

Analytics Service

Analytics service is under development and will be delivered in ONVIF Driver version 2.0 in Q1 2025



Streaming

The purpose of media service is to configure the device media streaming properties. The SED Server supports streaming of Video, Audio and Metadata.

Supported transport protocols:

- TCP
- UDP
- HTTP Tunneling

Not Supported:

- Multicast

Video Stream

SED Server displays information about triggered alarms to the user via video stream.

If no alert has been triggered, the user will see the basic screen.



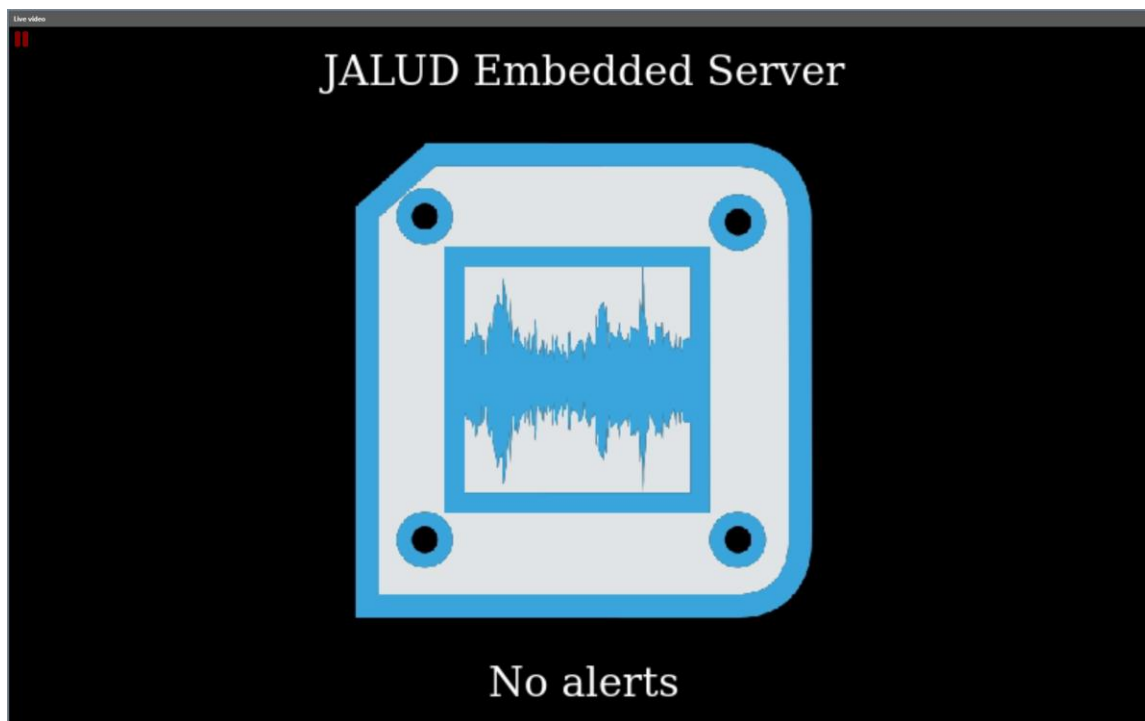


Figure 1: Basic screen

When the device detects required event and triggers an alert, the screen changes and the user is informed about:

- Type of the detected event
- Serial number and description of the device that triggered the alarm
- Timestamp of the event



Figure 2: Alert screen

If no other alarm is triggered, the event remains displayed for 30s and then the basic screen reappears. If a new alert is triggered, then a new alarm is displayed to the user if the previous one was displayed for at least 5s.

Each alert stays on screen for at least 5s, so if multiple alarms are triggered at once, newer alarms can be shown in the video stream with a delay, but none are missed. ONVIF events are of course triggered immediately.

Audio Stream

When SED device detects the requested event, it sends a short audio signal together with the metadata that triggered the event. Audio stream is used to replay the audio signal fragment to user.

The event audio fragment is replayed 3 seconds after the event became active to not interfere with system reaction sound in case it is set. Audio signal is played 3 times with 10s interval if no other alarm is triggered. If a new alert is triggered the replay is interrupted and a sound of the new alert is played instead. The sound fragment for each alert is triggered at least once and is synchronized with video stream. There might be some delay for video stream if multiple alerts are triggered at once.

The audio stream is designed to be constantly on as it only sends silence outside of detected alerts, so no one is disturbed

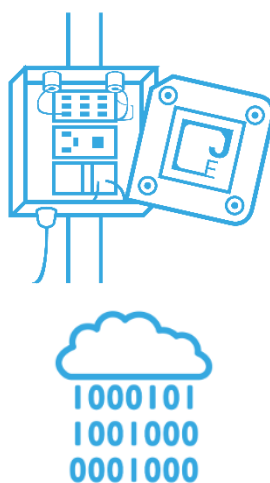
SED Server supports G.711, G.726 and AAC audio signal encoding, but it is recommended to use AAC as G.711 or G.726 encoding might distort the sound significantly and it might be harder to recognize if the alert is true or false.

Metadata Stream

The metadata stream is another way how to receive ONVIF events. Analytics metadata are under development together with Analytics service.

The Metadata stream is another option of how to provide the information about alerts, devices state, etc. to the user. The events description is identical as the one described in Event Service chapter. More information about Metadata Stream can be found in [Media2 Service spec](#) chapter 5.12.

The Metadata Stream Configuration supports Topic Filter and Message Content filter.



Integration

This section describes how to connect to and retrieve data from the SED Server in specific VMS. SED Server can be integrated in other VMS, besides the mentioned in next sections, which implements ONVIF Standard (such as Digifort, Ivisec and others we already have experiences with) and in ONVIF Device Manager. Contact our technical support in case you need help with integration.

GENETEC

Open **Config Tool** to connect and set SED Server.

Select an **Archiver** role and add a new **Video Unit**.

If you have SED Server on local network, you can use automatic search unless you need to add SED Server manually:

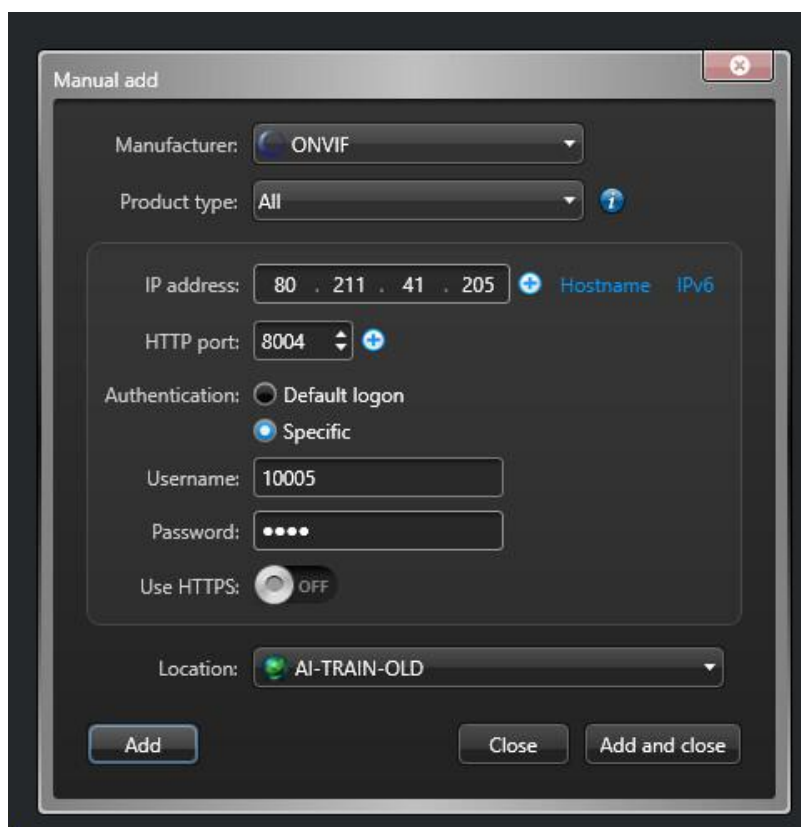


Figure 3:Add SED Server

- Manufacturer: **ONVIF**

- Device is added as a child role into the selected Archiver.

Open **General Settings** and select **Events** tab

[illegible]

Figure 4: Custom Events

Select **Identity** tab in SED Server camera unit settings and add a new **Action**.

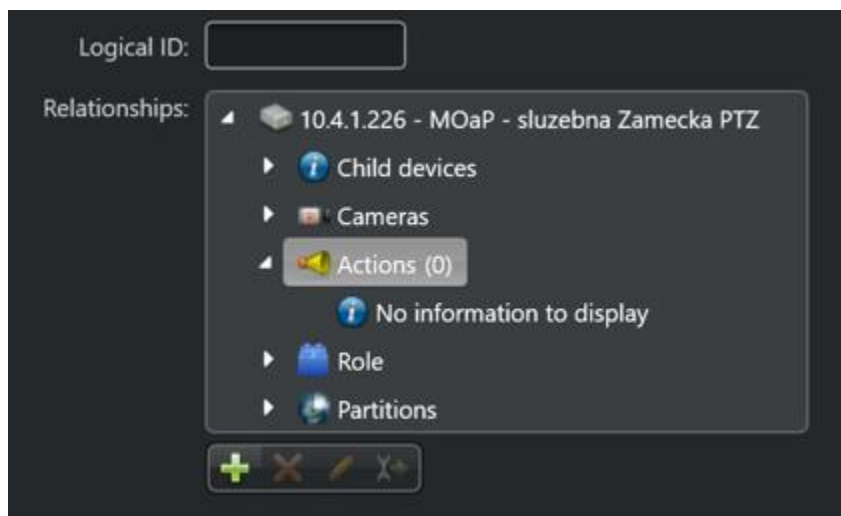


Figure 5: New Action

In the **Event-to-action** window, choose an event from the list and set a reaction. You can create a specific reaction on each Alert type, or you can have one reaction on all of them by one rule – see details in Alert event section.

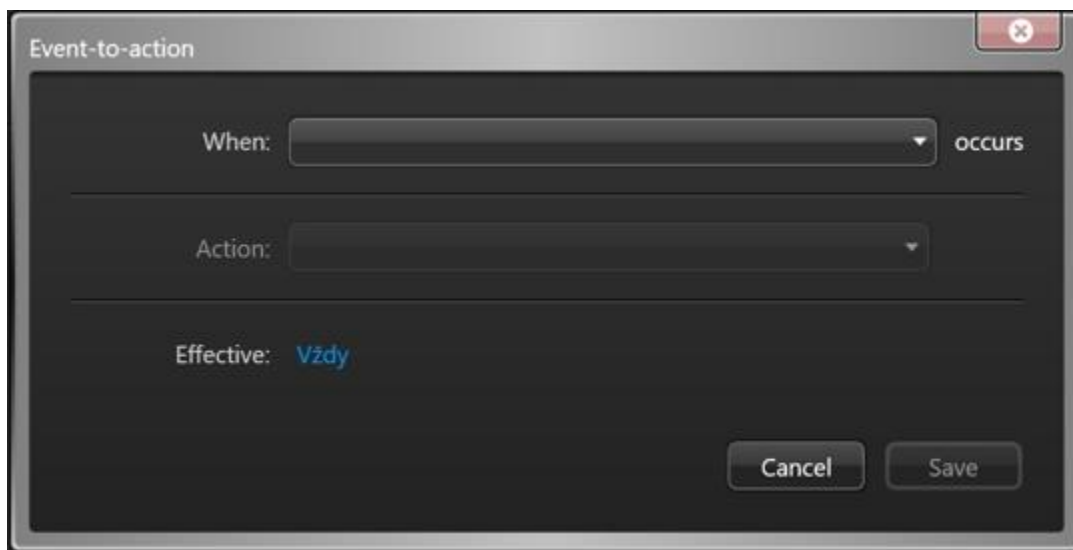


Figure 6: Reaction to Events Setting

Video Stream

Select Video tab in SED Server camera unit settings. In the bottom tabs you can switch among multiple encoding options and select the one that suits you best.

For each encoding you can set a quality of the encoded stream and network settings. Video supports transfer via UDP, TCP and HTTP Tunneling. Multicast is not supported by SED Server at present.

If you choose UDP and you use the cloud server managed by JALUD Embedded ensure that your IP Address and UDP port are reachable from outside.

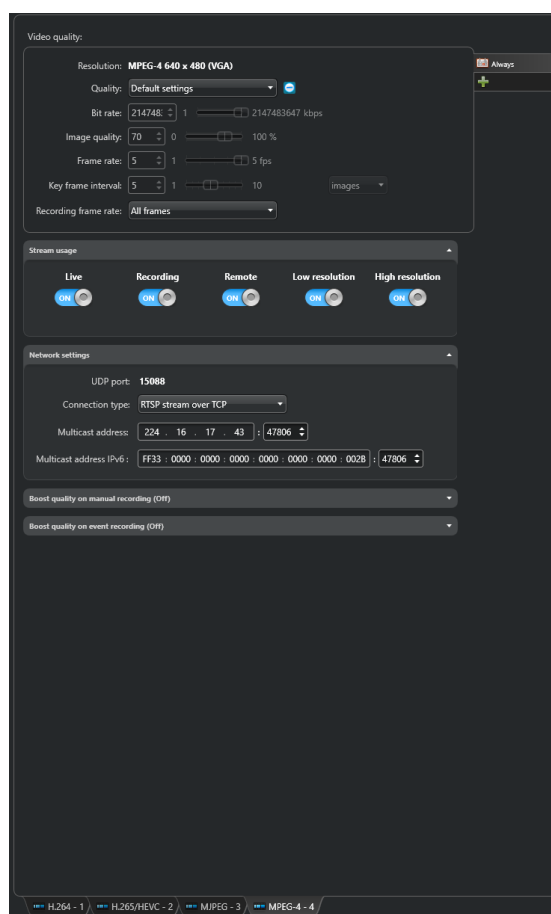


Figure 7: Video Settings

Audio Stream

Select SED Server Video Unit and switch to **Peripherals** tab. Camera and Microphone should be displayed among peripherals.

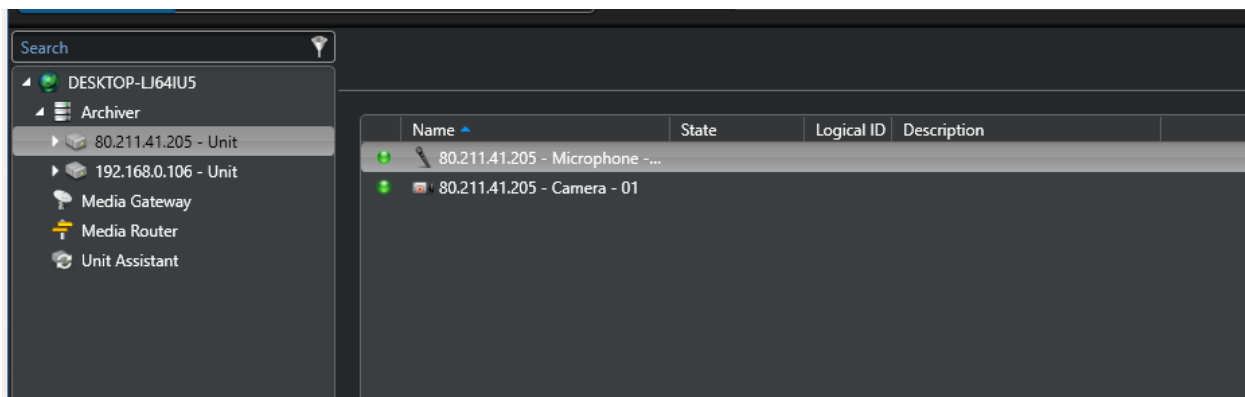


Figure 8: Video Unit Peripherals

The audio stream properties can be set after a double-click on the Microphone peripheral. Microphone settings support the UDP transport protocol only, so ensure that the UDP port is accessible from outside if you connect to the cloud SED Server.

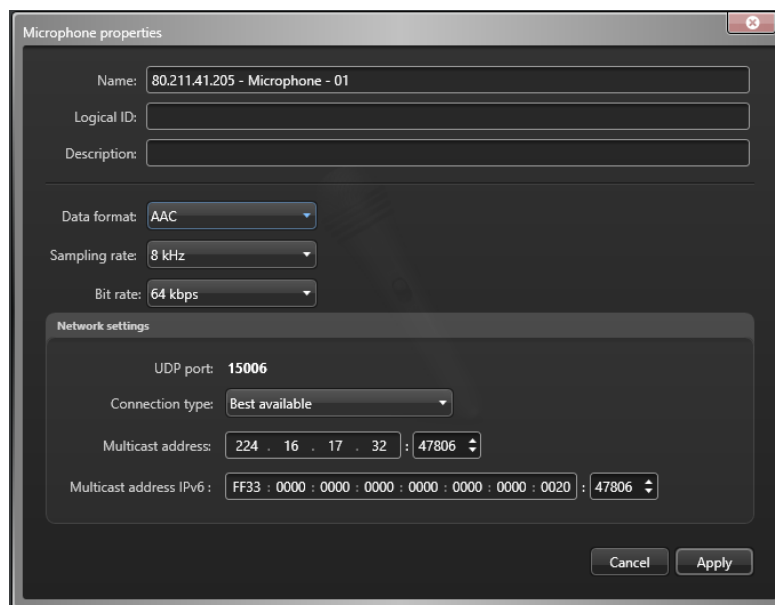


Figure 9: Microphone Settings

Runtime

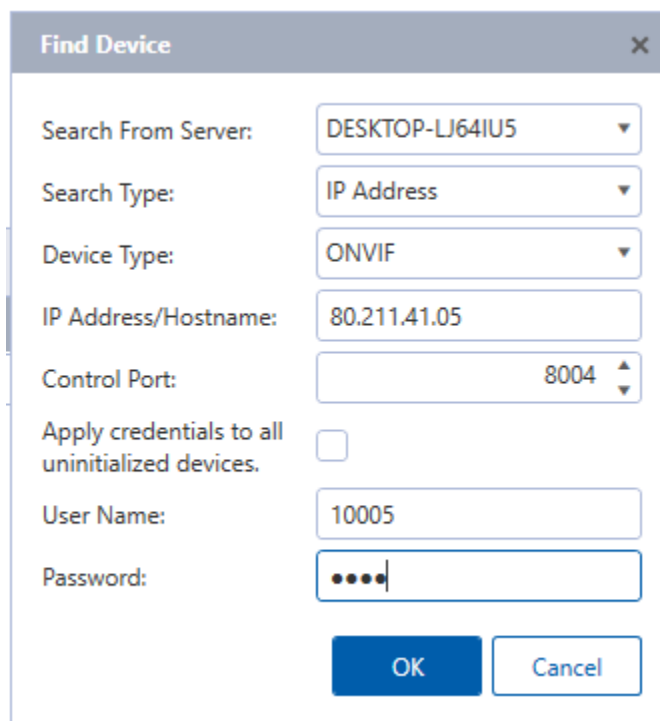
Open **Security Desk** tool and navigate to **Monitoring**. You can start a video stream by double-click on SED Server. Enable Audio stream on the control panel on the right. The SED Server produces only silence if there is no alert detected so the listening can be kept on.



Figure 10: Runtime Video and Audio

Avigilon

Navigate into **Connect/Disconnect Devices** menu in **Site Setup** to connect SED Server.
Press **Find Device...**



The 'Find Device' dialog box contains the following fields and controls:

- Search From Server: DESKTOP-LJ64IU5 (dropdown)
- Search Type: IP Address (dropdown)
- Device Type: ONVIF (dropdown)
- IP Address/Hostname: 80.211.41.05 (text input)
- Control Port: 8004 (spin box)
- Apply credentials to all uninitialized devices: ☐
- User Name: 10005 (text input)
- Password: [masked with dots] (password input)
- Buttons: OK, Cancel

Figure 11: Add SED Server

In the Popup windows add SED Server:

- Device type: **ONVIF**
- IP address and port are provided after devices purchase
- Credentials are provided after devices purchase

Name				IP Address	Type	Model
DESKTOP-LJ64IU5				10.254.33.55	Azis (ONVIF)	P1375
AXIS P1375				80.211.41.205	JALUD Embedded s.r.o. (ONVIF)	SED Server 1.0
SEDServer						

Figure 12: SED Server Added

When connecting SED Server proper **Network Type** needs to be set. When Cloud SED Server is being connected than use **WAN** network type. When you use a SED Server in your local network set **LAN** network type.

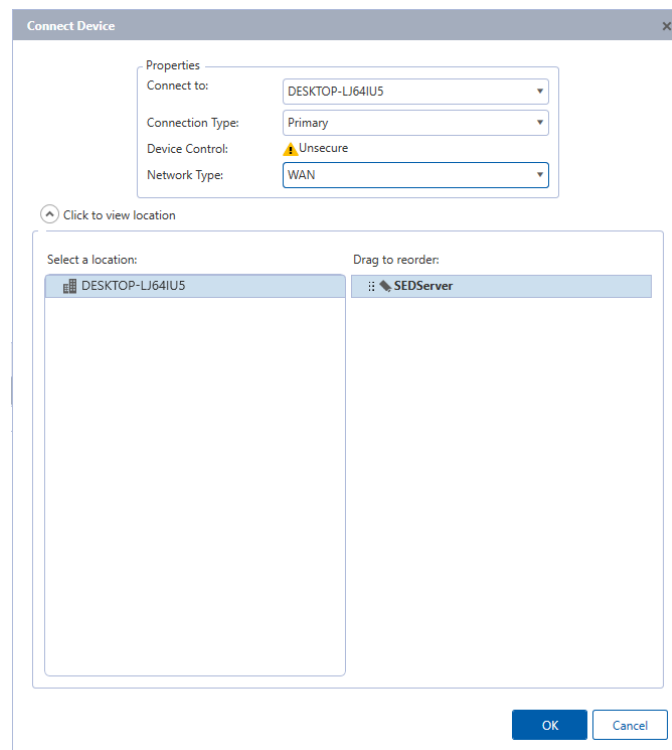


Figure 13: Connect Device

Events

Navigate to SED Server in **Site Setup** menu. Press **ONVIF Event Subscription** button in General section. Set requested SED Events as **Rule Trigger**.

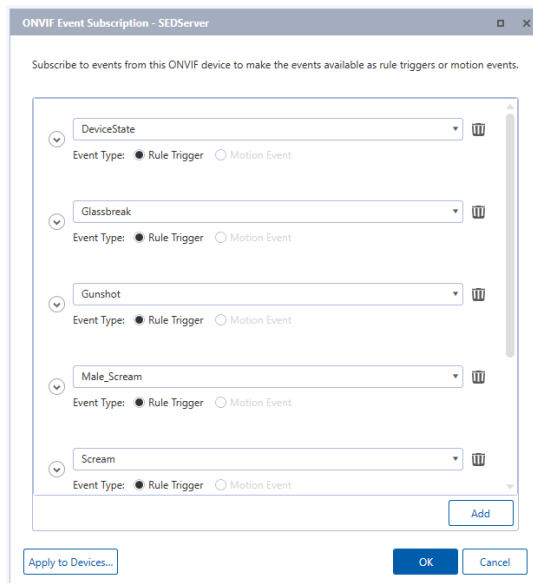


Figure 14: ONVIF Events Subscription

Note: When multiple devices are assigned to the user there are identically named events in the list. Avigilon unfortunately does not show the full path and the serial number of the device is not shown. Hover the mouse over the event to display full topic with serial number of the device.

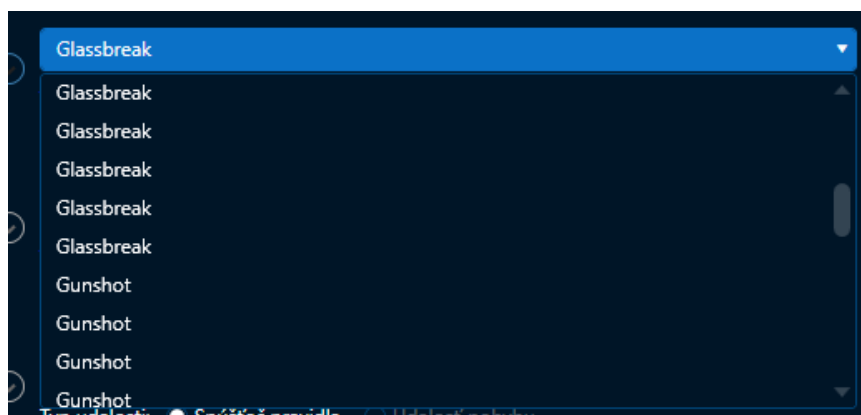


Figure 15: Multiple Devices Events List

In the **Site Setup** menu navigate to the top-most element and press **Rules** button. Add a new rule. Set **ONVIF Event Started** as a rule trigger. You can choose which event(s) you want to assign to the rule.

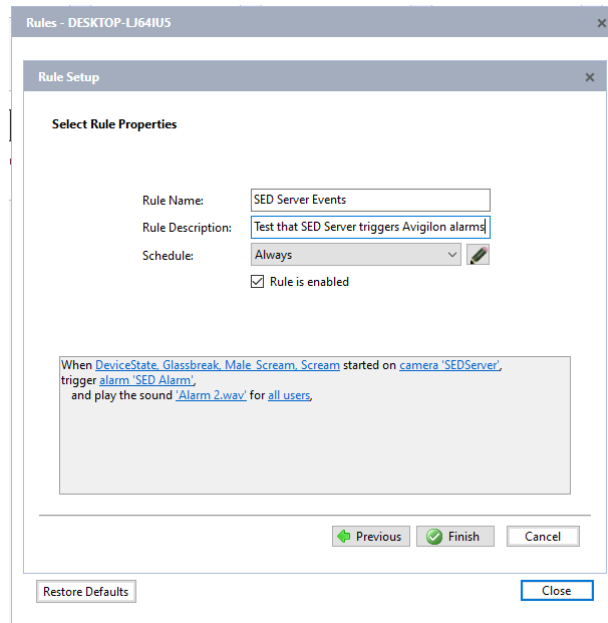


Figure 16: Rule Setting

If trigger alarm rule is set for SED Events the triggered alerts can be displayed in **Alarms** tab.

Event	Alarm	Start Time
Triggered	SED Alarm	11/16/2022 5:52:58 PM
Triggered	SED Alarm	11/16/2022 6:26:58 PM
Triggered	SED Alarm	11/16/2022 6:27:17 PM
Triggered	SED Alarm	11/16/2022 6:27:39 PM
Acknowledged by 'administrator'	SED Alarm	11/16/2022 6:44:55 PM
Triggered	SED Alarm	11/16/2022 6:51:16 PM
Triggered	SED Alarm	11/16/2022 6:51:21 PM
Triggered	SED Alarm	11/16/2022 6:51:30 PM
Triggered	SED Alarm	11/16/2022 6:51:35 PM
Triggered	SED Alarm	11/16/2022 6:51:42 PM
Triggered	SED Alarm	11/16/2022 6:52:04 PM
Triggered	SED Alarm	11/16/2022 6:52:11 PM
Triggered	SED Alarm	11/16/2022 6:52:17 PM
Triggered	SED Alarm	11/16/2022 6:52:29 PM
Triggered	SED Alarm	11/16/2022 6:53:01 PM
Triggered	SED Alarm	11/16/2022 6:53:09 PM

Figure 17: Alarms

Check Avigilon documentation for more details about rules settings.

Video Stream

Navigate to SED Server in **Site Setup** menu. Press **Compression and Image Rate** button in Video section. In the popup window preferred encoding and quality can be selected on the right side.

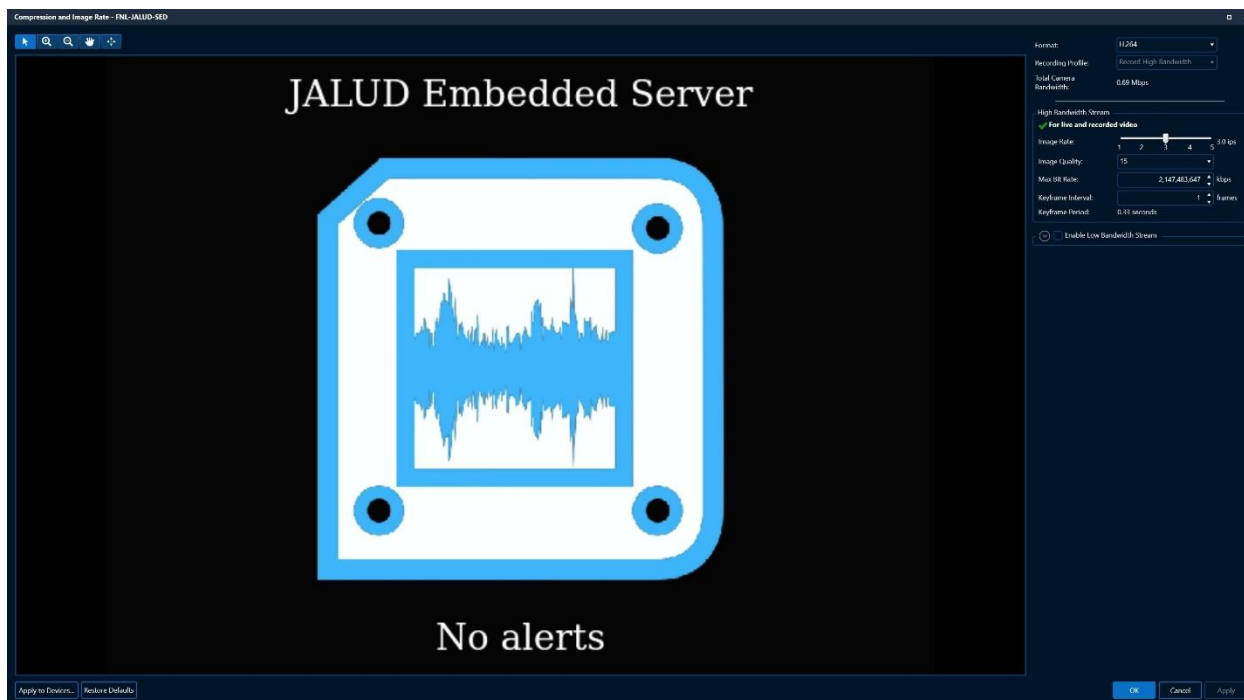


Figure 18: Video Stream Settings

Audio Stream

Audio Stream is not supported in Avigilon



Runtime

The SED Server video stream can be displayed in the view grid as same as video stream from a camera.

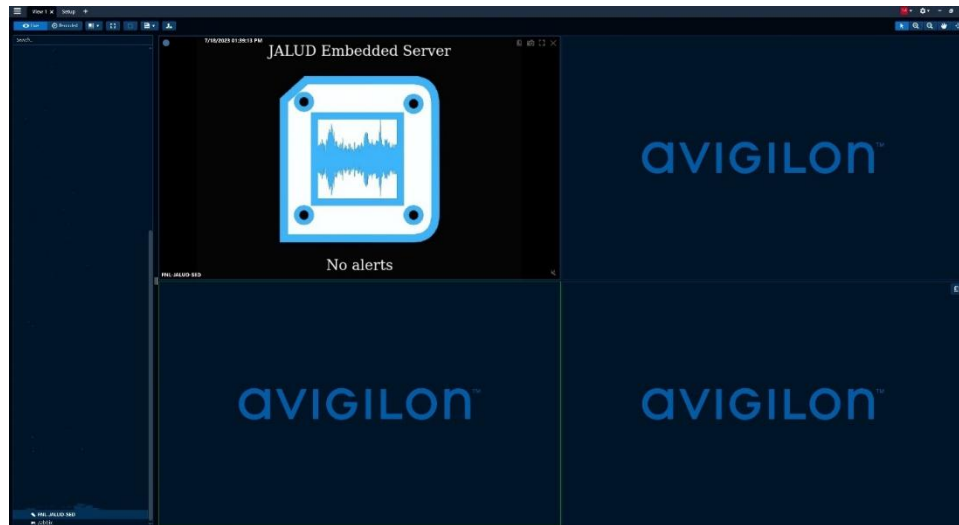


Figure 19: Video Stream in Grid

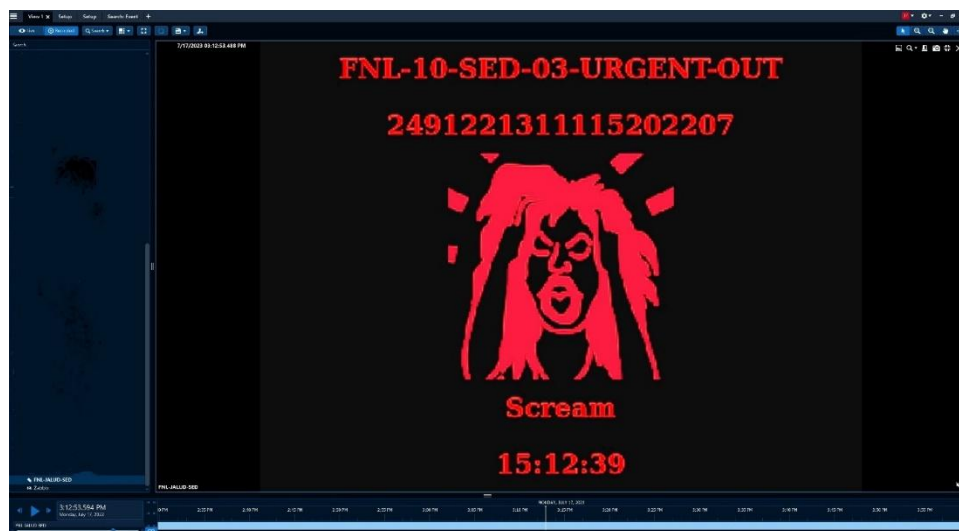


Figure 20: Video Stream Details

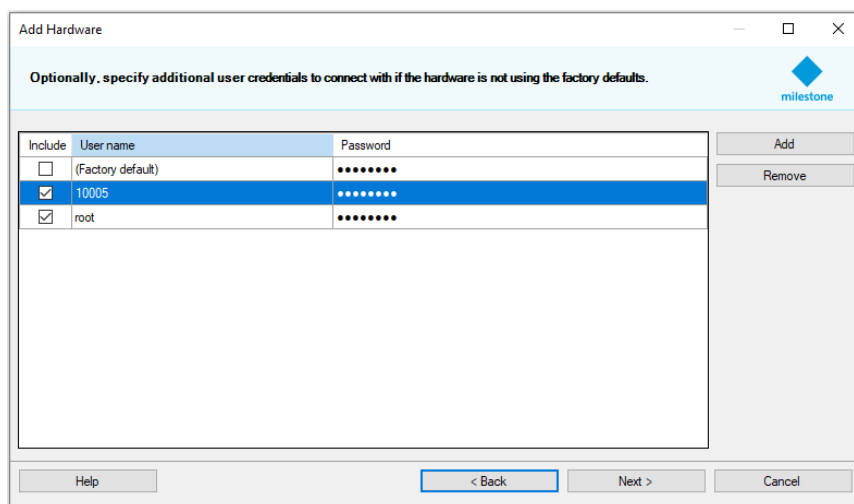
Milestone

Open XProtect Management Client application to connect SED Server. Navigate to **Recording Servers** and add hardware.

If you connect to cloud SED Server you have to choose an option to add hardware manually. In case you have SED Server on your local network you can choose Express option.

In the following windows:

- Set credentials that are provided after device purchase

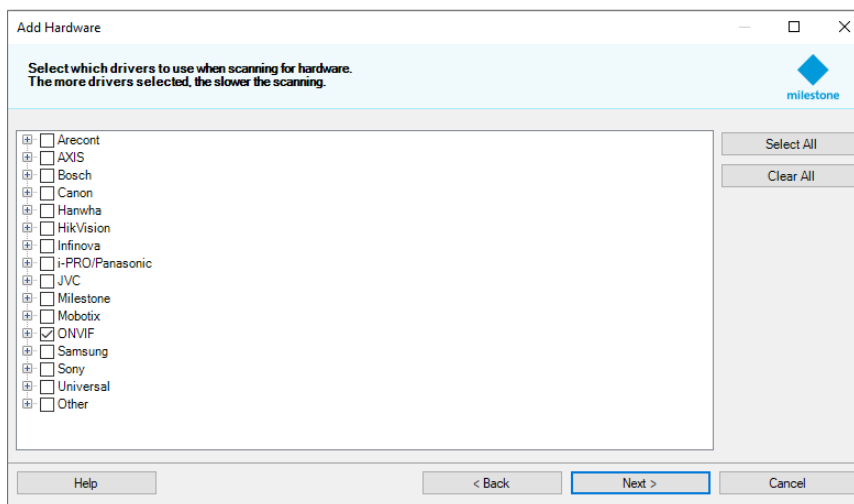


Optional, specify additional user credentials to connect with if the hardware is not using the factory defaults.

Include	User name	Password
☐	(Factory default)	
☒	10005	
☒	root	

Buttons: Add, Remove, Help, < Back, Next >, Cancel

- Select to use an ONVIF Driver

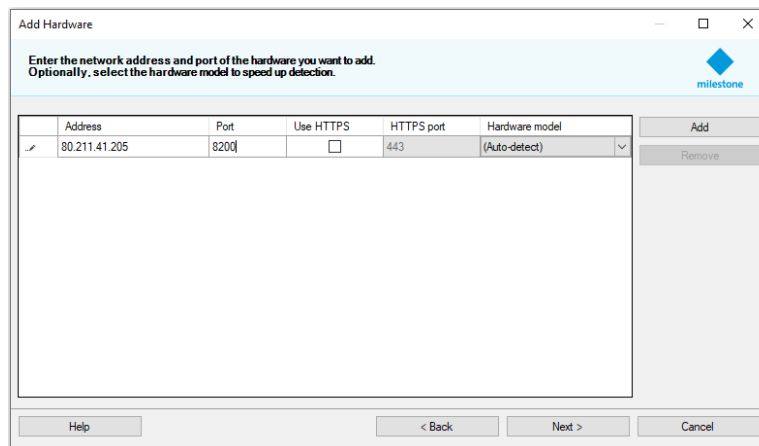


Select which drivers to use when scanning for hardware. The more drivers selected, the slower the scanning.

☐	Arecont
☐	AXIS
☐	Bosch
☐	Canon
☐	Hanwha
☐	HikVision
☐	Infinova
☐	i-PRO/Panasonic
☐	JVC
☐	Milestone
☐	Mobotix
☒	ONVIF
☐	Samsung
☐	Sony
☐	Universal
☐	Other

Buttons: Select All, Clear All, Help, < Back, Next >, Cancel

- Set SED Server IP Address and port that are provided after device purchase



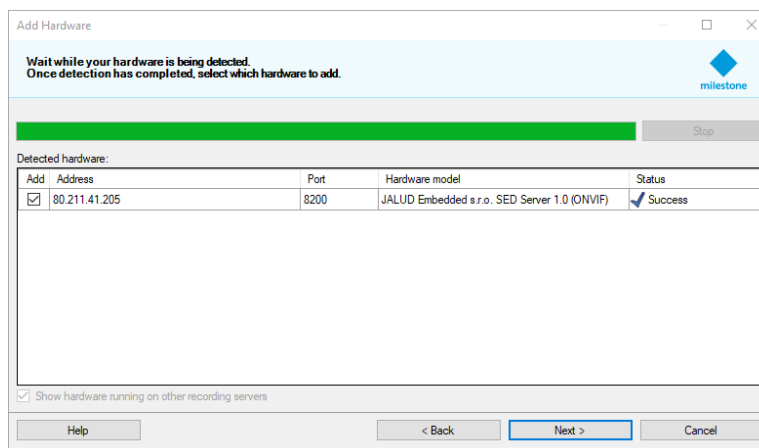
Add Hardware

Enter the network address and port of the hardware you want to add.
Optionally, select the hardware model to speed up detection.

	Address	Port	Use HTTPS	HTTPS port	Hardware model
✓	80.211.41.205	8200	☐	443	(Auto-detect)

Buttons: Add, Remove, Help, < Back, Next >, Cancel

- Wait until connection is finished and status changes to **Success**



Add Hardware

Wait while your hardware is being detected.
Once detection has completed, select which hardware to add.

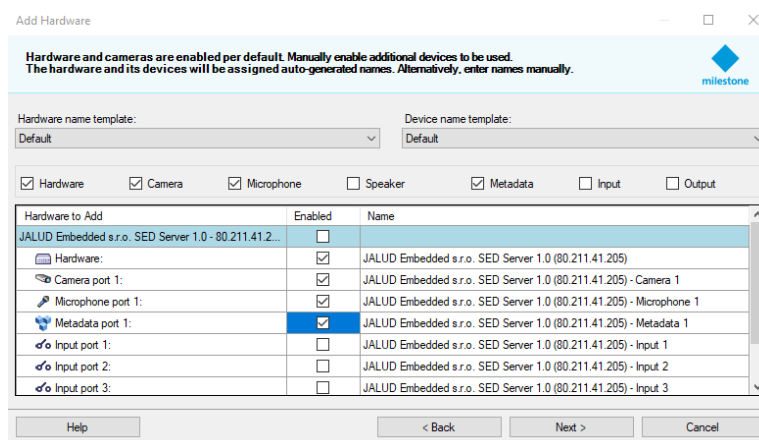
Detected hardware:

Add	Address	Port	Hardware model	Status
☒	80.211.41.205	8200	JALUD Embedded s.r.o. SED Server 1.0 (ONVIF)	✓ Success

☒ Show hardware running on other recording servers

Buttons: Help, < Back, Next >, Cancel

- Select devices you want to use



Add Hardware

Hardware and cameras are enabled per default. Manually enable additional devices to be used.
The hardware and its devices will be assigned auto-generated names. Alternatively, enter names manually.

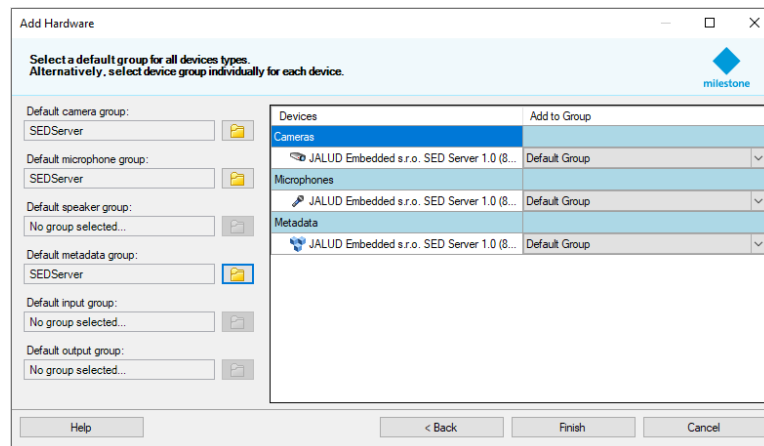
Hardware name template: Default Device name template: Default

☒ Hardware ☒ Camera ☒ Microphone ☐ Speaker ☒ Metadata ☐ Input ☐ Output

Hardware to Add	Enabled	Name
JALUD Embedded s.r.o. SED Server 1.0 - 80.211.41.2...	☐	
Hardware:	☒	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205)
Camera port 1:	☒	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Camera 1
Microphone port 1:	☒	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Microphone 1
Metadata port 1:	☒	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Metadata 1
Input port 1:	☐	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Input 1
Input port 2:	☐	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Input 2
Input port 3:	☐	JALUD Embedded s.r.o. SED Server 1.0 (80.211.41.205) - Input 3

Buttons: Help, < Back, Next >, Cancel

- Select Groups for devices and Finish



Events

Navigate to SED Server and among the options choose **Events** tab. Press **Add** button and list of Events pops up. All the custom events are displayed with “(Dynamic)” prefix within the list. Select the event you want to Handle and press **OK** button.

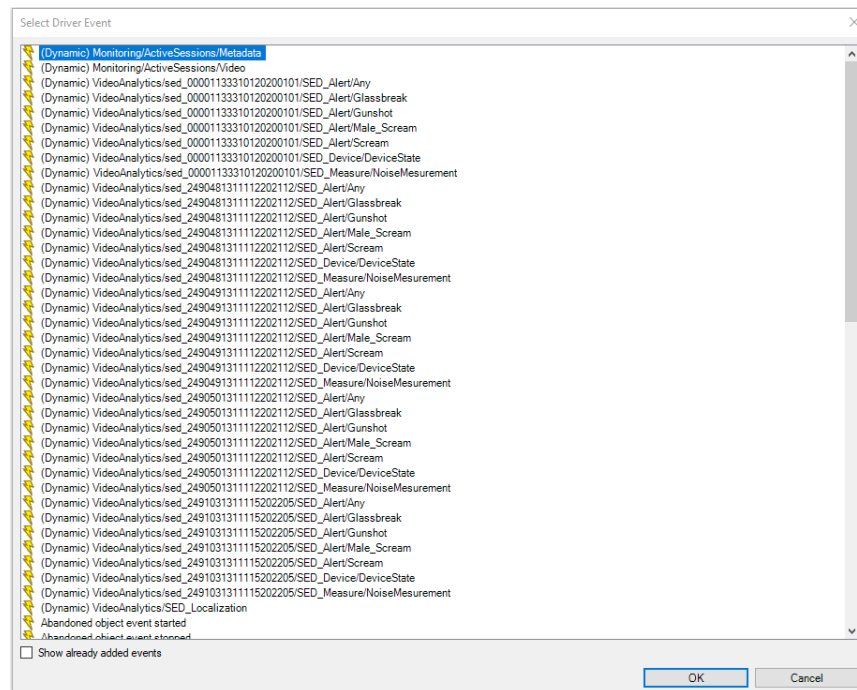


Figure 21: Device Events List

To create a reaction on the incoming event, create a **Rule**. Choose an option **Perform an action on <event>** and set the required event as a trigger.

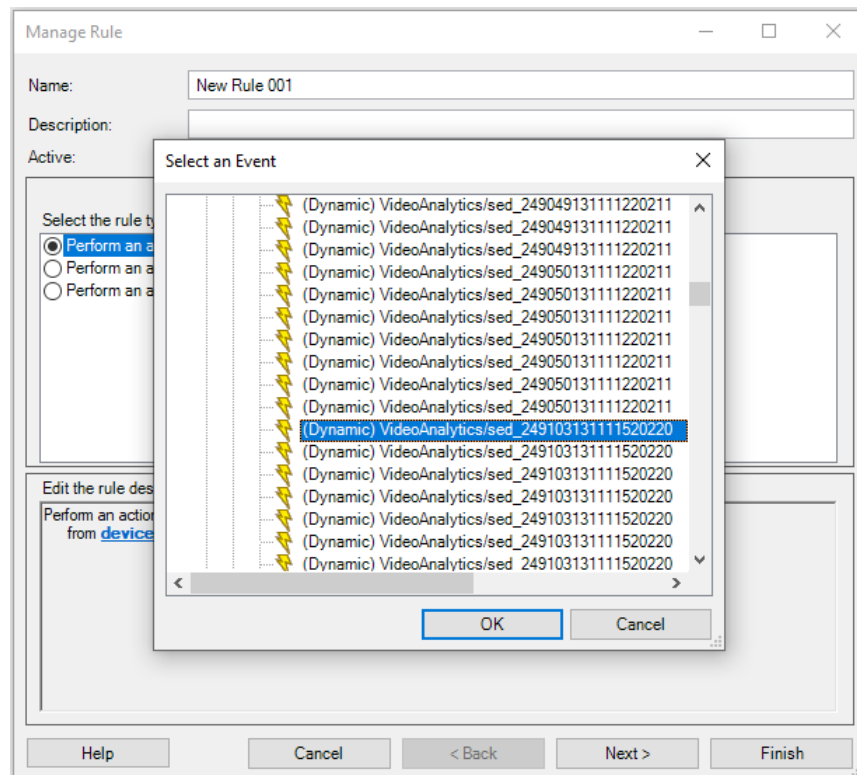


Figure 22: Add Rule

Note: There is a bug in the Milestone **ONVIF.dll** library that causes that the events are not handled by XProtect Manager. Contact us on support@jalud-embedded.com to receive fixed library. This bug will be fixed in the next release of XProtect.

Video Stream

Select a Camera node and switch to **Settings** tab to set video stream.

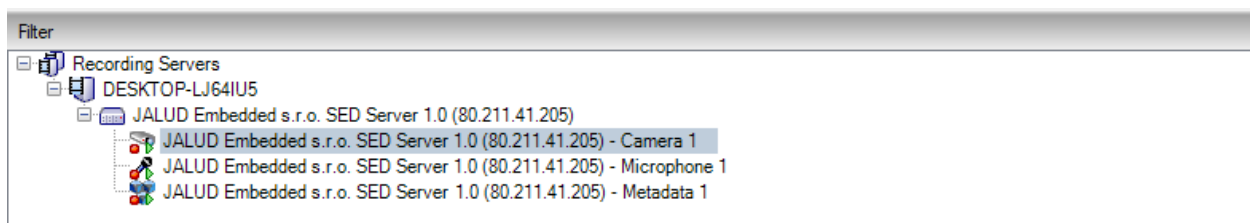


Figure 23: Camera Settings

Properties of all the available media profiles are displayed in the tab and it is possible to set encoding and quality of the video streaming for each of them.

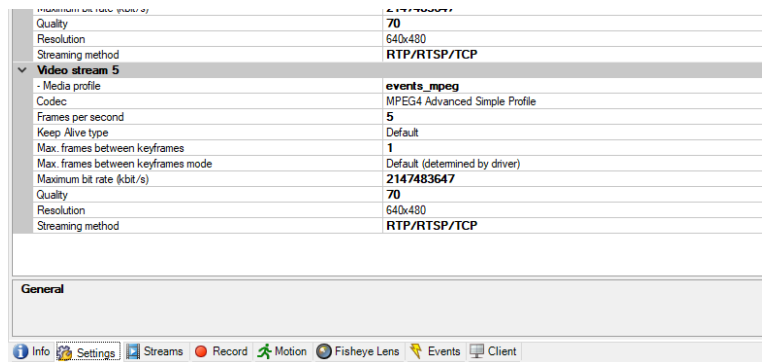


Figure 24: Video Stream Options

In the **Streams** tab the active stream can be set for live streaming and for recording.

Audio Stream

Set a Microphone node and switch to **Settings** tab to set audio stream

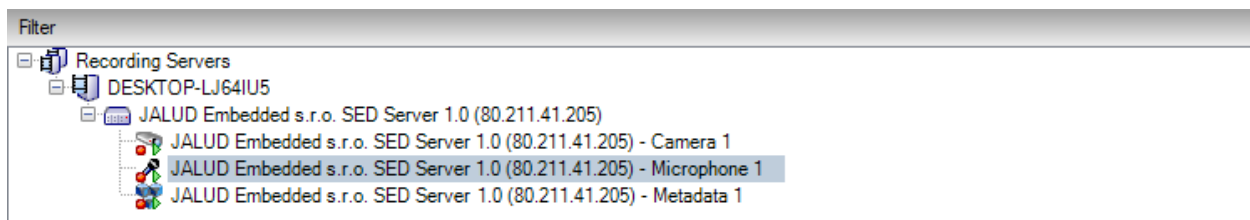


Figure 25: Microphone Settings

The encoding and quality of the audio stream can be set in the tab.

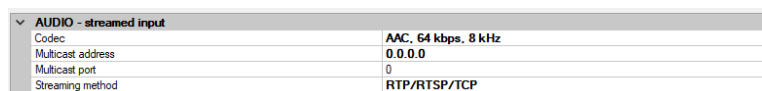


Figure 26: Audio Stream Options

Runtime

To watch video stream and listen to audio stream works in the same way it works for regular camera. Open **XProtect Smart Client** and on the left side select SED Server among other cameras and place the video stream on the screen.

Choose SED Server among the list of Microphones to start listening to audio stream. The audio stream can be kept on as the SED Server produces silence only if there is no alert detected.

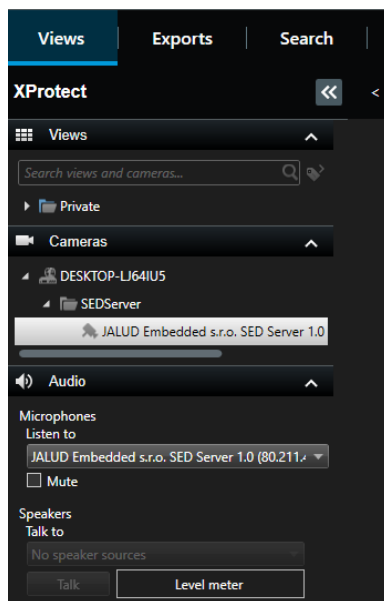


Figure 27: Control Panel

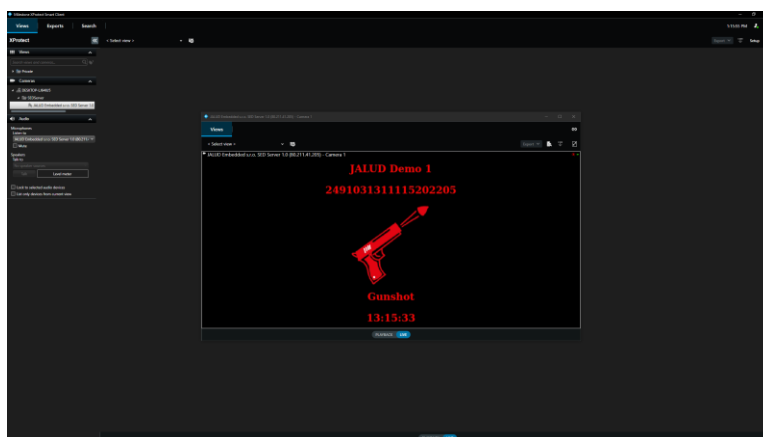


Figure 28: Runtime Video and Audio

Geutebruck

Open **G-Set** tool to connect and set SED Server.

Click on Hardware. Select root node and after right click press **New**



Figure 29: Add a New HW

- Set Name
- Plugin: **ONVIF**
- IP address and port are provided after devices purchase
- Credentials are provided after devices purchase

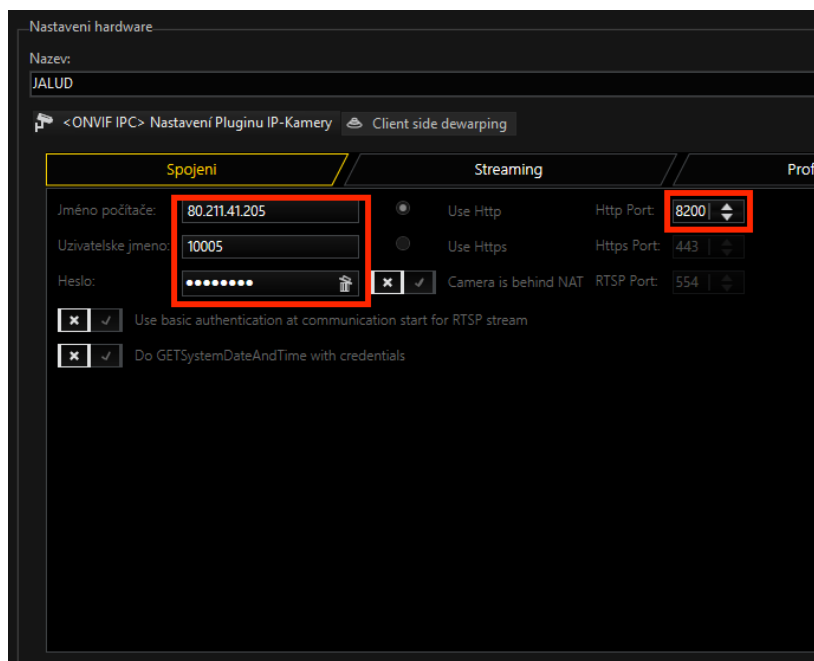


Figure 30: SED Server Settings

Add a new **Media Channel** and assign SED Server HW to it. Video stream should appear at the bottom.



Figure 31: Connection Established

Events

Open **Event handling** tab.

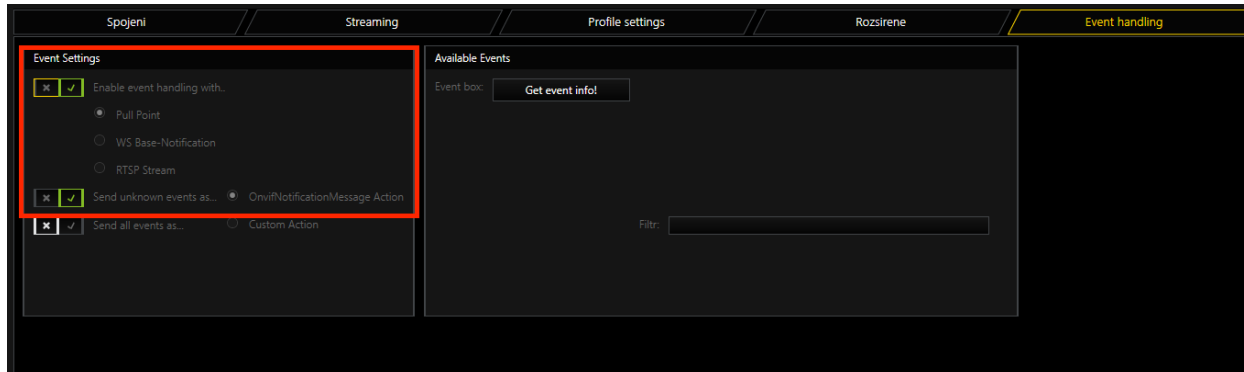


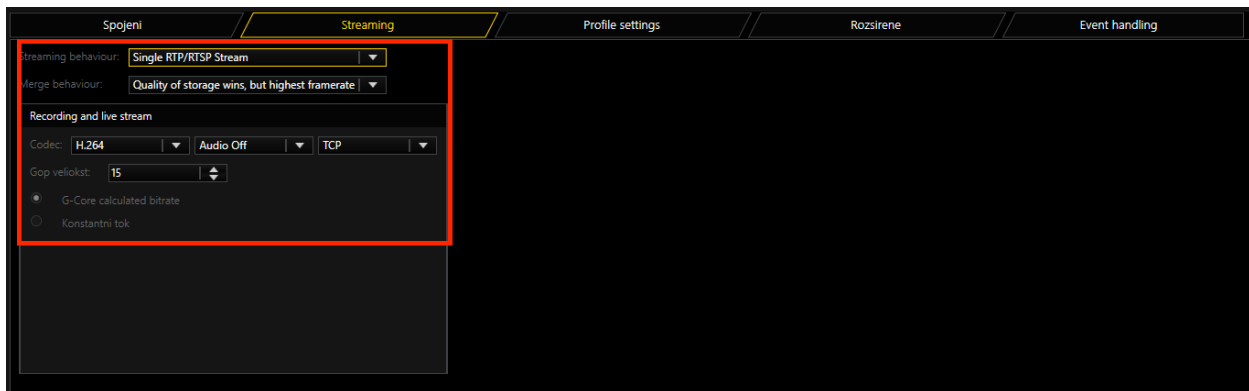
Figure 32: Event Handling Tab

You can Enable/Disable event handling. If you use cloud server managed by JALUD Embedded, use Pull Point or RTSP Stream connection. To use WS Base-Notification you need to have public IP address or purchased SED Server on your local network.

Check Geutebruck documentation for more details about events settings.

Video and Audio Stream

Open **Streaming** tab.



Video supports transfer via UDP, TCP and HTTP Tunneling. Multicast is not supported by SED Server at present.

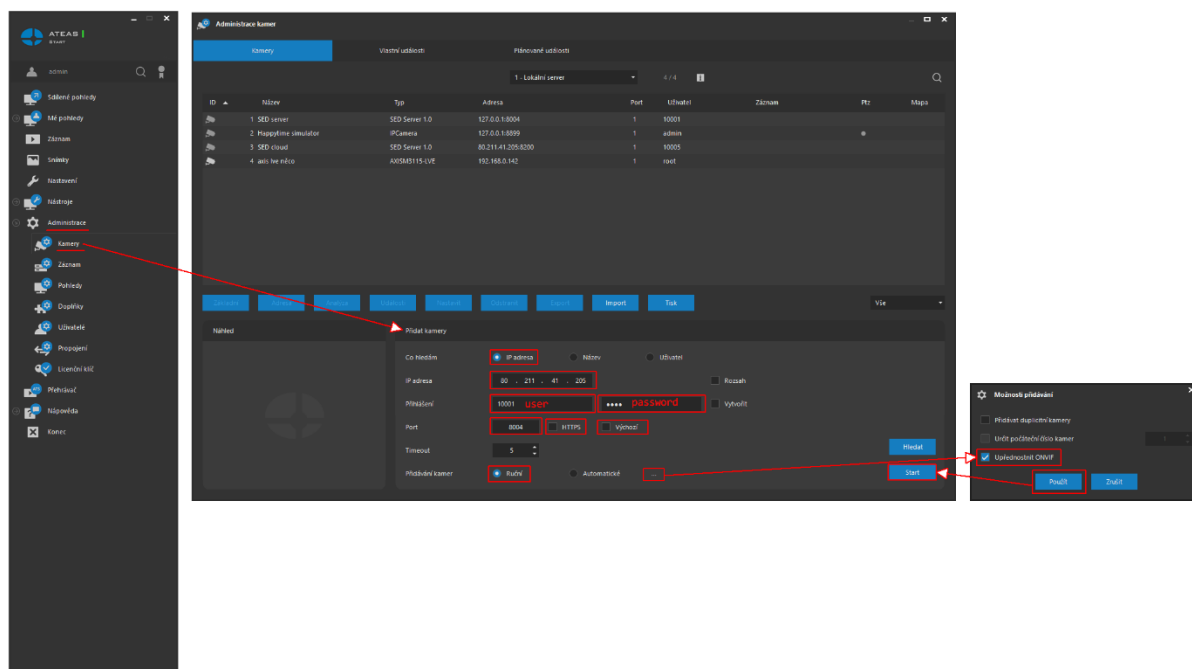
If you choose UDP and you use the cloud server managed by JALUD Embedded ensure that your IP Address and UDP port are reachable from outside



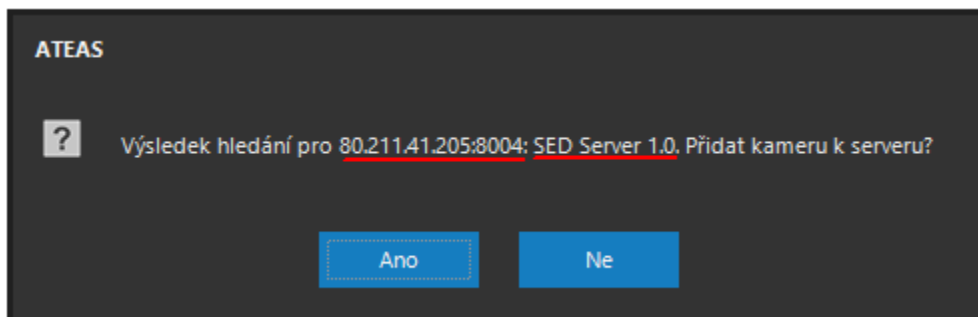
ATEAS

Adding SED server to ATEAS

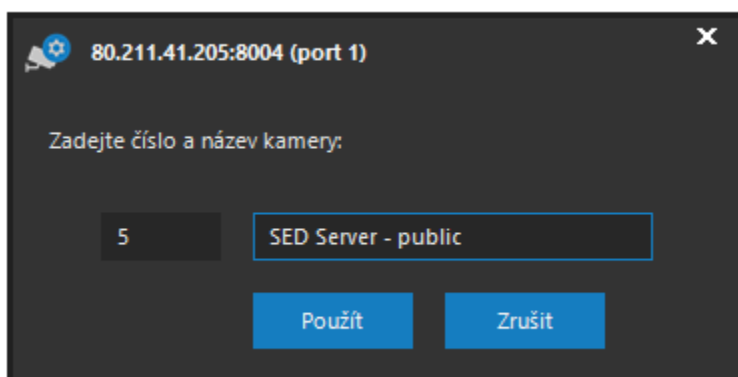
- Log into ATEAS Observer
- Go to Administration → Cameras
- Fill the Camera properties
 - select option *IP address*
 - Fill the IP address *80.211.41.205* (IP address of a public cloud SED server)
 - Fill your SED username (a number of at least 5 numerals)
 - Fill your ONVIF password for above user
 - Uncheck HTTPS
 - Uncheck default
 - Use port 8004
 - Select *Manual*
 - Invoke additional options dialog using ellipsis (...) button
 - Select preferred ONVIF sources
 - Confirm the dialog by the *Apply* button
 - Click start



- Success dialog shall appear
- Click Yes



- Name your SED server
- Click *Apply*



- Server shall appear along other cameras in ATEAS and show a thumbnail.

The screenshot displays the 'Administrace kamer' (Camera Administration) window. At the top, there are tabs for 'Kamery', 'Vlastní události', and 'Plánované události'. Below these, a dropdown menu shows '1 - Lokální server' and '4 / 4'. A search icon is on the right. The main table lists the following cameras:

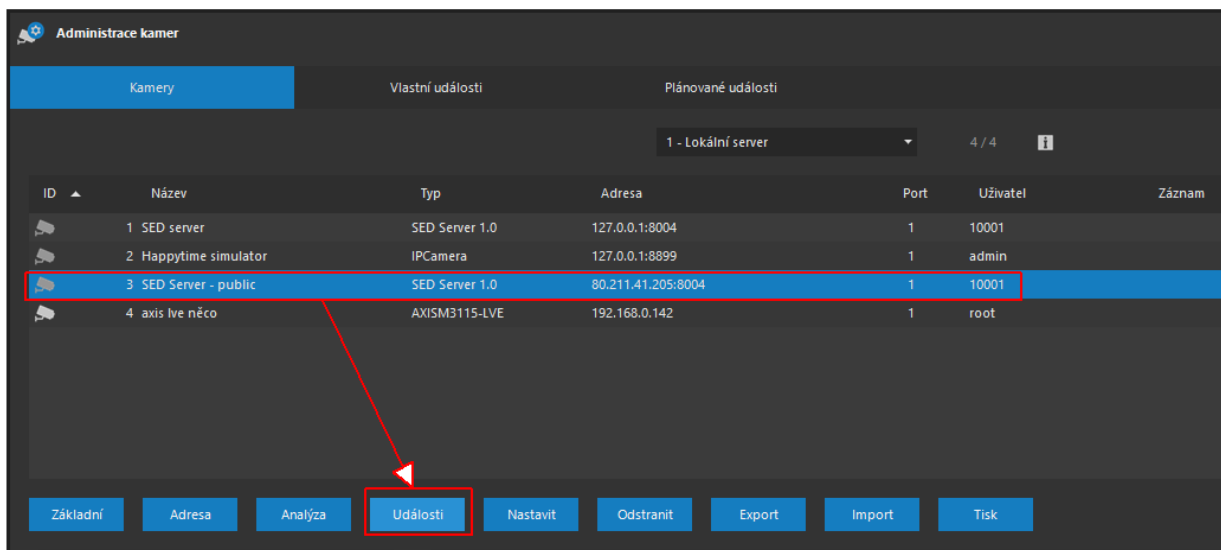
ID	Název	Typ	Adresa	Port	Uživatel	Záznam	Ptz	Mapa
1	SED server	SED Server 1.0	127.0.0.1:8004	1	10001			
2	Happytime simulator	IPCamera	127.0.0.1:8099	1	admin			
3	SED Server - public	SED Server 1.0	80.211.41.205:8004	1	10001			
4	axis live náco	AXISM3115-LIVE	192.168.0.142	1	root			

Below the table, there are buttons: 'Základní', 'Adresa', 'Analýza', 'Události', 'Nastavit', 'Odstranit', 'Export', 'Import', and 'Tisk'. A 'Vše' dropdown is on the right. On the left, a preview window titled 'Náhled' shows a thumbnail of the 'JALUD Embedded Server' with the text 'No alerts'. On the right, the 'Přidat kameru' (Add camera) panel is visible, showing options for 'Co hledám' (What I'm looking for) with radio buttons for 'IP adresa', 'Název', and 'Uživatel'. The 'IP adresa' is selected, and the fields show '80 . 211 . 41 . 205' for IP, '10001' for port, and '10001' for user. There are also checkboxes for 'Rozsah' and 'Vytvořit', and a 'Hledat' button. At the bottom, there are radio buttons for 'Přidávání kamer' (Adding cameras) with 'Ruční' (Manual) selected and 'Automatické' (Automatic) as an option, along with a 'Start' button.

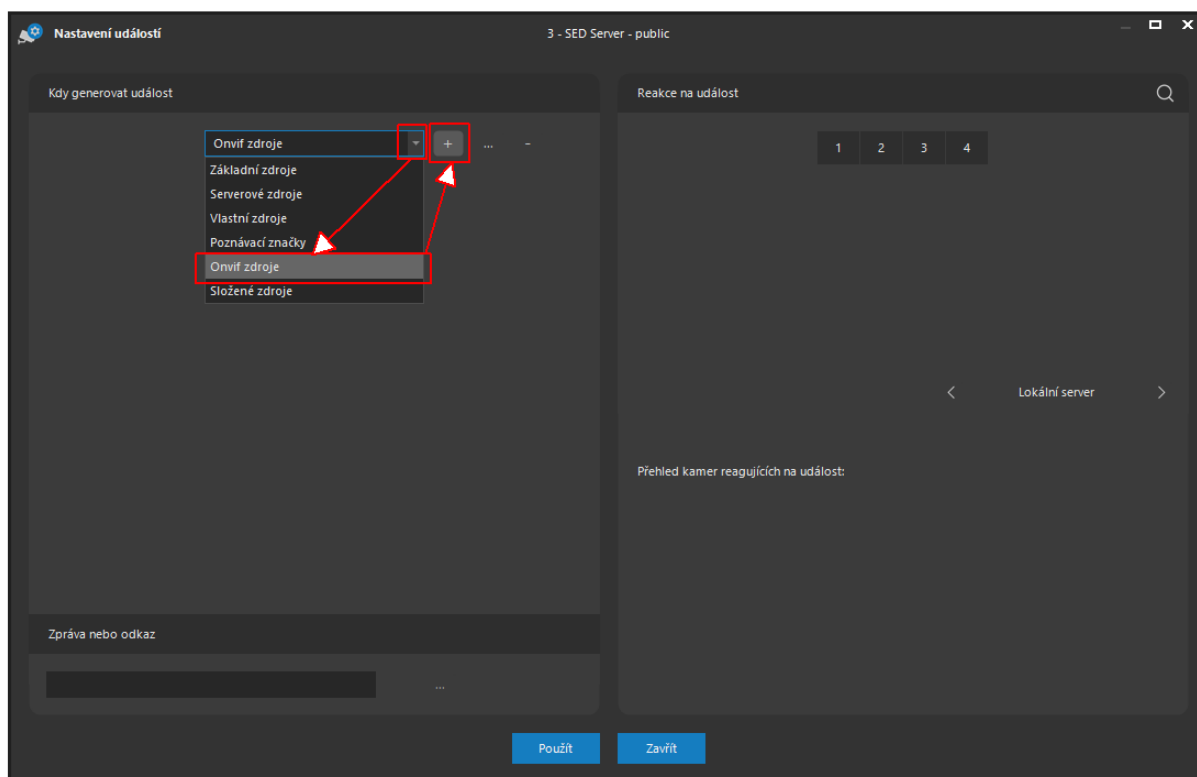
Events

Subscribing events

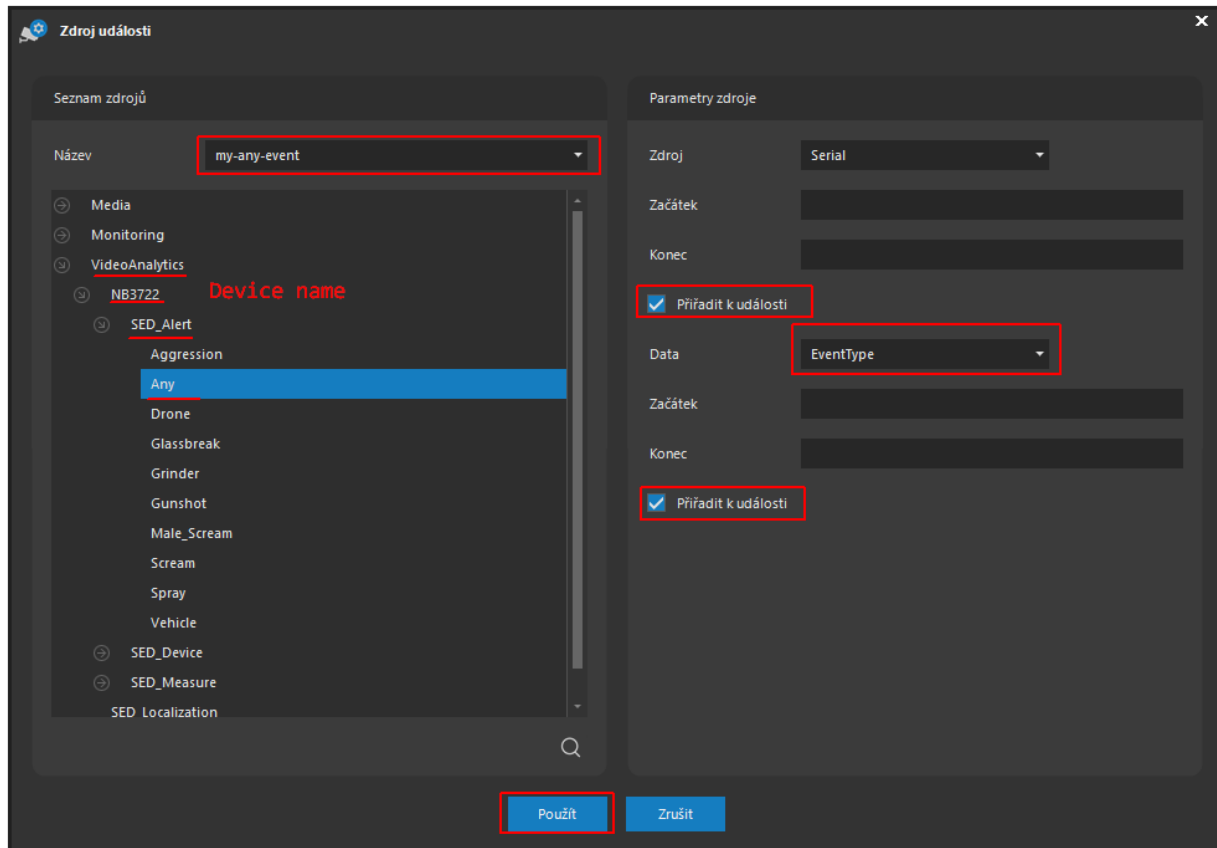
To receive notifications from SED you shall subscribe via event definition using *Events (Události)* button in the middle toolbar.



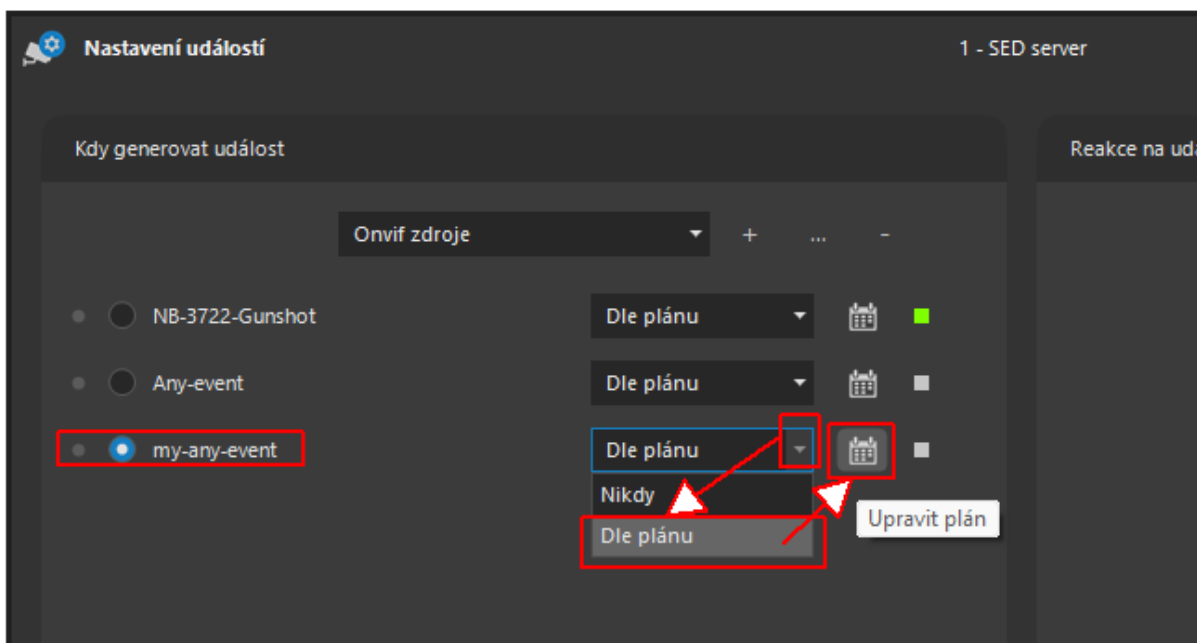
- Dialog will appear
- Expand the dropdown list
 - Select ONVIF sources
 - Plus (+) sign appears -> click it



- Another dialog appears with event selection
 - Name the event being created
 - Select *VideoAnalytics/{some device}/SED_Alert/{some event type}*
Note: Any event is triggered for any of supported event type.
 - Check *Add to event* (Přiřadit k události) for both Source and Data section in right hand side panel.
 - Select Event type in data dropdown list so you can distinguish later between events.
 - Click *Apply* (Použít)



- Event is now listed in previous dialog
 - Select it
 - Expand dropdown list and choose *According to schedule* (Dle plánu)
 - Click the calendar icon



- Schedule dialog appears
 - Choose *Static Plan* (Statický plán)
 - By dragging mouse from top left corner to bottom right corner fill the entire week.
 - Select *Generate event* (Generovat událost)
 - Set *Time to reset* (Doba klidu do resetu vstupu) to 1 s.
 - Set *Maximum event duration* (Maximální doba události) to 1 s.

NOTE: This is very important to properly capture all events produced by SED.

- Click *Apply* (Použít)

my-any-event

Nastavení plánu

☒ Statický časový plán ☐ Dynamický časový plán

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Po
Út
St
Čt
Pá
So
Ne

☐ Negenerovat událost ☒ Generovat událost ☐ Generovat událost a poplach (vynucená změna pohledu)

Nastavení parametrů zdroje události

Doba klidu do resetu vstupu: 1 sekund

Maximální doba události: 1 sekund

Odložení události: 0 sekund

☐ Aktivovat režim řešení poplachu ☐ Skrytá událost

Dynamický plán

☐ Použít zdroj ke generování dynamického plánu

Použít Zrušit

Viewing Events

Assuming you already created some view with cameras and SED Server you can visit that view.

- Select your view
- In bottom toolbar switch to *Event* (Události) tab.
 - Note that event is named based on name in previous steps.
 - Note that data selected in previous steps are included so you can distinguish from which device the event came and what type is it (especially important for thy cumulative *Any* type event.)
 - Note that events are just 1 s long and finished.

