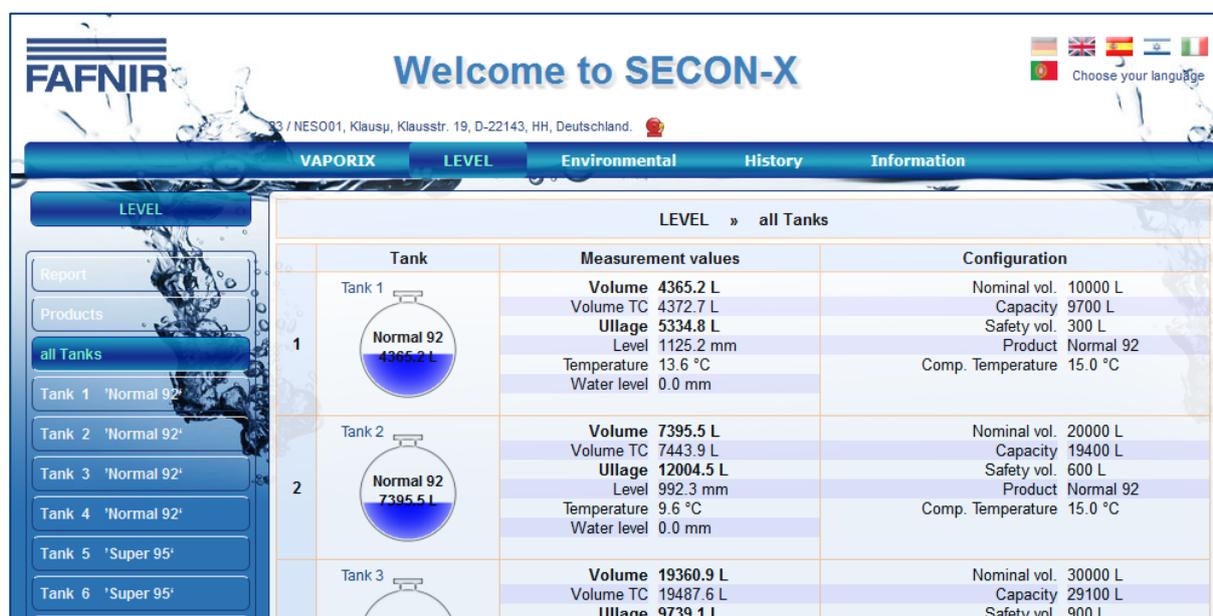


SECON-X

SECON-Lev Administrator



33 / NESO01, Klausj, Klausstr. 19, D-22143, HH, Deutschland.

Choose your language

VAPORIX LEVEL Environmental History Information

LEVEL » all Tanks

Tank	Measurement values	Configuration
Tank 1 	Volume 4365.2 L Volume TC 4372.7 L Ullage 5334.8 L Level 1125.2 mm Temperature 13.6 °C Water level 0.0 mm	Nominal vol. 10000 L Capacity 9700 L Safety vol. 300 L Product Normal 92 Comp. Temperature 15.0 °C
Tank 2 	Volume 7395.5 L Volume TC 7443.9 L Ullage 12004.5 L Level 992.3 mm Temperature 9.6 °C Water level 0.0 mm	Nominal vol. 20000 L Capacity 19400 L Safety vol. 600 L Product Normal 92 Comp. Temperature 15.0 °C
Tank 3 	Volume 19360.9 L Volume TC 19487.6 L Ullage 9739.1 L	Nominal vol. 30000 L Capacity 29100 L Safety vol. 900 L

Version: 4
 Edition: 2016-09
 Art. No: 350136

Table of contents

1	Overview	1
1.1	SECON-X system components	1
1.2	SECON-Lev and SECON-Lev+	2
1.3	About this document	2
1.4	Safety instructions	3
2	SECON-Lev... as local application	4
2.1	Configuration - Settings.....	4
2.1.1	Login.....	4
2.1.2	Virtual keyboard.....	5
2.1.3	Tank truck display.....	5
2.1.4	Language	5
2.1.5	Services.....	6
2.1.6	Alarm volume	6
2.1.7	Network configuration.....	7
2.1.8	VPN	8
2.1.9	WLAN	8
2.1.10	3G/UMTS.....	9
2.1.11	Screen calibration	9
2.1.12	Browser	10
2.1.13	Configuration wizard.....	11
2.2	Configuration – Tools.....	14
2.2.1	Ping	14
2.2.2	Traceroute.....	15
2.2.3	Name resolution.....	15
2.2.4	Self-test.....	16
2.2.5	Log files	17
3	Remote access	18
3.1	Connection to the SECON-Server.....	18
3.1.1	Requirements	18
3.1.2	Connection setup.....	18
3.2	Connection to the SECON device.....	19
3.2.1	Connection setup.....	19
4	List of figures.....	21

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1 Overview

1.1 SECON-X system components

SECON-X is a hardware-software-network system which comprises several components (see figure below) and performs the following tasks:

- Global data access to the SECON-Clients with web interface
- Remote diagnostics
- Remote display, evaluation and data storage
- Universal data format

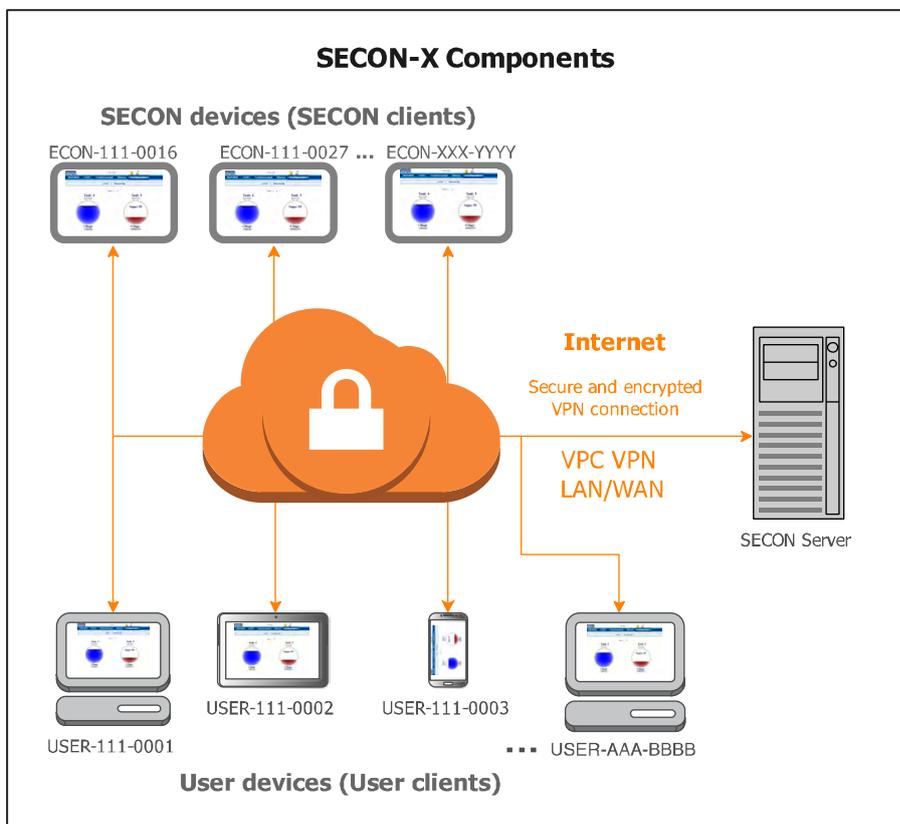


Figure 1: SECON-X system and components

SECON-Lev... is the operating software of the SECON devices with connection to the **VISY-X System**.

1.2 SECON-Lev and SECON-Lev+

SECON-Lev is the operating system of the SECON devices with connection to the **VISY-X System**, with which a precise and continuous filling level measurement in up to 16 tanks is carried out directly at the petrol station. The product temperature and the water level are gauged simultaneously.

SECON-Lev+ is an extension of the operating software for the SECON devices with which in addition all VISY-X environmental sensors are monitored and POS systems are connected.

The SECON device can be used as a supplementary device or as an alternative to a petrol station computer for displaying measured values. The SECON device is also suitable as a display for tank truck drivers for reading out the fill volumes in the individual tanks before supplying the petrol station.

The measured values are displayed on a TFT colour screen. All functions are accessible using the touch screen user interface. Alarms are signalled visually by the display module and also audibly by a buzzer.

SECON-Lev... stores the measured values and the evaluations based on it locally in a database and in archive files. The data can be kept for 10 years+ and displayed on site. The measured values can be displayed locally on the SECON device as well as via a secure VPN connection (remote access). Stored values can also be called up via the secure VPN connection with web-DAV. The synchronisation can be used to compare the locally stored data also with a server.

To determine the average product density the pressure sensors VPS-T can be used in fuel tanks and the VPS-L in LPG tanks. The SECON devices and the VPS... pressure sensors are connected with the VISY-Command evaluation unit, see:



Technical Documentation, SECON-Client, art. no. 350076



Technical Documentation, VISY-Command VI-4, art. no. 207184



Technical Documentation, VPS pressure sensors, art. no. 350204

After the installation or replacement of the sensors the VISY-Command evaluation unit must be configured with the VISY-Setup configuration program, see:



Technical Documentation VISY-Setup V4..., art. no. 207158

1.3 About this document

This documentation describes the configuration of the SECON-Lev and SECON-Lev+ operating software as local application on the SECON devices (SECON-Clients), as well the remote access via a web browser (USER-Clients).

To operate the SECON-Lev... software, see:



Technical Documentation SECON-Lev User Guide, art. no.: 350111

For the installation and operation of the OpenVPN software (remote access), see:



Technical Documentation OpenVPN installation, art. no. 350199

1.4 Safety instructions

Operating software SECON-Lev... is intended for SECON devices. The software must be used exclusively for this purpose. Please observe and follow all product safety notes and operating instructions. The manufacturer accepts no liability for any form of damage resulting from improper use!

The SECON-X system has been developed, manufactured and tested in accordance with state-of-the-art technology and recognised technical safety regulations. Nevertheless, the system may be a source of danger. The following safety precautions must be observed in order to reduce the risk of injury, electric shocks, fire or damage to the equipment:

- Do not change or modify the system or add any equipment without the prior consent of the manufacturer.
- Only use original parts. These are in line with the technical requirements specified by the manufacturer.
- The installation, operation and maintenance of the SECON device, together with the SECON-Lev... software, may only be carried out by expert personnel.
- Operators, fitters and service technicians must observe all applicable safety regulations. This also applies to any local safety and accident prevention regulations which are not stated in these operating instructions.



If these safety instructions are not observed, it may result in the risk of accident or damage to the SECON-X system.



The SECON touch screen may only be operated using a finger or a stylus designed for this purpose. The use of pointed objects (e.g. screwdrivers, pens) may cause damage to the touch screen.



Useful tips and information in this manual that should be observed are written in italics and identified by this symbol.

2 SECON-Lev... as local application

2.1 Configuration - Settings

In the Configuration » Settings menu, the SECON can be configured for the particular prevailing conditions: Tank truck display, language, services, alarm volume, network VPN, WLAN, 3G/UMTS, screen calibration, via browser.

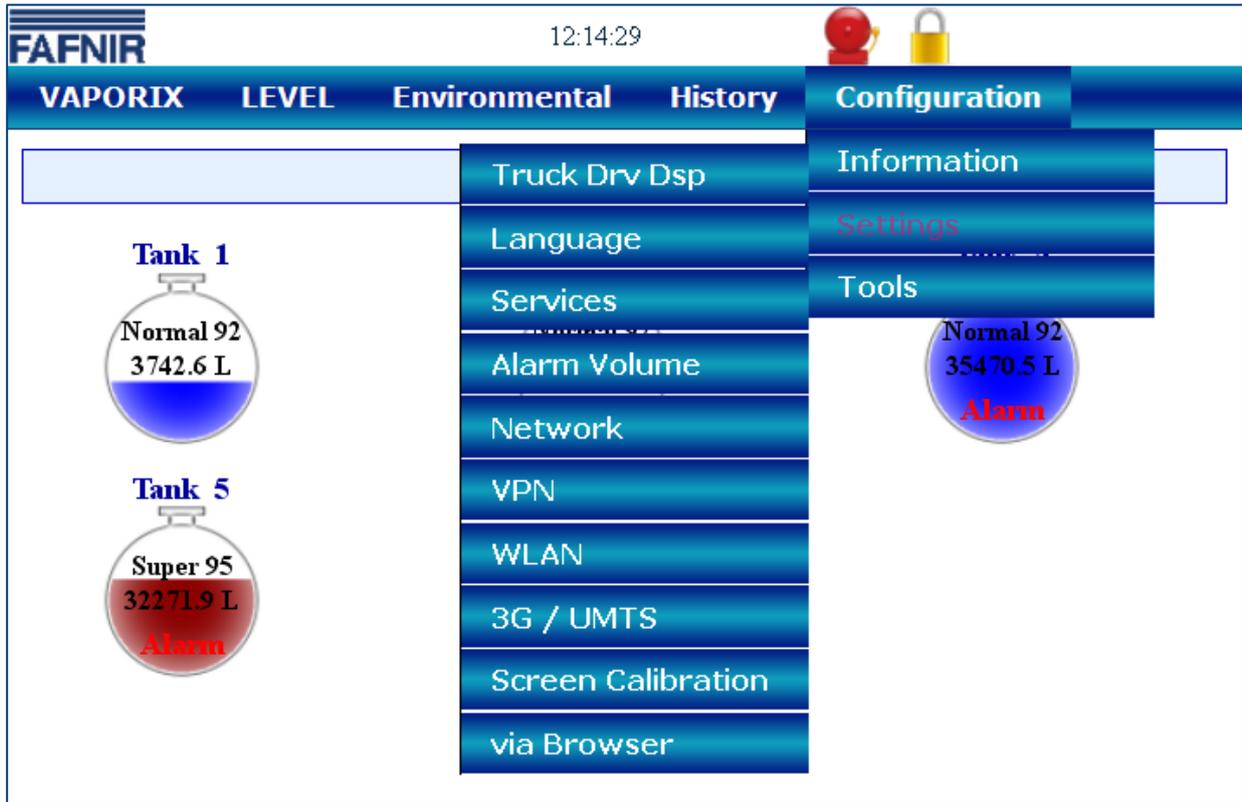


Figure 2: Configuration - Settings



The lock symbol indicates an existing VPN connection.



The yellow alarm indicates a warning.



The red alarm symbol indicates an error.

2.1.1 Login

For configuration outside the tank truck display, login is required:

User: *admin*

Password: *vap22765*



After 5 minutes, if no configuration changes are made, access is automatically blocked.

2.1.2 Virtual keyboard

When the user touches an empty field, a virtual keyboard is displayed automatically.



Figure 3: Configuration – Virtual keyboard

2.1.3 Tank truck display

With the Tank truck display function, an automatically changing display is shown for all the tanks, with their available space as well as a tank truck symbol.

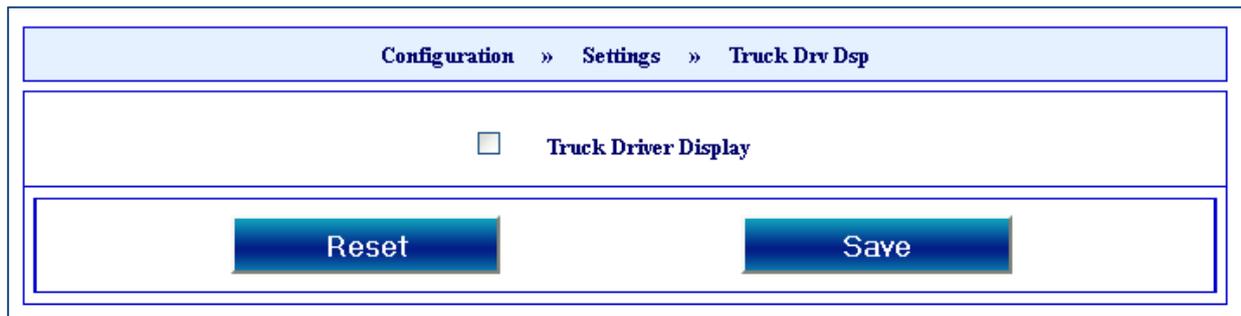


Figure 4: Configuration – Tank truck display

2.1.4 Language

Select your language here.



Figure 5: Settings – Language

2.1.5 Services

The available services can be activated or deactivated here. Depending on the setting for these services, the appropriate menu options are shown.

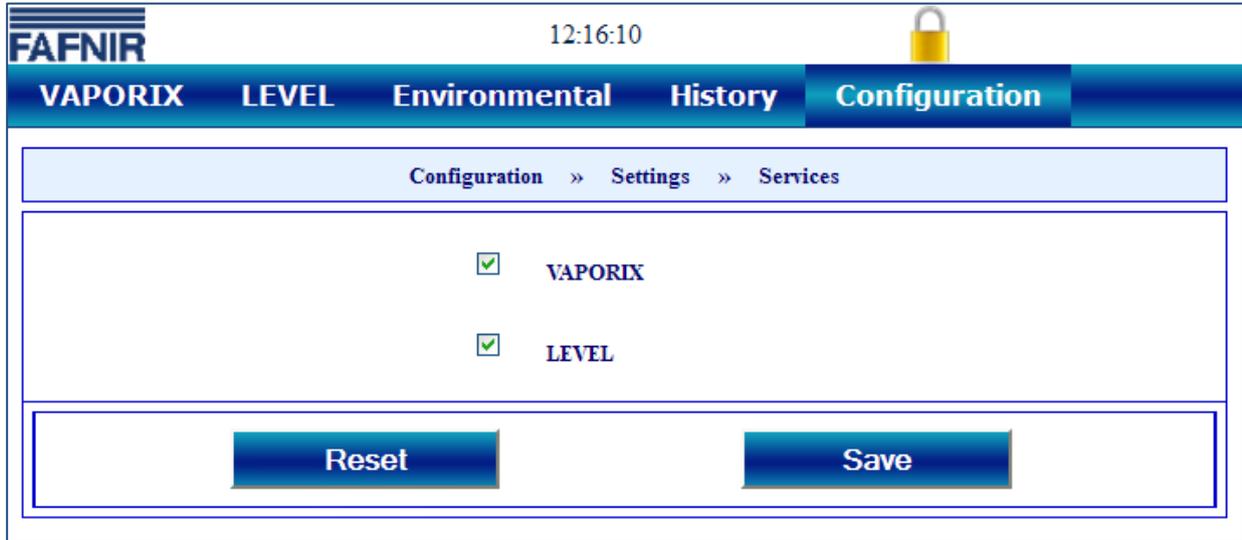


Figure 6: Settings – Services

2.1.6 Alarm volume

The volume of the integrated loudspeaker can be changed here.

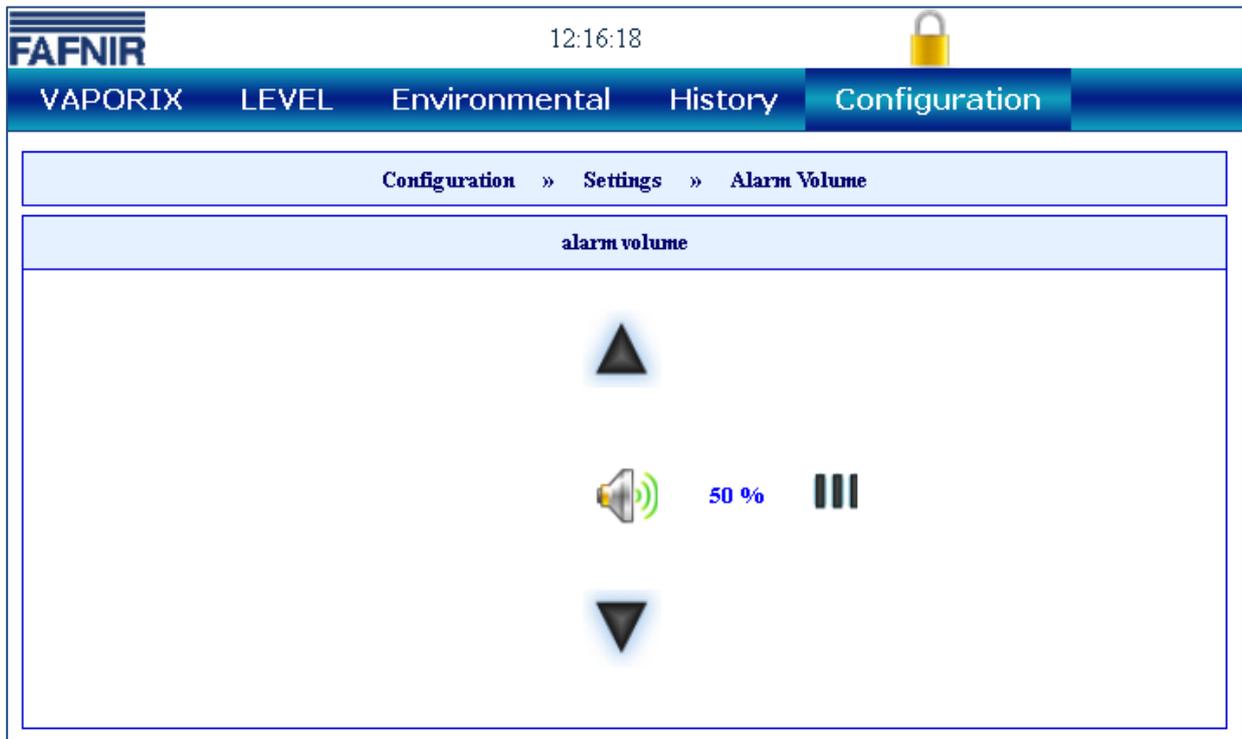
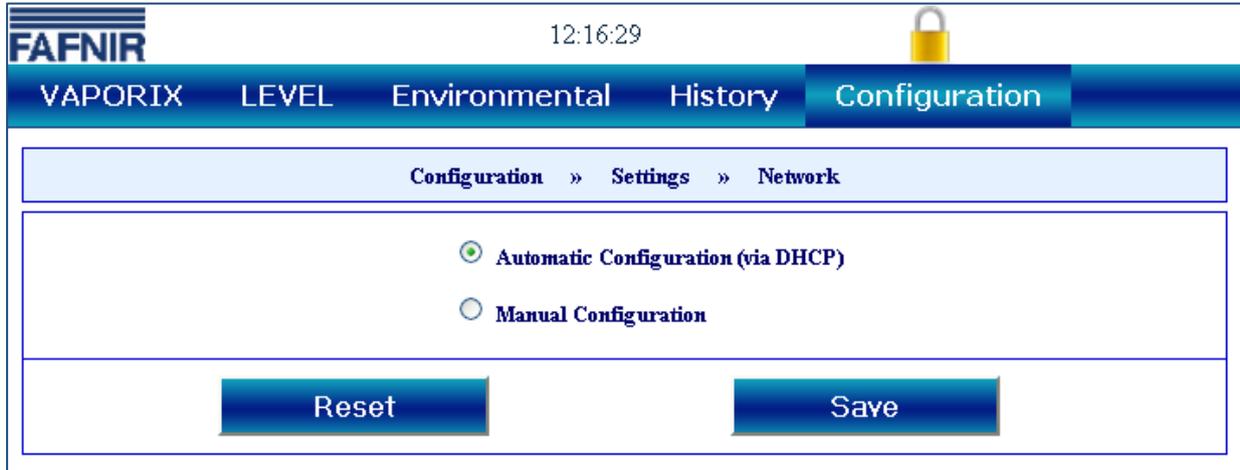


Figure 7: Settings – Alarm volume

2.1.7 Network configuration

The network can be configured automatically. To do this, select the “Automatic configuration” option and confirm by pressing the <Save> button.



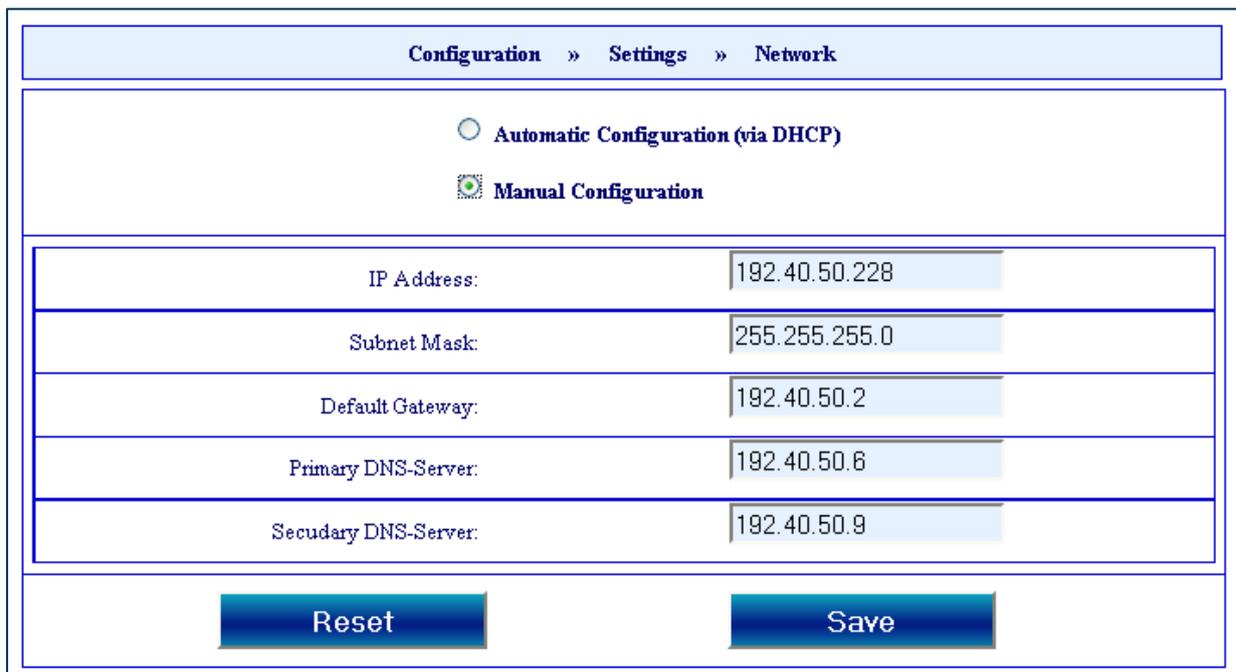
The screenshot shows the FAFNIR web interface. At the top, there is a navigation bar with the FAFNIR logo on the left, the time 12:16:29 in the center, and a lock icon on the right. Below the navigation bar, there are tabs for VAPORIX, LEVEL, Environmental, History, and Configuration. The Configuration tab is active. Below the tabs, there is a breadcrumb trail: Configuration » Settings » Network. The main content area has two radio button options: Automatic Configuration (via DHCP) and Manual Configuration. At the bottom of the form, there are two buttons: Reset and Save.

Figure 8: Settings – Network – Automatic configuration

 *Network configuration is set to DHCP by default.*

With this configuration, the client calls up the IP address from the DHCP server directly. A functional DHCP server must be available in the network for this.

The network can be configured manually. For this, please contact your network administrator. To do this, select the “Manual configuration” option, enter the appropriate network data and confirm by pressing the <Save> button (for an example, see the figure below).



The screenshot shows the FAFNIR web interface with the Manual Configuration option selected. The breadcrumb trail is Configuration » Settings » Network. The radio button for Manual Configuration is selected. Below the options, there is a table for network parameters:

IP Address:	192.40.50.228
Subnet Mask:	255.255.255.0
Default Gateway:	192.40.50.2
Primary DNS-Server:	192.40.50.6
Secudary DNS-Server:	192.40.50.9

At the bottom of the form, there are two buttons: Reset and Save.

Figure 9: Settings – Network – Manual configuration

2.1.8 VPN

The network data for the VPN connection are entered here. For this, please contact your network administrator (for an example, see the figure below).

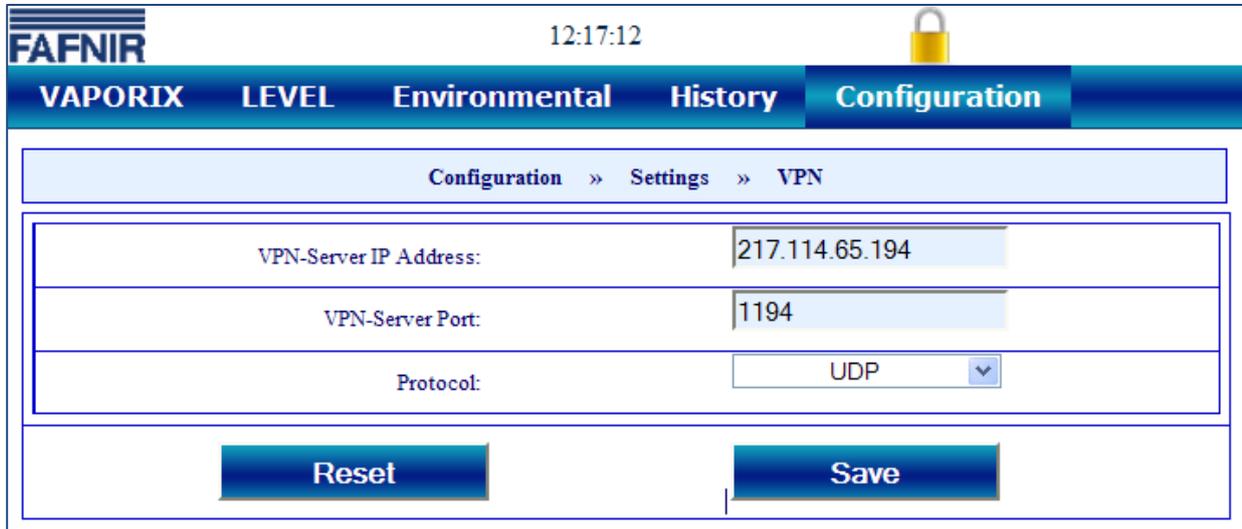


Figure 10: Settings – VPN

2.1.9 WLAN

The WLAN function is currently not supported with an internal module.

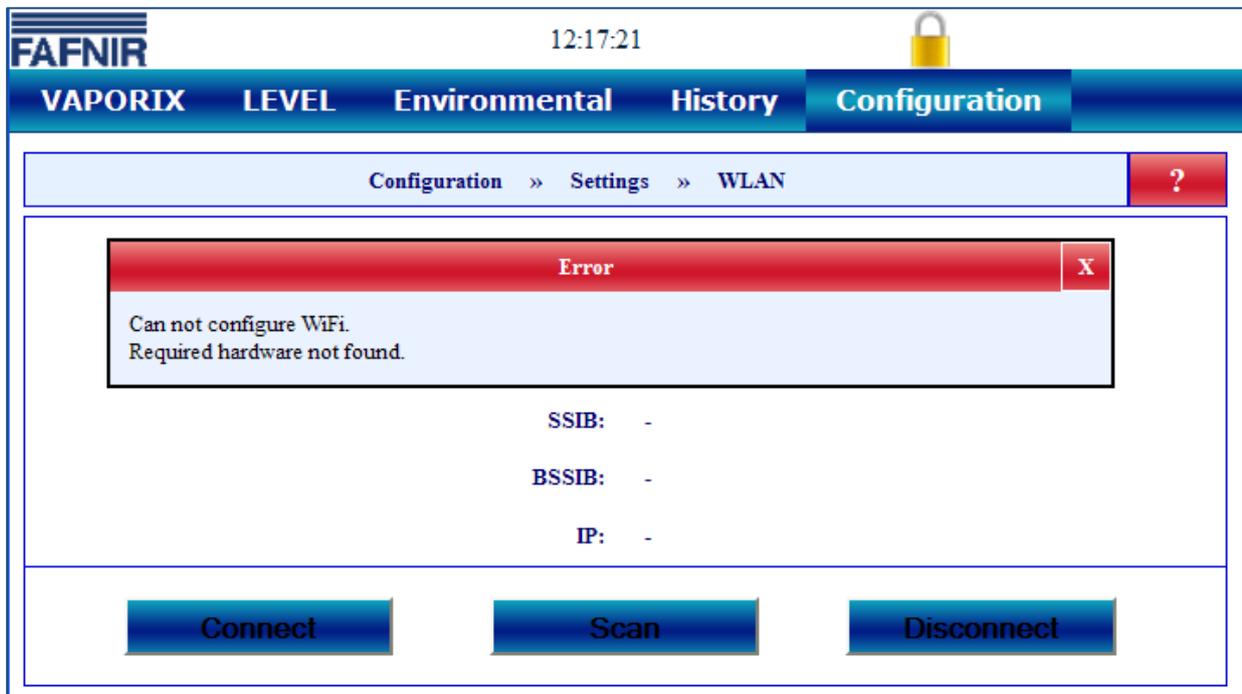


Figure 11: Settings – WLAN

2.1.10 3G/UMTS



The 3G/UMTS function is currently not supported with an internal module.

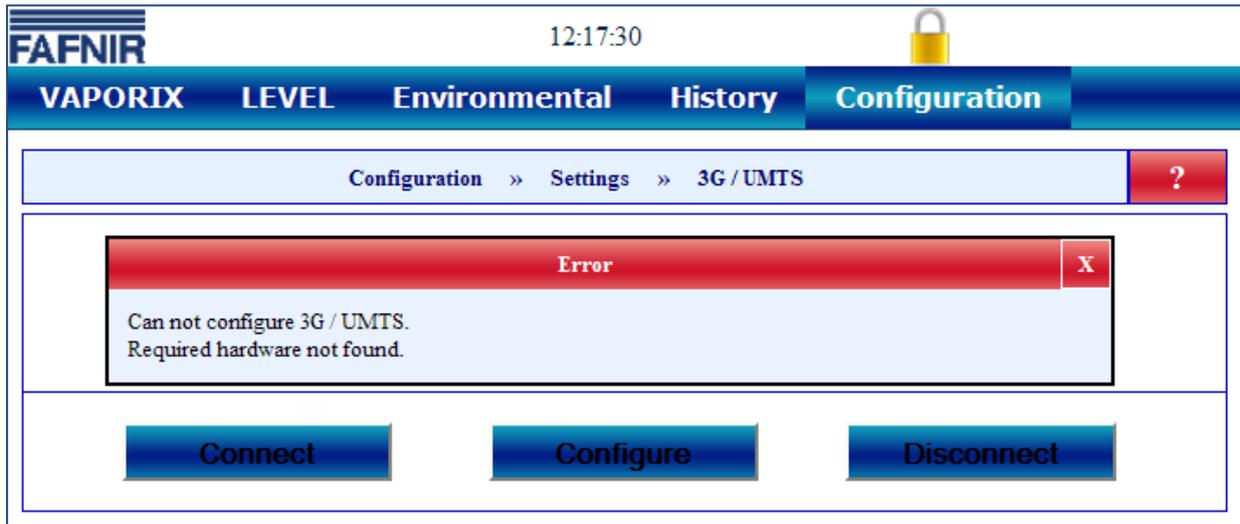


Figure 12: Settings – 3G/UMTS

2.1.11 Screen calibration

The touchscreen precision is calibrated here.

Press the <Start> button and touch the 5 calibration crosses using the touchscreen stylus.



If calibration is not performed correctly, it may become impossible to use the touchscreen!

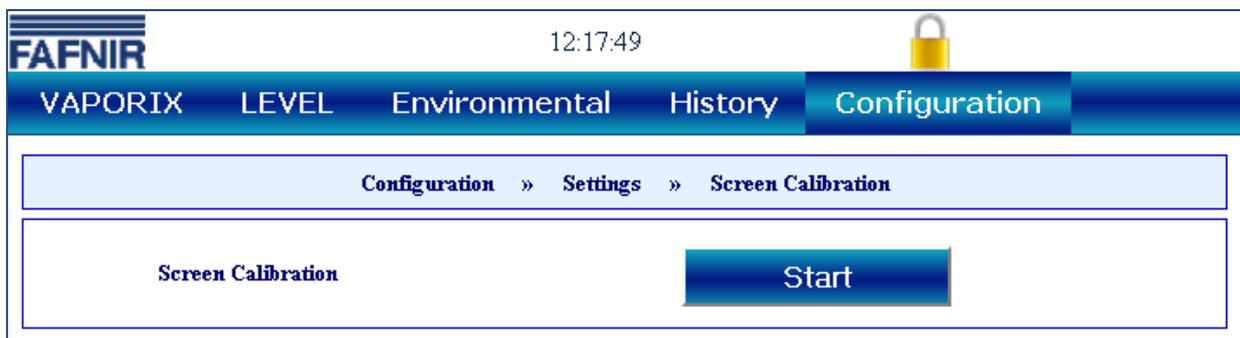


Figure 13: Settings – Screen Calibration

2.1.12 Browser



Station data and pressure sensors can only be configured via a web browser and a network connection with a PC/laptop that is connected to the SECON device.

- If this has not been done already, connect the SECON device and PC/laptop with an RJ45 network cable.
- In menu item Browser on the SECON device enter the IP address of your PC/laptop (see figure below). To determine the IP address for your PC laptop, simply enter the Windows command "ipconfig".

Configuration » Settings » via Browser		?
SECONs IP Address:	192.40.50.228	
Laptops / PCs IP Address:	192.40.50.	<input type="text"/>
<input type="button" value="Reset"/>		<input type="button" value="Start"/>

Figure 14: Settings – Via browser

- Save the configuration by clicking on the <Start> button.
- This is then confirmed with the https-IP address that can be used to set up a connection to the SECON device via a browser (see figure below).

Configuration » Settings » via Browser		?
Information: The configuration has been saved successfully.		
Information: Now you can configure this SECON by browser. The SECON can be reached at the following address: https://192.40.50.228		
SECONs IP Address:	192.40.50.228	
Laptops / PCs IP Address:	192.40.50.52	
<input type="button" value="Reset"/>		<input type="button" value="Stop"/>

Figure 15: Settings – Via browser – Confirmation



The IP address for the PC/laptop must not be the same as the IP address for the SECON. The configuration process may only be carried out from a single PC/laptop. During configuration, a tool symbol is shown on the display. Configuration must be completed by pressing the "Stop" function key.

2.1.13 Configuration wizard

With the web browser of a PC/laptop that is connected to the SECON, the following data can be configured via the "Configuration wizard":

- Station data (address, etc.)
- Pressure sensors (device number, position, connection, fuelling points)



Other SECON configurator menus have no functions as yet.

- (1) Establish the network connection described in chapter 2.1.12.
- (2) For access to the configurator, enter the https address previously determined in the address line of your browser.
- (3) In the password entry form, enter "admin" as the user and the password "Faf-nir22765Altona" and confirm the entry.



Figure 16: Configuration wizard

- (4) Start the wizard by clicking on the <Next> button.
In the first wizard step, the station data is preset.
The "**Pressure**" function is intended for the VAPORIX application.

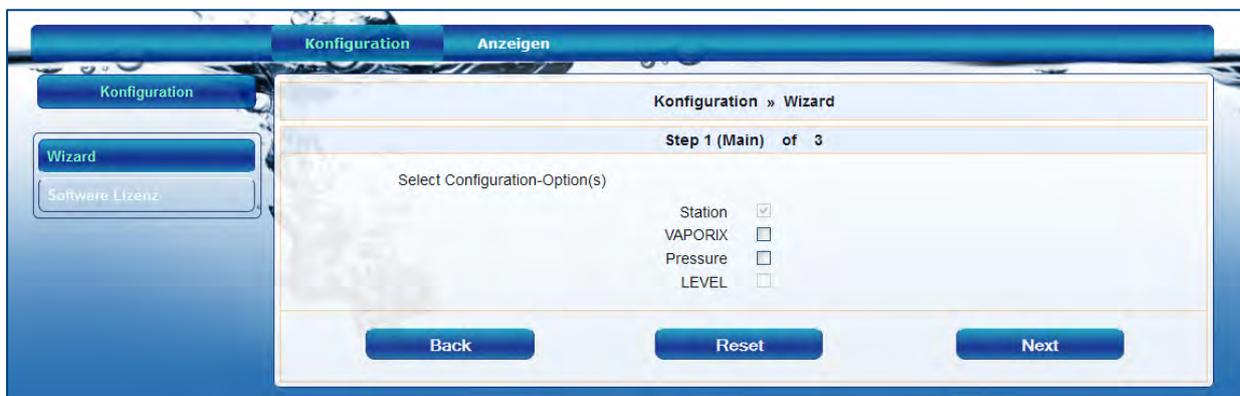


Figure 17: Configuration wizard – Step 1

(5) In step 2, enter the station data (address, etc.)



SECON Configuration GUI

Konfiguration Anzeigen

Konfiguration » Wizard

Step 2 (Station) of 3

Station

Internal No	23
Name	Klausu
Street	Klausstr. 19
Postalcode	D-22143
City	HH
Country	Deutschland

Geographic coordinates

Latitude	53.599993
Longitude	10.169206

Back Reset Next

Figure 18: Configuration wizard – Step 2

(6) In step 3, enter the pressure sensor data, if previously selected.



Figure 19: Configuration wizard – Step 3

- No:** Running number assigned by the program
- Pressure-Id:** Device number
- Position:** Logical position of sensor. During the exchange it should be ensured that the replacement sensor receives the same position, since the data will be continued independent of the changing device number.
- Connection:** Type of connection. *Wireless* must be selected if the sensor is to be connected via a combination of VISY-RFT-L/VISY-RFR. If the sensor is wired via a VISY-VPI, the appropriate *VPI Ch[X]* channel must be selected.
- Fuelling points:** Selection of the monitored fuelling points

(7) After the data has been entered and the <Next> button is pressed, a message is displayed confirming successful SECON configuration.

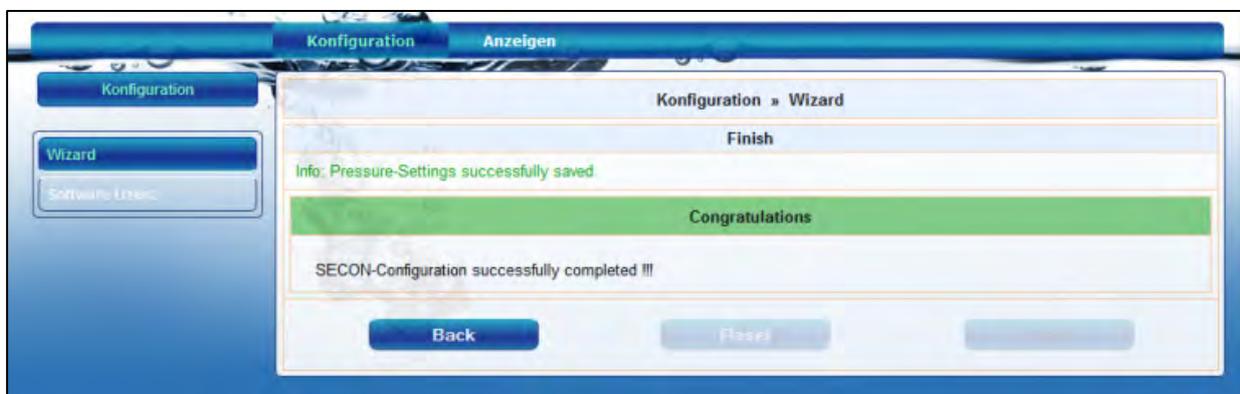


Figure 20: Configuration wizard – Message confirming successful configuration

2.2 Configuration – Tools

The Configuration » Tools menu contains the following functions for checking the network connection: Ping, traceroute, name resolution, self-test, log files.

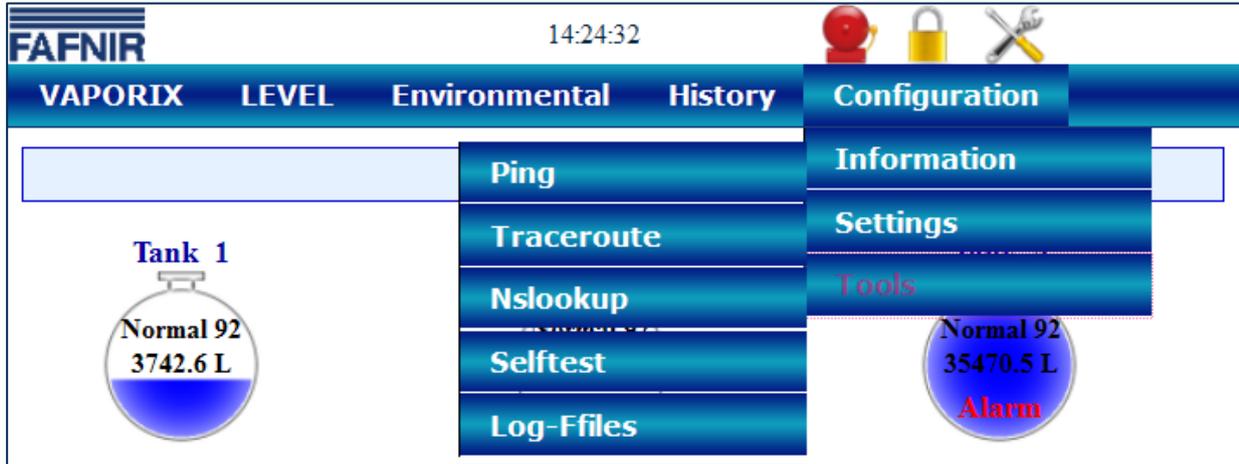


Figure 21: Configuration – Tools

2.2.1 Ping

With this option, you can test the network connection by pinging the IP address entered using the virtual keyboard (for an example, see the figure below).

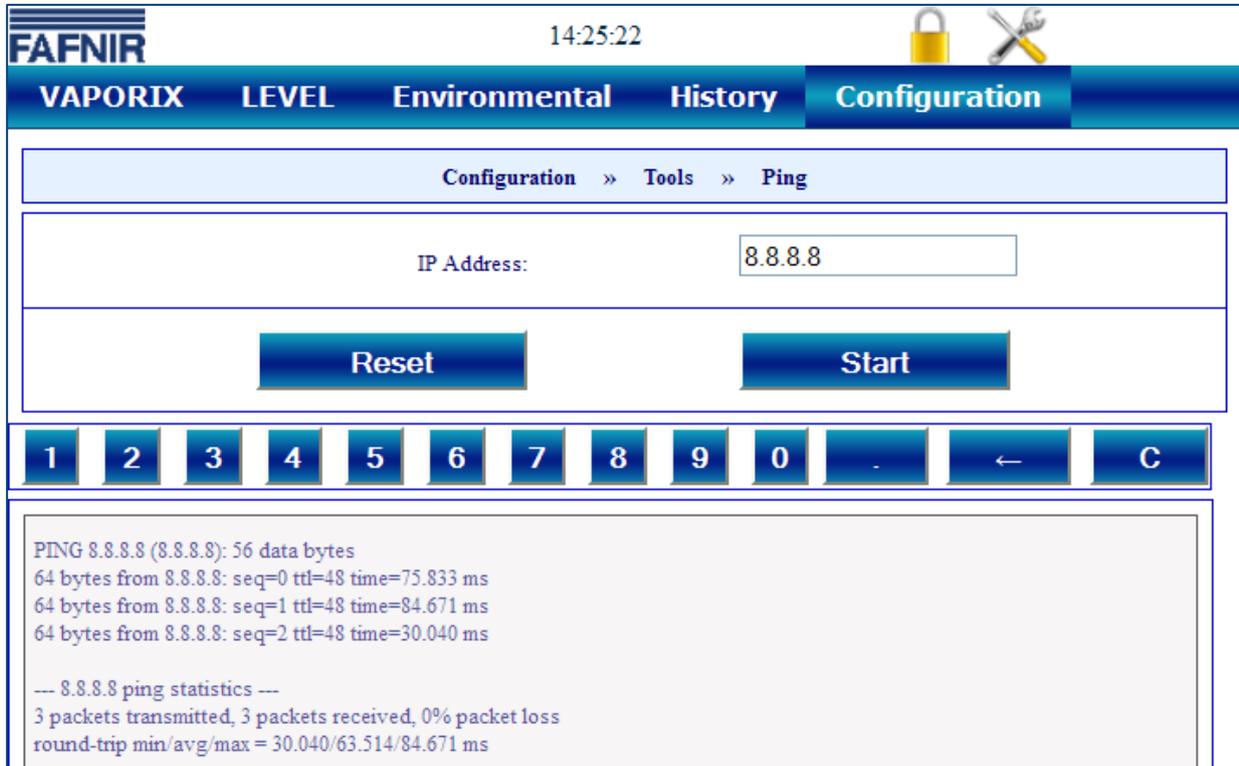
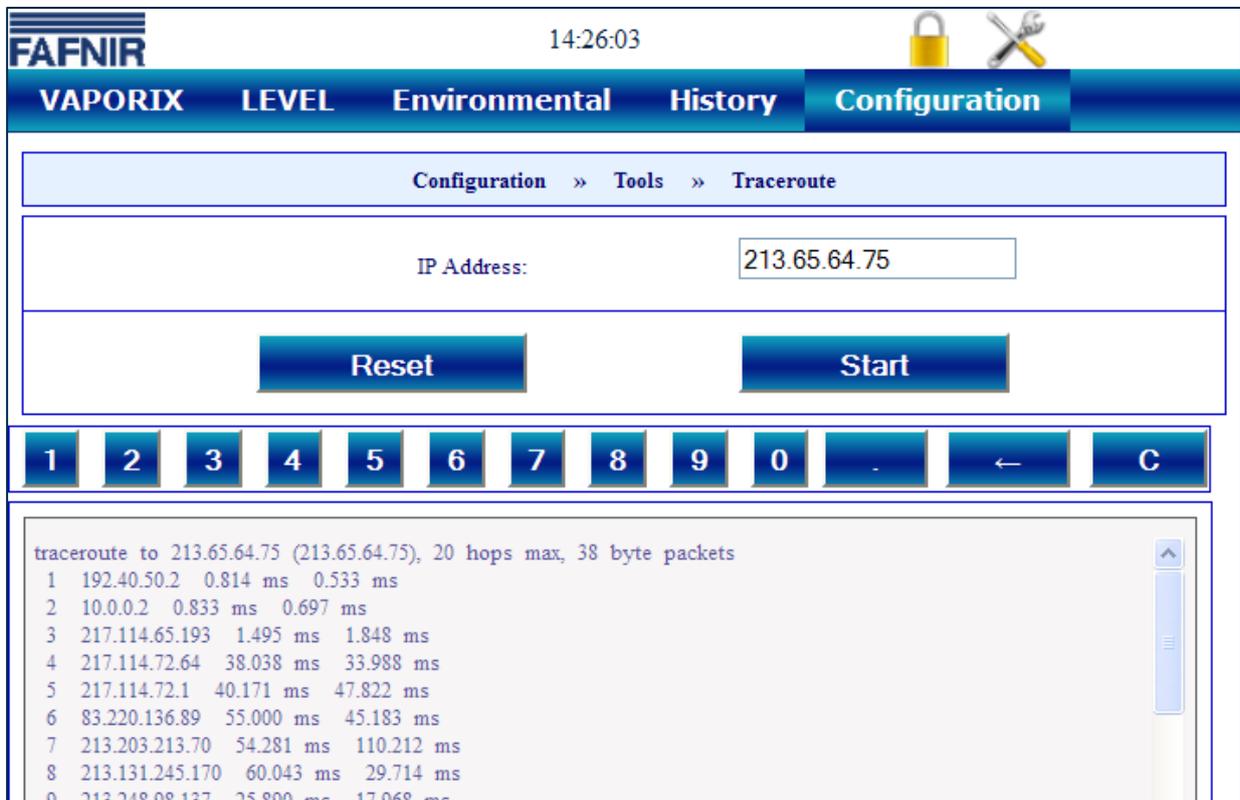


Figure 22: Tools – Ping

2.2.2 Traceroute

With the Traceroute tool, you can enter the destination address and then have the individual stations through which a packet passes to reach the destination address displayed (for an example, see the figure below).



Configuration » Tools » Traceroute

IP Address:

1 2 3 4 5 6 7 8 9 0 . ← C

```

traceroute to 213.65.64.75 (213.65.64.75), 20 hops max, 38 byte packets
 1 192.40.50.2  0.814 ms  0.533 ms
 2 10.0.0.2    0.833 ms  0.697 ms
 3 217.114.65.193  1.495 ms  1.848 ms
 4 217.114.72.64  38.038 ms 33.988 ms
 5 217.114.72.1  40.171 ms 47.822 ms
 6 83.220.136.89  55.000 ms 45.183 ms
 7 213.203.213.70 54.281 ms 110.212 ms
 8 213.131.245.170 60.043 ms 29.714 ms
 9 213.248.98.137 25.890 ms 17.968 ms
  
```

Figure 23: Tools – Traceroute

2.2.3 Name resolution

To determine whether the set DNS resolution is working properly, one of the available addresses can be resolved (for an example, see the figure below).



Configuration » Tools » Nslookup

destination:

```

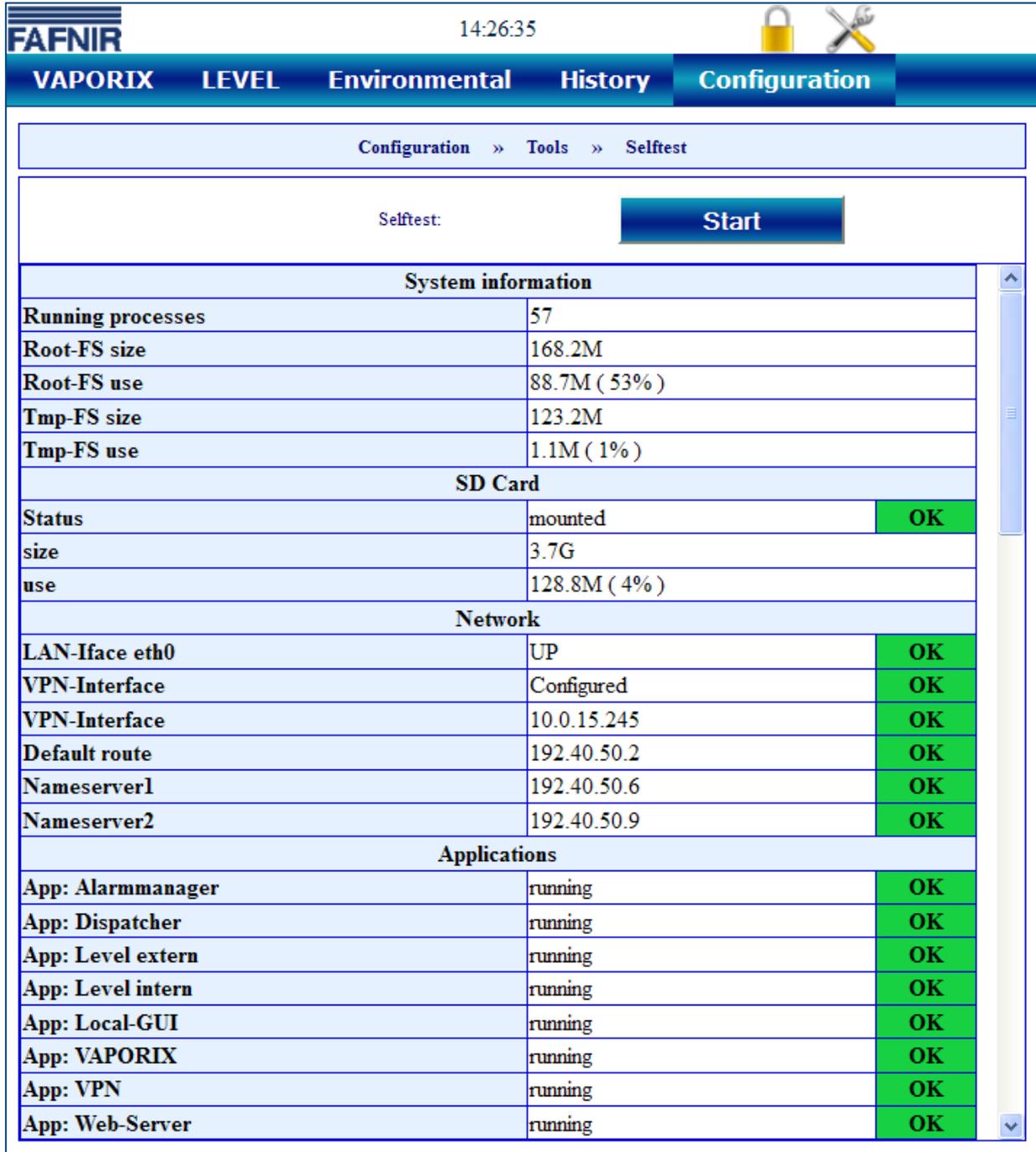
Server: 192.40.50.6
Address 1: 192.40.50.6 netmanager1vm.fafnir.de

Name: fafnir.de
Address 1: 217.114.74.210 fafnir01.nmmn.net
  
```

Figure 24: Tools – Name resolution

2.2.4 Self-test

In the self-test, a comprehensive system test is carried out and the results obtained are output in tabular form (for an example, see the figure below).



Configuration » Tools » Selftest

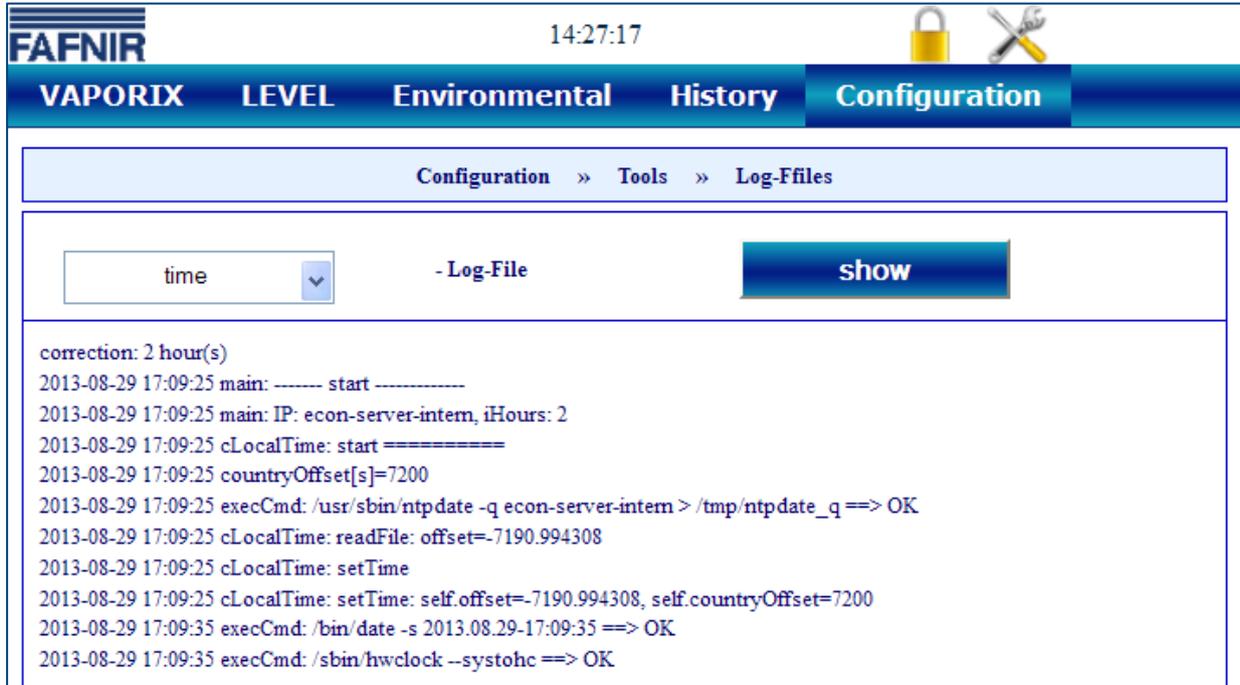
Selftest:

System information		
Running processes	57	
Root-FS size	168.2M	
Root-FS use	88.7M (53%)	
Tmp-FS size	123.2M	
Tmp-FS use	1.1M (1%)	
SD Card		
Status	mounted	OK
size	3.7G	
use	128.8M (4%)	
Network		
LAN-Iface eth0	UP	OK
VPN-Interface	Configured	OK
VPN-Interface	10.0.15.245	OK
Default route	192.40.50.2	OK
Nameserver1	192.40.50.6	OK
Nameserver2	192.40.50.9	OK
Applications		
App: Alarmmanager	running	OK
App: Dispatcher	running	OK
App: Level extern	running	OK
App: Level intern	running	OK
App: Local-GUI	running	OK
App: VAPORIX	running	OK
App: VPN	running	OK
App: Web-Server	running	OK

Figure 25: Tools – Self-test

2.2.5 Log files

The "Time" monitors time synchronisation, the "Watchdog" monitors the ongoing processes. The results are saved and can be output in the log files (for an example, see the figures below).



14:27:17

FAFNIR

VAPORIX LEVEL Environmental History Configuration

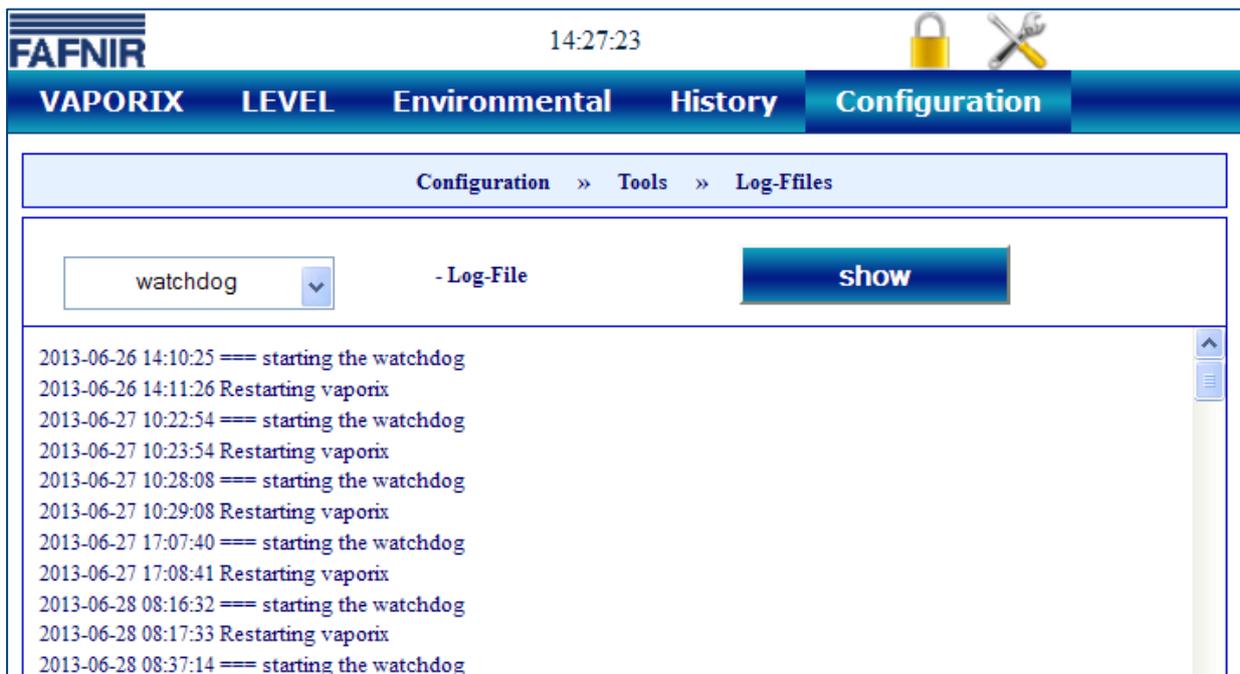
Configuration >> Tools >> Log-Ffiles

time - Log-File show

```

correction: 2 hour(s)
2013-08-29 17:09:25 main: ----- start -----
2013-08-29 17:09:25 main: IP: econ-server-intern, iHours: 2
2013-08-29 17:09:25 cLocalTime: start =====
2013-08-29 17:09:25 countryOffset[s]=7200
2013-08-29 17:09:25 execCmd: /usr/sbin/ntpdate -q econ-server-intern > /tmp/ntpdate_q ==> OK
2013-08-29 17:09:25 cLocalTime: readFile: offset=-7190.994308
2013-08-29 17:09:25 cLocalTime: setTime
2013-08-29 17:09:25 cLocalTime: setTime: self.offset=-7190.994308, self.countryOffset=7200
2013-08-29 17:09:35 execCmd: /bin/date -s 2013.08.29-17:09:35 ==> OK
2013-08-29 17:09:35 execCmd: /sbin/hwclock --systohc ==> OK
  
```

Figure 26: Tools – Log file "Time"



14:27:23

FAFNIR

VAPORIX LEVEL Environmental History Configuration

Configuration >> Tools >> Log-Ffiles

watchdog - Log-File show

```

2013-06-26 14:10:25 === starting the watchdog
2013-06-26 14:11:26 Restarting vaporix
2013-06-27 10:22:54 === starting the watchdog
2013-06-27 10:23:54 Restarting vaporix
2013-06-27 10:28:08 === starting the watchdog
2013-06-27 10:29:08 Restarting vaporix
2013-06-27 17:07:40 === starting the watchdog
2013-06-27 17:08:41 Restarting vaporix
2013-06-28 08:16:32 === starting the watchdog
2013-06-28 08:17:33 Restarting vaporix
2013-06-28 08:37:14 === starting the watchdog
  
```

Figure 27: Tools – Log file "Watchdog"

3 Remote access

3.1 Connection to the SECON-Server

3.1.1 Requirements

The connection of the user clients to the SECON-Server (see Figure 29) is established by a secure encrypted Internet connection (VPN Virtual Private Network).

- (1) For the encrypted Internet connection the **installation of VPN software OpenVPN** on the PC, mobile phone or tablet used (user clients) is necessary. OpenVPN is an Open Source software with GNU General Public License, see:



Technical Documentation SECON-X OpenVPN installation, art. no. 350199.

- (2) **Key and configuration files** are required, which are provided by the FAFNIR company.
- (3) For remote access, "Mozilla Firefox", "Opera", "Chrome" or "Safari" are the **preferred web browsers**.



Remote access is currently not possible with Internet Explorer.

3.1.2 Connection setup

- (1) Test connection / disconnection
 - Start the program "OpenVPN GUI" with administrator access rights. Then, the OpenVPN icon is displayed in the info area of the task bar.
 - Right-click on the OpenVPN icon and select "Connect" for connection or "Disconnect" for disconnection.

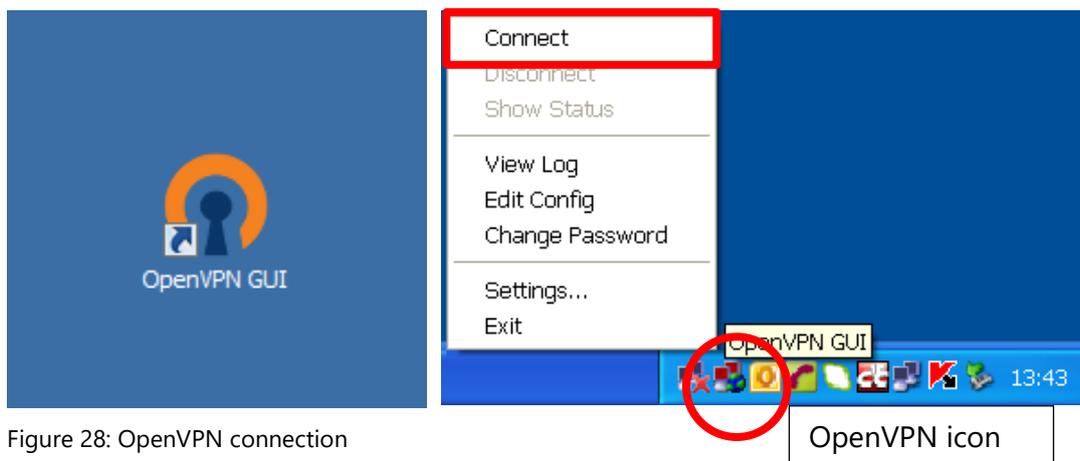


Figure 28: OpenVPN connection



After successful connection, the colour of the icon will change to green.

- (2) Start the browser

- (3) Enter the following address for the FAFNIR server: **http://10.0.8.1**
(for the user's own server, please enter the user's own address)
- (4) Confirm by pressing [Enter]



The profiles created will vary depending on the user rights (configuration is carried out on the SECON-Server). These grant certain users access to configured items (petrol stations).

- (5) In your browser, you will now see all the petrol stations released for you. Any petrol station with "Online" "Connect" status can be called up by clicking on "Connect".



Figure 29: SECON-Server home page

3.2 Connection to the SECON device

3.2.1 Connection setup

- (1) Any petrol station with "Online" "Connect" status can be called up by clicking on "Connect".
- (2) An access check for access to the petrol station is then carried out:

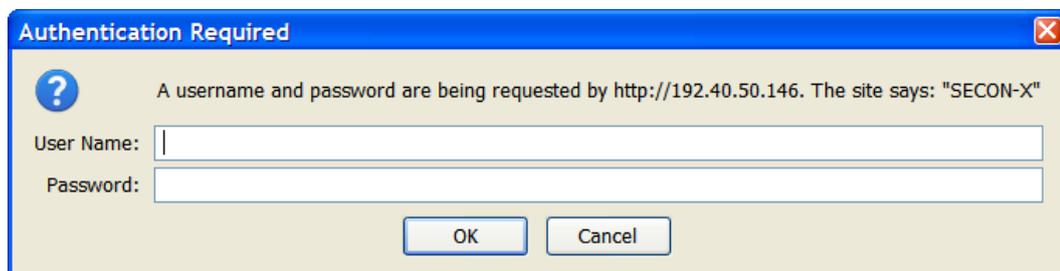


Figure 30: Verification on the SECON-Client

Please enter your user name and password here.
In the case of the FAFNIR server, this is "fafnir" and "fafnir22766"

If verification is successful, the system connects to the SECON-Client selected and the data recorded for the petrol station can be viewed via the browser.



The screenshot shows the SECON-X web interface. At the top, there is a navigation bar with tabs for VAPORIX, LEVEL, Environmental, History, and Information. The 'LEVEL' tab is active. Below the navigation bar, there is a sidebar with a 'LEVEL' button and a list of tanks: Report, Products, all Tanks, Tank 1 'Normal 92', Tank 3 'Normal 92', Tank 4 'Normal 92', and Tank 5 'Super 95'. The main content area displays a table titled 'LEVEL » all Tanks' with three columns: Tank, Measurement values, and Configuration. The table lists data for Tank 1, Tank 3, and Tank 4.

Tank	Measurement values	Configuration
1 Tank 1 Normal 92 4092.9 L	Volume 4092.9 L Volume TC 4014.5 L Ullage 5607.1 L Level 1071.5 mm Temperature 30.7 °C Water level 55.8 mm	Nominal vol. 10000 L Capacity 9700 L Safety vol. 300 L Product Normal 92 Comp. Temperature 15.0 °C
2 Tank 3 Normal 92 10318.9 L	Volume 10318.9 L Volume TC 10104.5 L Ullage 18781.1 L Level 940.5 mm Temperature 32.0 °C Water level 57.2 mm	Nominal vol. 30000 L Capacity 29100 L Safety vol. 900 L Product Normal 92 Comp. Temperature 15.0 °C
Tank 4	Volume 12840.2 L Volume TC 12613.3 L	Nominal vol. 40000 L Capacity 38800 L

Figure 31: Remote access to SECON-Client

4 List of figures

Figure 1: SECON-X system and components.....	1
Figure 2: Configuration - Settings.....	4
Figure 3: Configuration – Virtual keyboard	5
Figure 4: Configuration – Tank truck display	5
Figure 5: Settings – Language	5
Figure 6: Settings – Services.....	6
Figure 7: Settings – Alarm volume	6
Figure 8: Settings – Network – Automatic configuration.....	7
Figure 9: Settings – Network – Manual configuration.....	7
Figure 10: Settings – VPN.....	8
Figure 11: Settings – WLAN	8
Figure 12: Settings – 3G/UMTS	9
Figure 13: Settings – Screen Calibration	9
Figure 14: Settings – Via browser.....	10
Figure 15: Settings – Via browser – Confirmation.....	10
Figure 16: Configuration wizard.....	11
Figure 17: Configuration wizard – Step 1	11
Figure 18: Configuration wizard – Step 2.....	12
Figure 19: Configuration wizard – Step 3	13
Figure 20: Configuration wizard – Message confirming successful configuration	13
Figure 21: Configuration – Tools	14
Figure 22: Tools – Ping	14
Figure 23: Tools – Traceroute.....	15
Figure 24: Tools – Name resolution.....	15
Figure 25: Tools – Self-test.....	16
Figure 26: Tools – Log file “Time”	17
Figure 27: Tools – Log file “Watchdog”	17
Figure 28: OpenVPN connection	18
Figure 29: SECON-Server home page.....	19
Figure 30: Verification on the SECON-Client.....	19
Figure 31: Remote access to SECON-Client	20



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