



NES Nová Dubnica s.r.o.

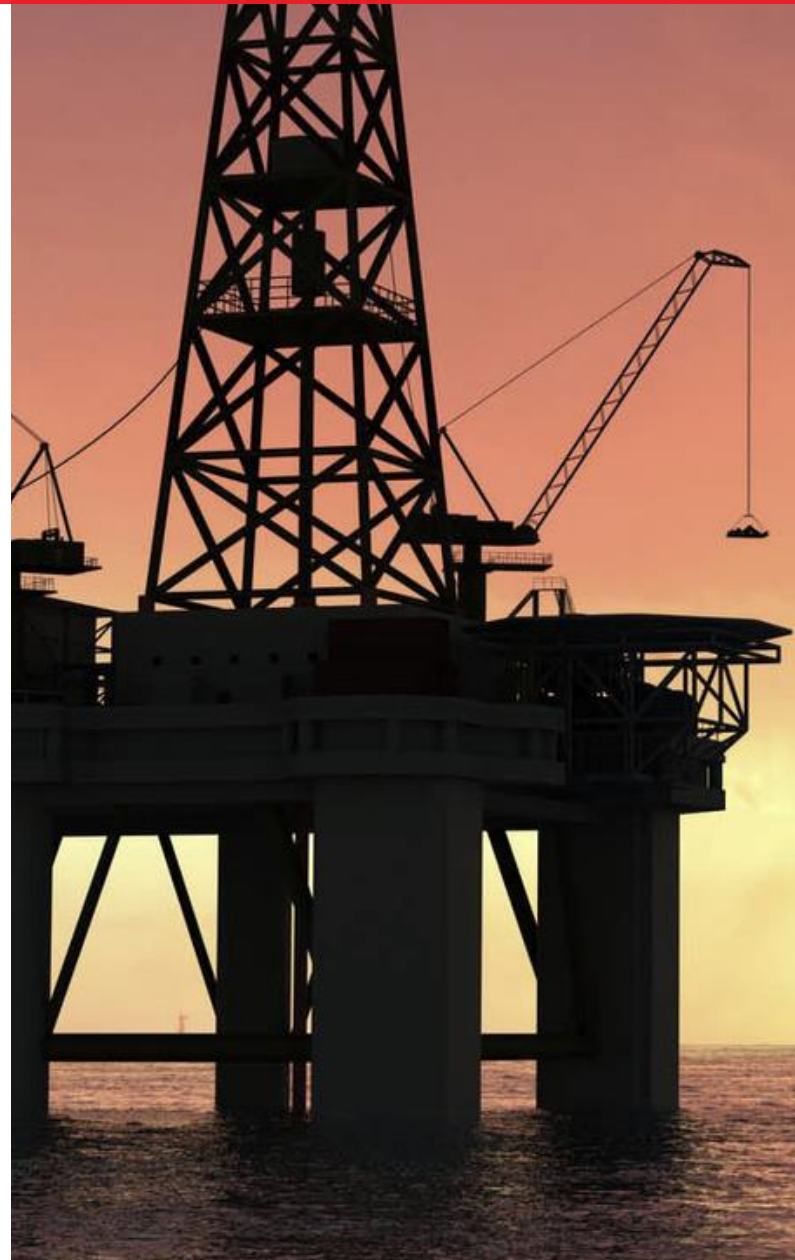
NESMONITOR.COM

Control and monitoring system / Version 2.0

Monitored Objects:



**Pipelines,
industrial areas
(refineries)**



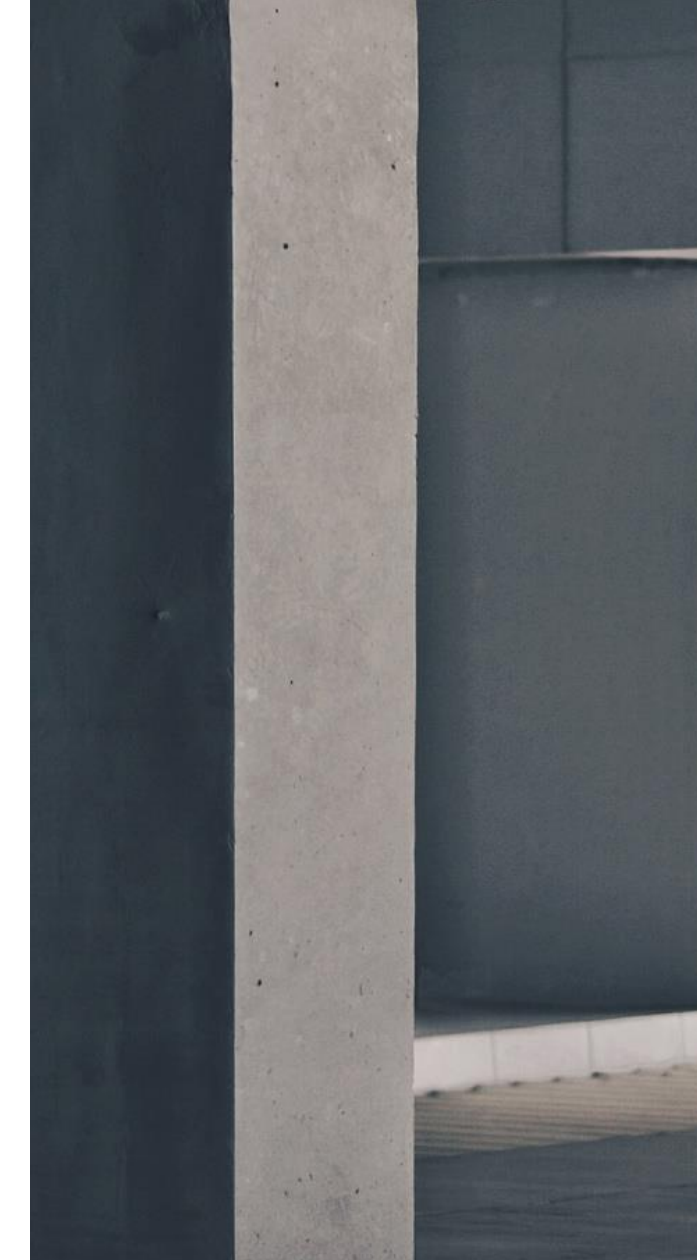
**Structures
submerged in
seawater**



**Gas and oil
wells**



**Underground
tanks**



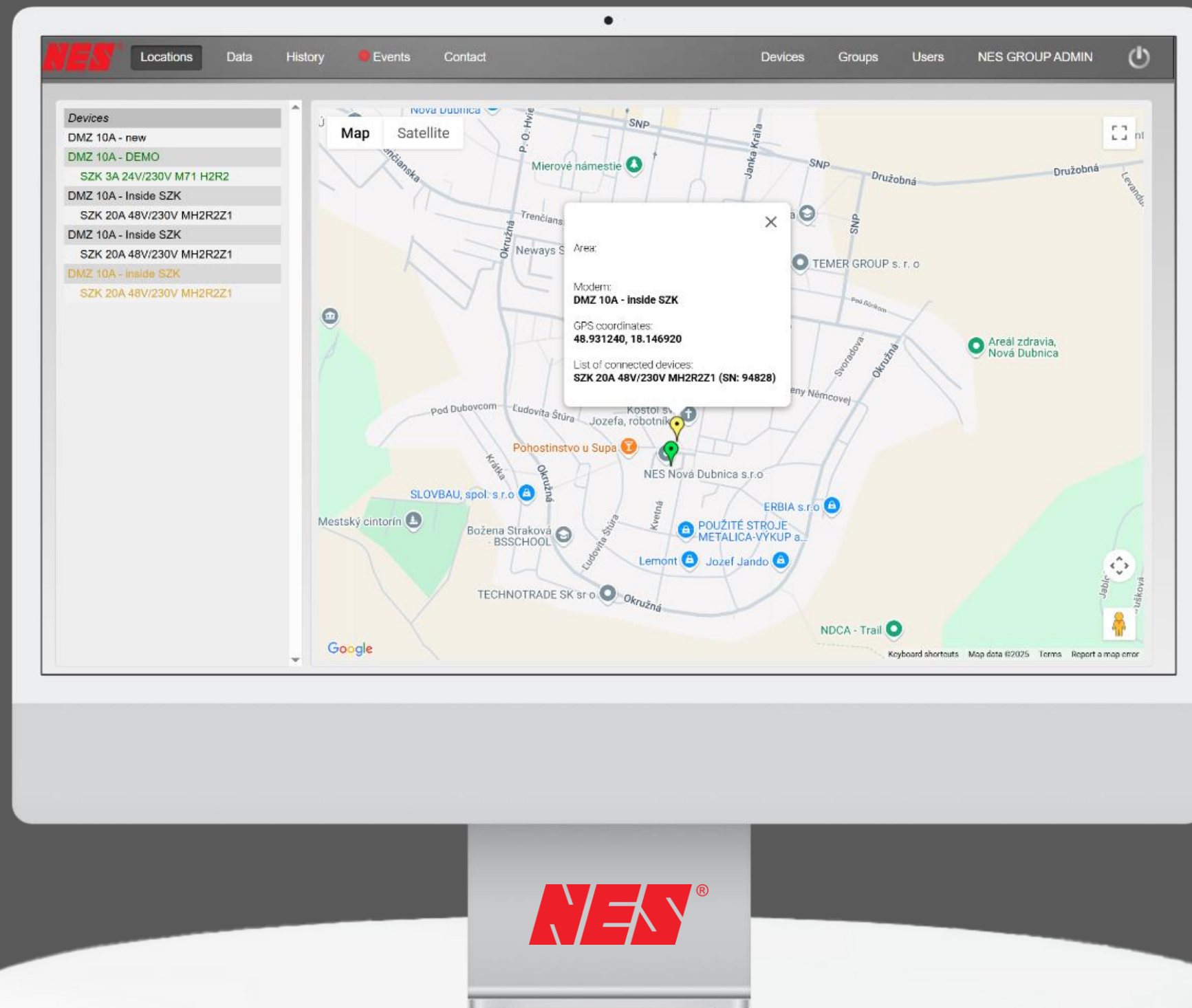
**Reinforced
concrete
structures**

Description:

The **NESMONITOR** control and monitoring system is designed for remote device management via a web interface.

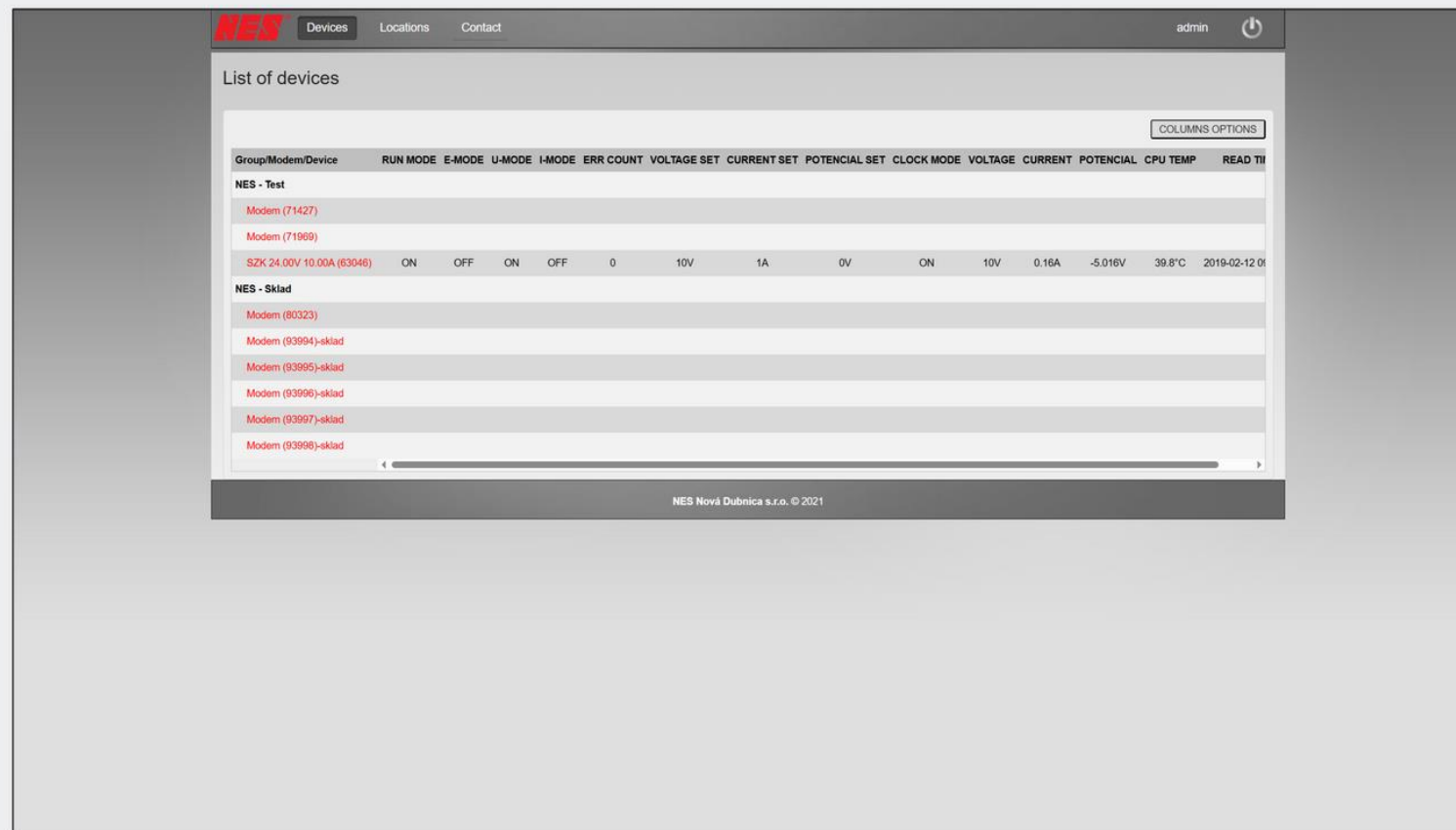
Connection to the **NESMONITOR** web (server) is provided by a communication converter (client). Client/server communication occurs at a configurable interval (from 30 seconds) or during critical events. This type of communication does not require a public IP address.

Additional devices are connected via the serial interface (RS232, RS485, CAN, etc.) of the communication module. The **NESMONITOR** system is continuously updated according to customer requirements and current trends.



NESMONITOR – v. 2.0

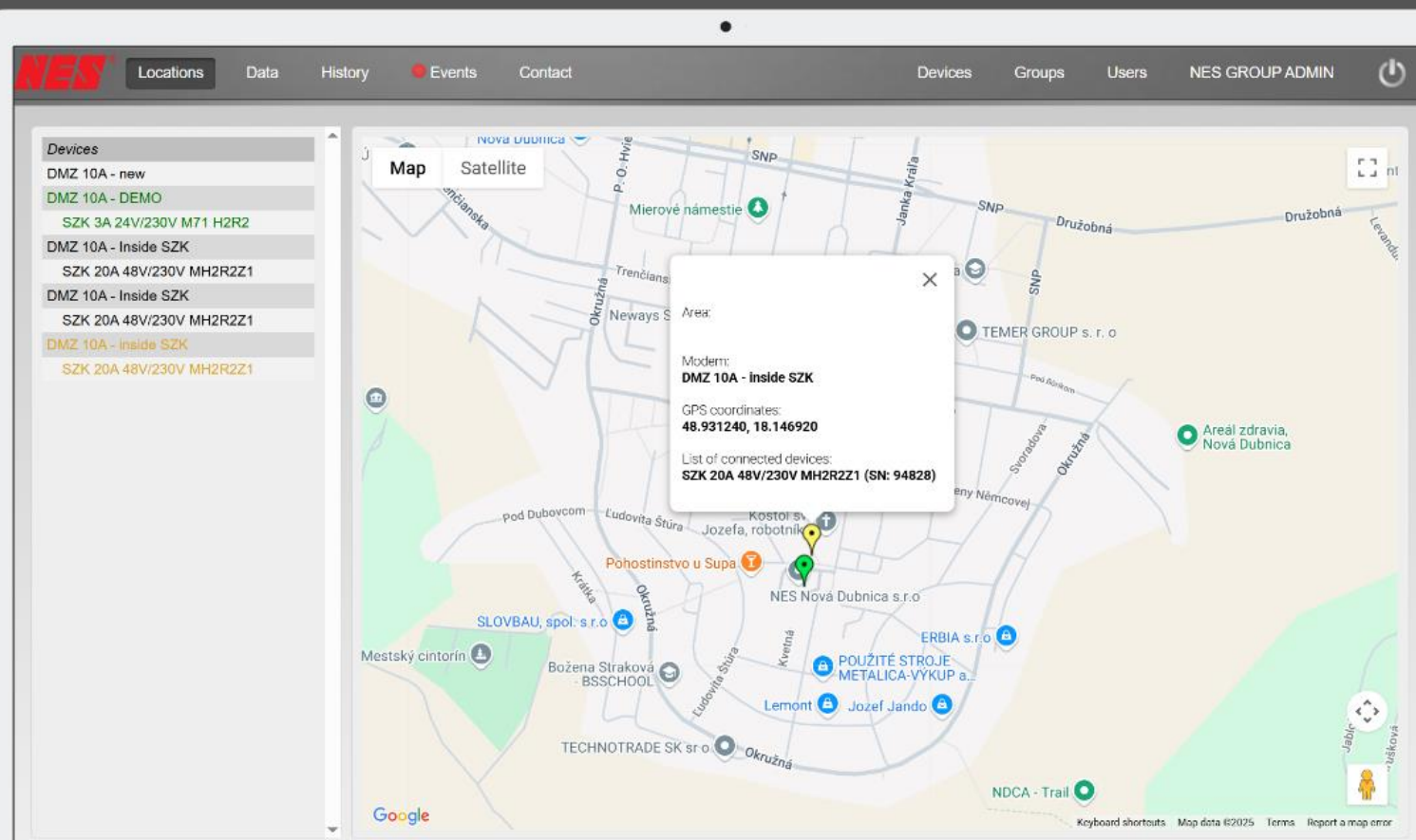
Version 1.0



The screenshot shows the 'List of devices' page in NESMONITOR v1.0. The interface includes a top navigation bar with 'Devices', 'Locations', and 'Contact' tabs, and an 'admin' user indicator. The main content area displays a table with columns for Group/Model/Device, RUN MODE, E-MODE, U-MODE, I-MODE, ERR COUNT, VOLTAGE SET, CURRENT SET, POTENTIAL SET, CLOCK MODE, VOLTAGE, CURRENT, POTENTIAL, CPU TEMP, and READ TIME. The table is divided into two sections: 'NES - Test' and 'NES - Sklad'. The 'NES - Test' section shows a single row for 'SZK 24.00V 10.00A (83046)' with various status indicators. The 'NES - Sklad' section shows a list of devices with their model numbers and status.

Group/Model/Device	RUN MODE	E-MODE	U-MODE	I-MODE	ERR COUNT	VOLTAGE SET	CURRENT SET	POTENTIAL SET	CLOCK MODE	VOLTAGE	CURRENT	POTENTIAL	CPU TEMP	READ TIME
NES - Test														
Modem (71427)														
Modem (71969)														
SZK 24.00V 10.00A (83046)	ON	OFF	ON	OFF	0	10V	1A	0V	ON	10V	0.16A	-5.016V	39.8°C	2019-02-12 01:00
NES - Sklad														
Modem (80323)														
Modem (93994)-sklad														
Modem (93995)-sklad														
Modem (93996)-sklad														
Modem (93997)-sklad														
Modem (93998)-sklad														

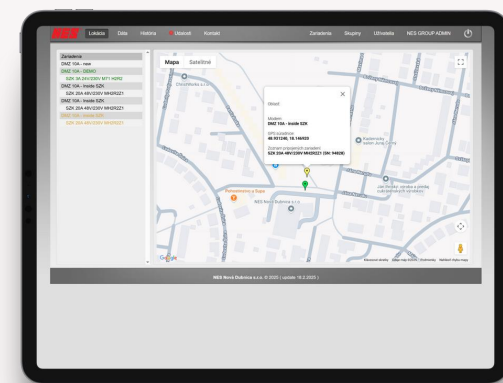
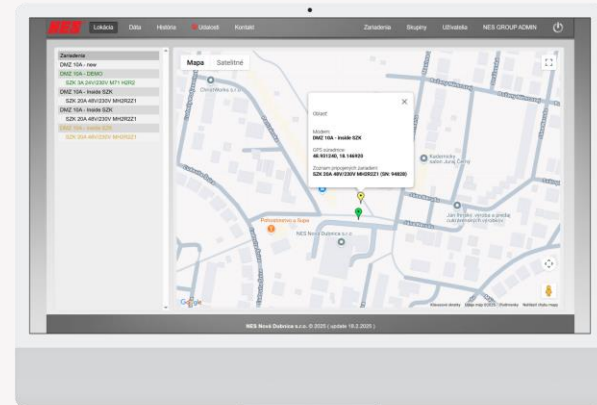
Version 2.0



NESMONITOR – Version 2.0 Innovations:

1. Connection for every NES device supporting the MODBUS-RTU or CANMB protocol.
2. Recovery of data in case of communication failure with the communication module (client).
3. Admin, User, and Guest accounts enabling self-management of sub-accounts.
4. Organizing accounts and devices into groups.
5. Mass parameter settings.
6. Support for multiple languages (English, Slovak).
7. Event list with the option of e-mail notifications.
8. Event list and email messages.

The website nesmonitor.com is optimized for PC and tablet viewing.



Operator



GSM



**Communication
Module (NES)**



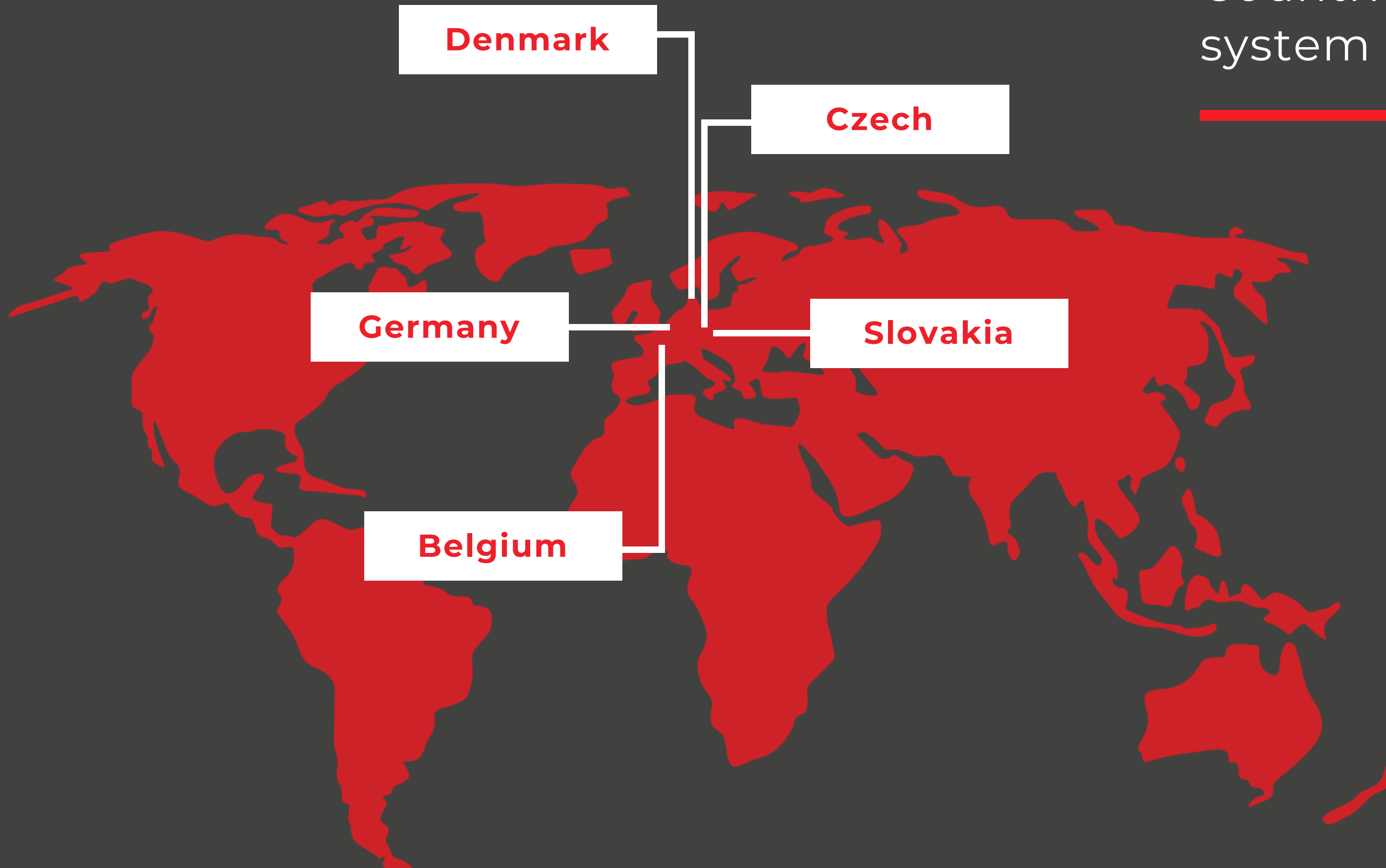
GPS



**Cathodic protection
station (NES)**

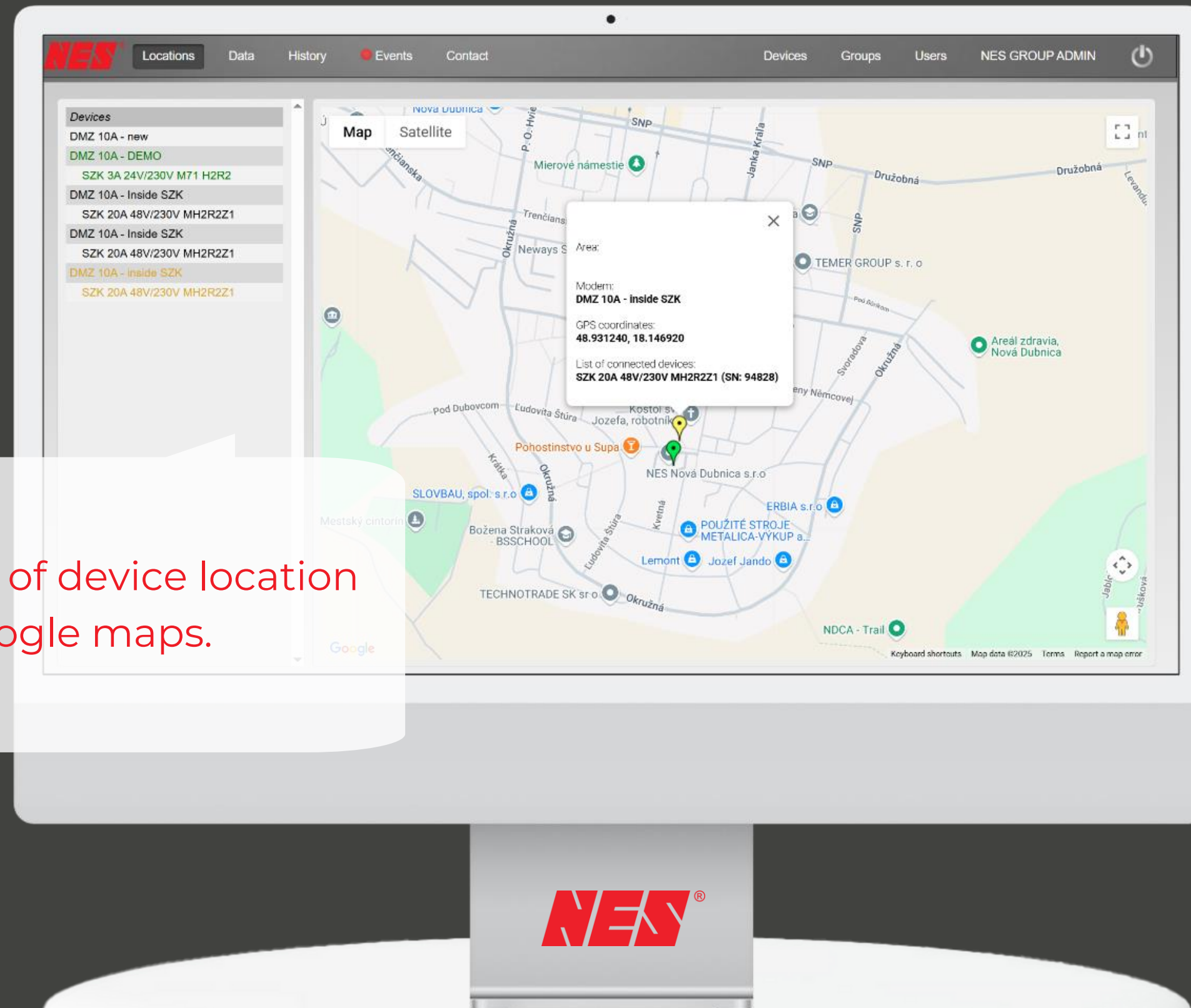
**Data transmission flow:
Operator → Cathodic protection station**

Countries connected to
system NESMONITOR

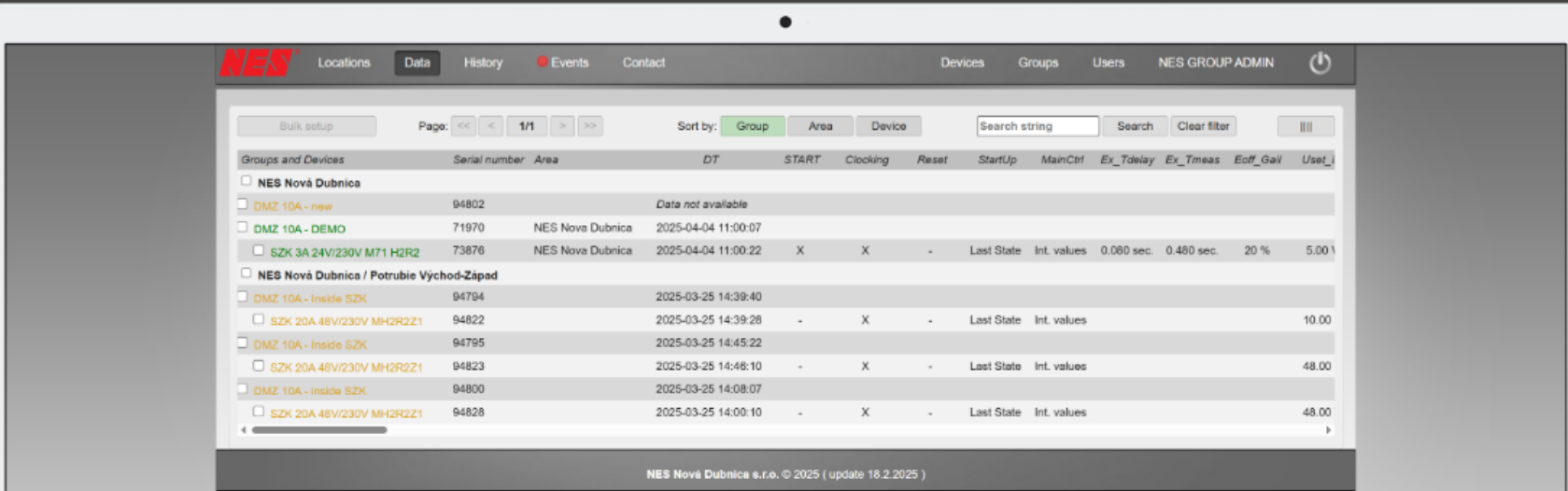


NESMONITOR and location

Graphical display of device location and status on Google maps.



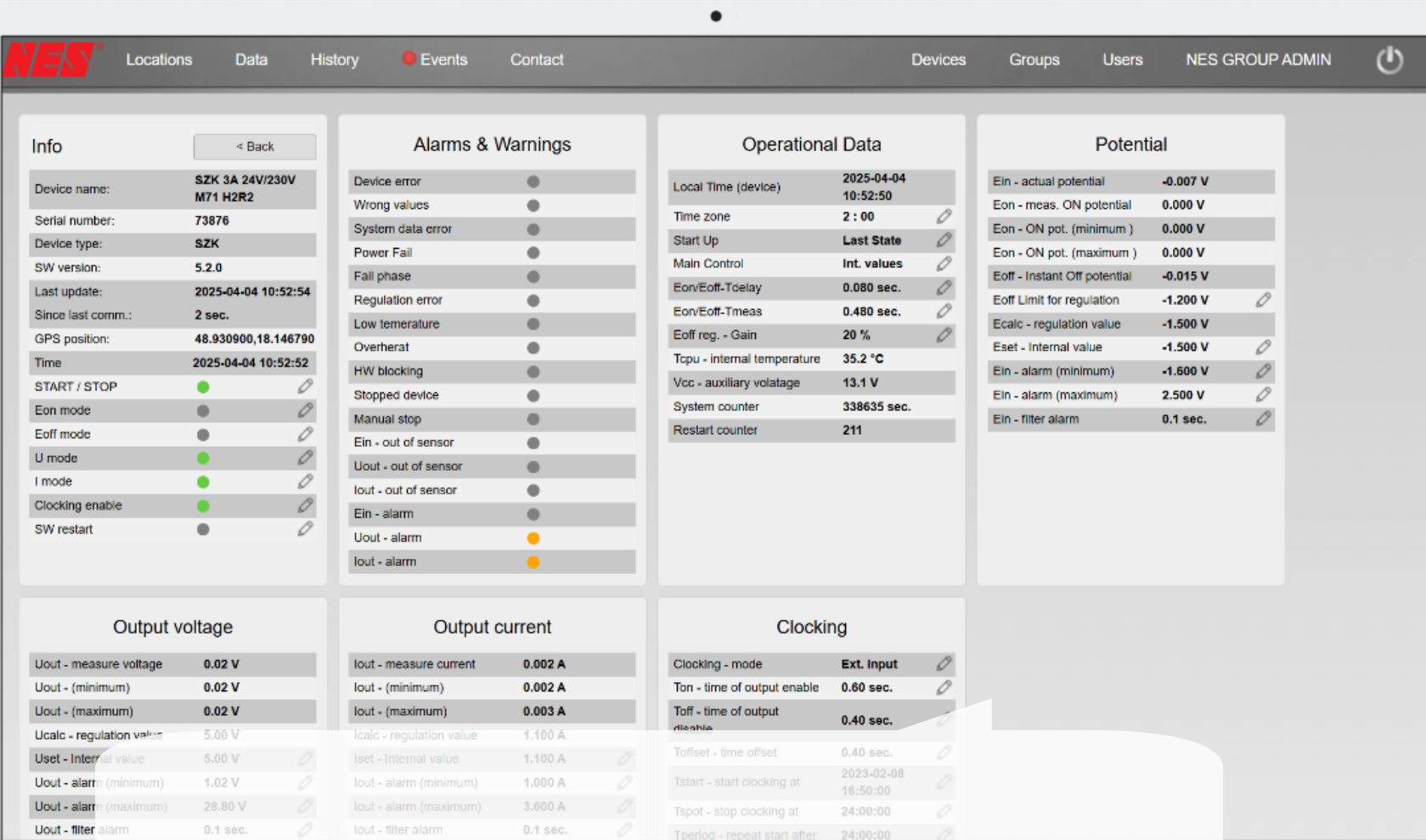
NESMONITOR and current data



The screenshot shows the 'Data' tab in the NESMONITOR interface. It displays a table of devices with columns for Serial number, Area, DT, START, Clocking, Reset, StartUp, MainCtrl, Ex_Tdelay, Ex_Tmeas, Eoff_Gal, and Uset. The table lists several devices, including 'DMZ 10A - new', 'DMZ 10A - DEMO', and 'SZK 3A 24V/230V M71 H2R2'. The interface also includes a search bar and a 'Bulk setup' button.

Groups and Devices	Serial number	Area	DT	START	Clocking	Reset	StartUp	MainCtrl	Ex_Tdelay	Ex_Tmeas	Eoff_Gal	Uset
Data not available												
DMZ 10A - new	94802											
DMZ 10A - DEMO	71970	NES Nova Dubnica	2025-04-04 11:00:07									
SZK 3A 24V/230V M71 H2R2	73876	NES Nova Dubnica	2025-04-04 11:00:22	X	X	-	Last State	Int. values	0.080 sec.	0.480 sec.	20 %	5.00 V
NES Nova Dubnica / Potrubie Východ-Západ												
DMZ 10A - inside SZK	94794		2025-03-25 14:38:40									
SZK 20A 48V/230V MH2R2Z1	94822		2025-03-25 14:39:28	-	X	-	Last State	Int. values				10.00 V
DMZ 10A - inside SZK	94795		2025-03-25 14:45:22									
SZK 20A 48V/230V MH2R2Z1	94823		2025-03-25 14:48:10	-	X	-	Last State	Int. values				48.00 V
DMZ 10A - inside SZK	94800		2025-03-25 14:08:07									
SZK 20A 48V/230V MH2R2Z1	94828		2025-03-25 14:00:10	-	X	-	Last State	Int. values				48.00 V

Current status of all devices assigned to the user. Bulk setup option..



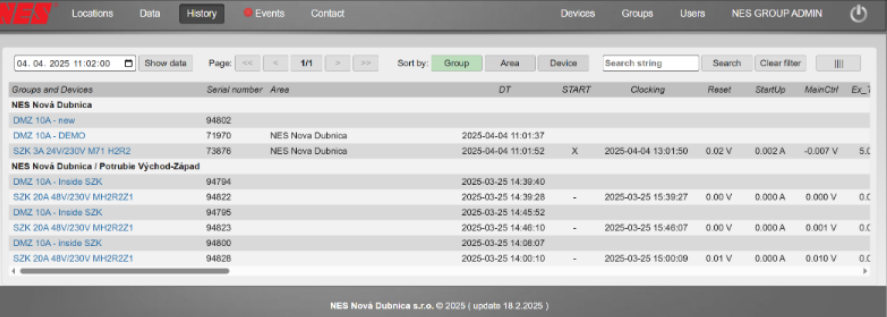
The screenshot shows the 'Data' tab in the NESMONITOR interface, displaying detailed parameters for a specific device. The parameters are organized into several sections: Info, Alarms & Warnings, Operational Data, Potential, Output voltage, Output current, and Clocking. Each section contains a list of parameters with their current values and a 'Back' button.

Info	Alarms & Warnings	Operational Data	Potential
Device name: SZK 3A 24V/230V M71 H2R2	Device error	Local Time (device) 2025-04-04 10:52:50	Ein - actual potential -0.007 V
Serial number: 73876	Wrong values	Time zone 2 : 00	Eon - mcas. ON potential 0.000 V
Device type: SZK	System data error	Start Up Last State	Eon - ON pot. (minimum) 0.000 V
SW version: 5.2.0	Power Fail	Main Control Int. values	Eon - ON pot. (maximum) 0.000 V
Last update: 2025-04-04 10:52:54	Fail phase	Eon/Eoff-Tdelay 0.080 sec.	Eoff - Instant Off potential -0.015 V
Since last comm.: 2 sec.	Regulation error	Eon/Eoff-Tmeas 0.480 sec.	Eoff Limit for regulation -1.200 V
GPS position: 48.930900,18.146790	Low temperature	Eoff reg. - Gain 20 %	Ecalc - regulation value -1.500 V
Time 2025-04-04 10:52:52	Overheat	Tcpu - internal temperature 35.2 °C	Eset - Internal value -1.500 V
START / STOP	HW blocking	Vcc - auxiliary volatage 13.1 V	Ein - alarm (minimum) -1.600 V
Eon mode	Stopped device	System counter 338635 sec.	Ein - alarm (maximum) 2.500 V
Eoff mode	Manual stop	Restart counter 211	Ein - filter alarm 0.1 sec.
U mode	Ein - out of sensor		
I mode	Uout - out of sensor		
Clocking enable	lout - out of sensor		
SW restart	Ein - alarm		
	Uout - alarm		
	lout - alarm		

Output voltage	Output current	Clocking
Uout - measure voltage 0.02 V	lout - measure current 0.002 A	Clocking - mode Ext. Input
Uout - (minimum) 0.02 V	lout - (minimum) 0.002 A	Ton - time of output enable 0.60 sec.
Uout - (maximum) 0.02 V	lout - (maximum) 0.003 A	Toff - time of output 0.40 sec.
Ucalc - regulation value 5.00 V	lcalc - regulation value 1.100 A	Toffset - time offset 0.40 sec.
Uset - Internal value 5.00 V	lset - Internal value 1.100 A	Tstart - start clocking at 2023-02-08 16:50:00
Uout - alarm (minimum) 1.02 V	lout - alarm (minimum) 1.000 A	Tspot - stop clocking at 24:00:00
Uout - alarm (maximum) 28.80 V	lout - alarm (maximum) 3.600 A	Tperiod - repeat start after 24:00:00
Uout - filter alarm 0.1 sec.	lout - filter alarm 0.1 sec.	

Detailed list of parameters of a specific device with the possibility of changing parameters.

NESMONITOR and records



The screenshot shows the NESMONITOR interface with a table of device records. The table has columns for Groups and Devices, Serial number, Area, DT, START, Clocking, Reset, StartUp, MainChf, and Ex. The data is filtered for the date 04.04.2025 11:02:00. The table lists several devices, including DMZ 10A-Inside, DMZ 10A-DEMO, and SKZ 3A 24V/230V MT1 H2R2, with their respective serial numbers and areas.

Groups and Devices	Serial number	Area	DT	START	Clocking	Reset	StartUp	MainChf	Ex
NES Nova Dubnica	94802								
DMZ 10A-Inside	71970	NES Nova Dubnica	2025-04-04 11:01:37						
DMZ 10A-DEMO	73876	NES Nova Dubnica	2025-04-04 11:01:52	X	2025-04-04 13:01:50	0.02 V	0.002 A	-0.007 V	5.2
SKZ 3A 24V/230V MT1 H2R2									
NES Nova Dubnica / Potrubie Vychod-Zapad									
DMZ 10A-Inside SKZ	94794		2025-03-25 14:39:40						
SKZ 20A 48V/230V MH2R2Z1	94822		2025-03-25 14:39:28	-	2025-03-25 15:39:27	0.00 V	0.000 A	0.000 V	0.0
DMZ 10A-Inside SKZ	94795		2025-03-25 14:46:52						
SKZ 20A 48V/230V MH2R2Z1	94823		2025-03-25 14:46:10	-	2025-03-25 15:46:07	0.00 V	0.000 A	0.001 V	0.0
DMZ 10A-Inside SKZ	94800		2025-03-25 14:06:07						
SKZ 20A 48V/230V MH2R2Z1	94828		2025-03-25 14:00:10	-	2025-03-25 15:00:09	0.01 V	0.000 A	0.010 V	0.0

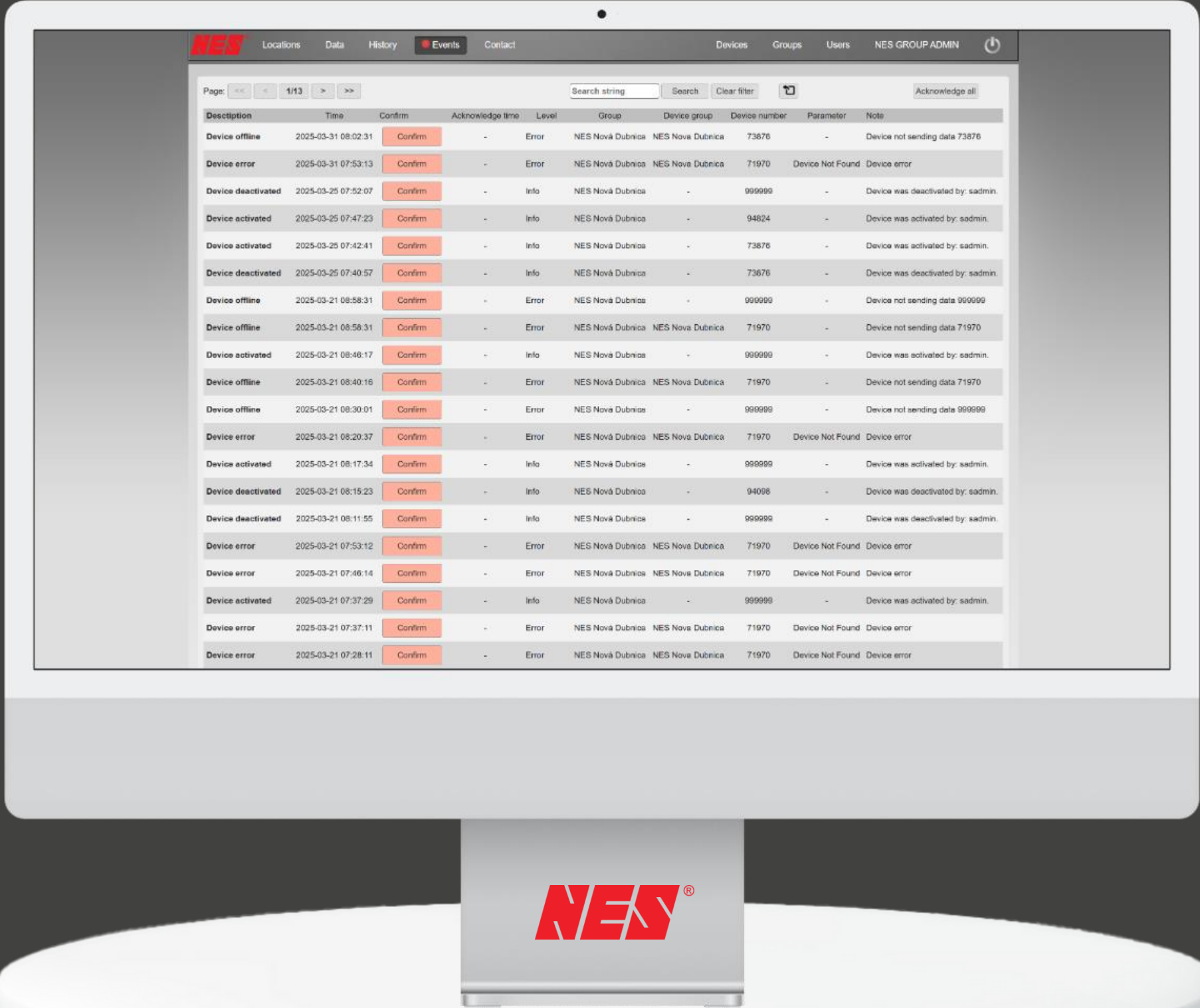
View records of all devices at a configurable time.

Table view of all device records in the set time period.



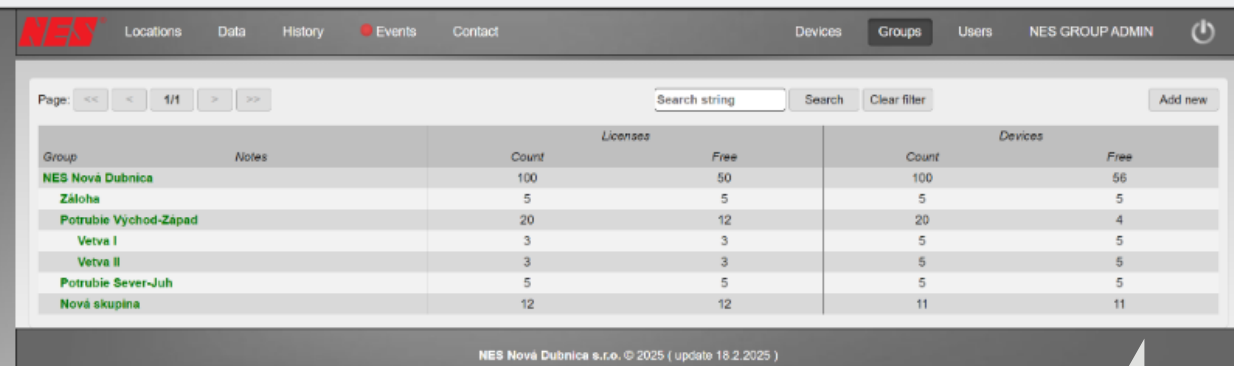
Graphical display of selected parameters in a set time period.

NESMONITOR and events



Event logs on devices as well as servers.
An e-mail notification can be sent when
an error event occurs.

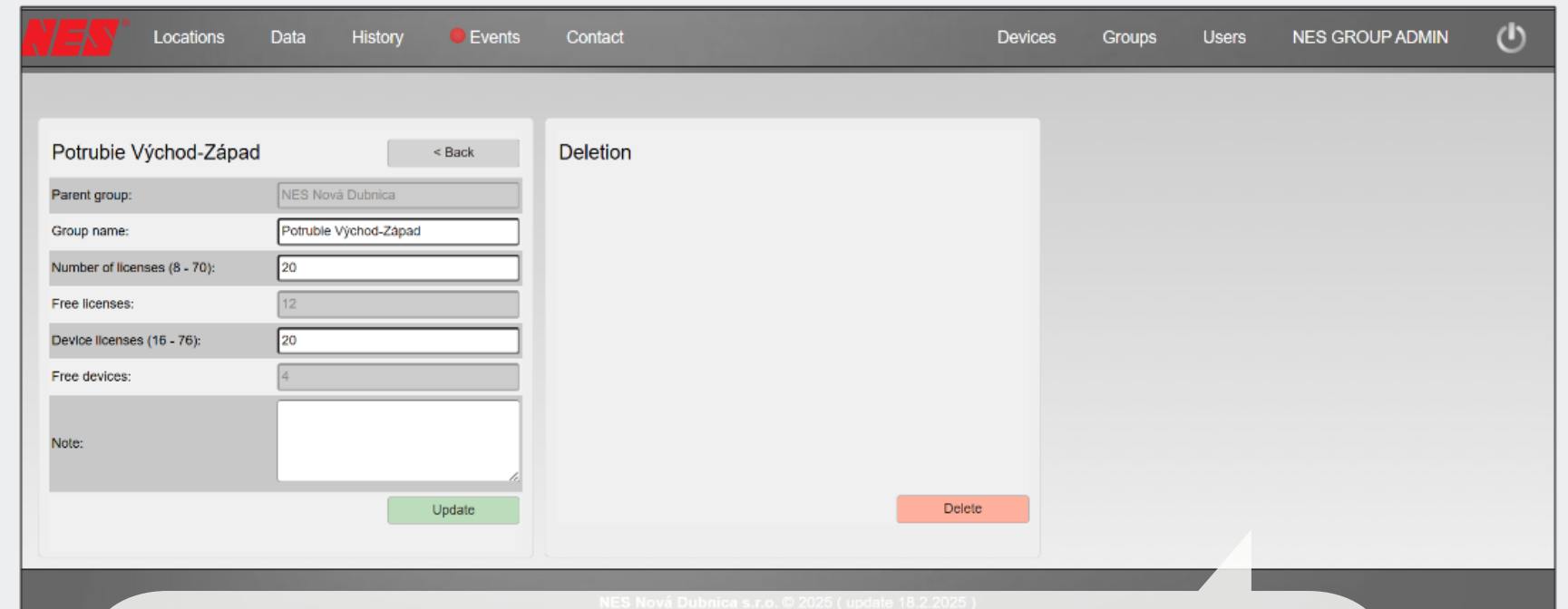
NESMONITOR and groups



The screenshot shows the 'Groups' page in the NESMONITOR application. It features a table with columns for Group, Notes, Licenses (Count, Free), and Devices (Count, Free). The table lists several groups, including 'NES Nová Dubnica', 'Záloha', 'Potrubie Východ-Západ', 'Vetva I', 'Vetva II', 'Potrubie Sever-Juh', and 'Nová skupina'. The footer indicates 'NES Nová Dubnica s.r.o. © 2025 (update 18.2.2025)'.

Group	Notes	Licenses		Devices	
		Count	Free	Count	Free
NES Nová Dubnica		100	50	100	56
Záloha		5	5	5	5
Potrubie Východ-Západ		20	12	20	4
Vetva I		3	3	5	5
Vetva II		3	3	5	5
Potrubie Sever-Juh		5	5	5	5
Nová skupina		12	12	11	11

Group management allows for better sorting of devices but also the ability for customers to further offer our product (subgroups).



The screenshot shows the 'Group management' page for 'Potrubie Východ-Západ'. It includes a 'Deletion' section and a form for updating the group. The form fields are: Parent group (NES Nová Dubnica), Group name (Potrubie Východ-Západ), Number of licenses (8 - 70) (20), Free licenses (12), Device licenses (16 - 76) (20), Free devices (4), and a Note field. The 'Update' button is green, and the 'Delete' button is orange. The footer indicates 'NES Nová Dubnica s.r.o. © 2025 (update 18.2.2025)'.

Each group has a set number of licenses as well as a number of devices.

NESMONITOR and users



Group / User	Full name	Email	Level	RFID	Expiry date	Expiry warning in days	Time zone	Language	Email notification
NES Nová Dubnica									
nes_admin1	Admin 2 for AdacSolutions	jaseenovce@adacsolutions.com	Admin	-	2100-01-01	30	Europe/Bratislava	SK	Yes
nes_user2	NES - user 2	kacaliskm@gmail.com	User	-	2100-01-01	15	Europe/Bratislava	SK	Yes
nes_guest2	NES - guest2	marek.kacalik@gmail.com	Guest	-	2025-12-13	30	Europe/Bratislava	SK	Yes
nes_admin2	NES GROUP ADMIN	kacalik@nes.sk	Admin	2***0	2038-02-04	30	Europe/Amsterdam	EN	Yes

Manage user accounts types: Admin, User and Guest. Basic settings include e-mail, notifications, language and account expiration date.

Client - Modem

The client is a modem that enables communication via the RS232 interface. The obtained information is then transmitted using the TCP/IP protocol via HTTP.

Main parameters:

- Power supply 12V to 32V
- Communication interfaces: RS232/RS485/CAN, GSM
- Contains GPS for determining position and precise time
- Contains terminals for external clocking
- GSM and GPS antennas can be connected externally
- GSM modem is mounted on a DIN rail
- Option to set up the modem via SMS.



Modem

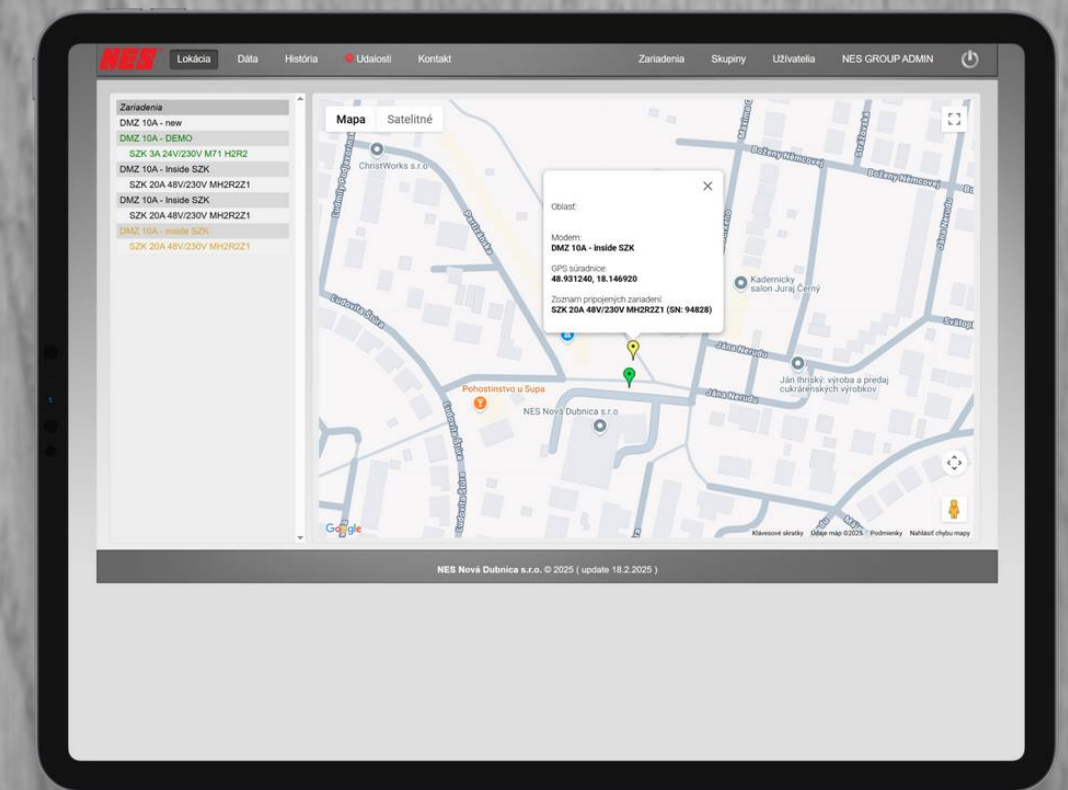


**Cathodic
protection
station SZK**

MySQL and Web Server

The web server is located on an external hosting, where connectivity and server management are guaranteed. The server processes data that regularly arrives from the cathode station. Due to the large volume of data stored on the server, regular monthly backups are performed.

- The server is used to collect the necessary measured data.
- It provides visualization of the measured data.
- Possibility to control the device remotely.
- Different access rights to the server.
- Data is stored securely outside the monitored device.
- End devices are assigned automatically.



Nesmonitor advantages

➤ Possibility to set and monitor U, I and P remotely.

➤ The user can see all assigned resources directly on the map.

➤ Possibility to change and monitor the selected cathodic protection mode.

➤ Monitoring the temperature of the source.

➤ Tracking error messages on the source and also via e-mail.

➤ Ability to start synchronous clocking of a group of resources for one modem with an accuracy of 1ms.

➤ Possibility to display graphical dependencies between set and desired values.

➤ Possibility to determine the location of the terminal device.
(protection against theft thanks to logging).

➤ Possibility of sending a simple text message to the terminal device.

➤ Remote Start / Stop of the rectifier.

A background image showing a close-up of two hands shaking in a firm grip, symbolizing a business agreement. The hands are wearing dark suit sleeves with white cuffs. The background is slightly blurred, showing more of the suit and some papers on a desk.

Price policy

- The customer purchases a SIM card, which he pays at his own expense, as well as data transfer.
- The customer pays NES Nová Dubnica s.r.o. flat-rate fees for server management and technical support.

**Cathodic protection
rectifiers (NES)**

Air cooled

**Series M71
(customer solutions)**

**Series M71
(standard solutions)**

**Cathodic protection
stations**

**Series M2U
19" rack design**

The main advantages of NES sources (switched technology):

- 
- The pulse-width regulation used ensures high efficiency of switched-mode power supplies in a wide input voltage range.
 - The output of the power supply is short-circuit proof and galvanically isolated from the input.
 - Efficiency of more than 90% at the nominal operating point.
 - First harmonic power factor ≥ 0.96 .
 - High switching frequency of the power supplies.
 - Available for all types of electrodes.
- 

Oil cooled



The main advantages of oil-cooled NES power supplies:

- 
- Oil cooling, high degree of protection
 - Safe operation, reliability
 - Galvanic isolated output from input
 - High efficiency over 80%
 - No-load operation, short circuit protection
 - Easy installation and operation
 - Suitable for all types of electrodes
 - Communication interface, PC connectivity
 - Sun visor (roof), air vent, oil sight glass, thermometer, drain valve with lock, lifting eyes
 - Remote alarms - relay contacts (programmable)
 - GPS synchronization (optional)
- 



**You can find the
entire offer here:**



Contact details



Address:

NES Nová Dubnica s.r.o.
M. Gorkého 820/27
SK-01851 Nová Dubnica
Slovak republic

tel.: +421 42 4401 208

e-mail: info@nes.sk



nes.sk