MANUAL

ServiceGate Nano V3

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1. What do you need?

The ServiceGate VPN router Nano V3 was developed as part of the Remote Engineer solution.

Through the corresponding client software, you make a VPN connection to this router. Your computer is then ‘directly’ connected to the devices connected to the ServiceGate Nano V3. To configure and work with the router, you need the following:

1. **The ServiceGate Nano V3**
   The router comes standard with connectors for power and I/O, a network cable, and a Wi-Fi antenna.

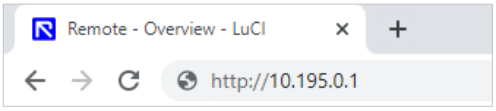
2. **A internet browser**
   You configure the ServiceGate Nano V3 with an internet browser. You can use any browser for this purpose - we recommend Google Chrome.

3. **A computer**
   This connects you to the router.

2. Connecting and logging in

First of all, you connect to the ServiceGate Nano V3 and log in. You do this as follows.

1. Connect the router to a power source of 8-36 VDC.
2. Connect the router to your computer via the LAN port using the network cable provided.
3. Go to your internet browser and enter the router's default IP address (10.195.0.1) or the IP address agreed with you.



4. Enter. The following login screen appears.

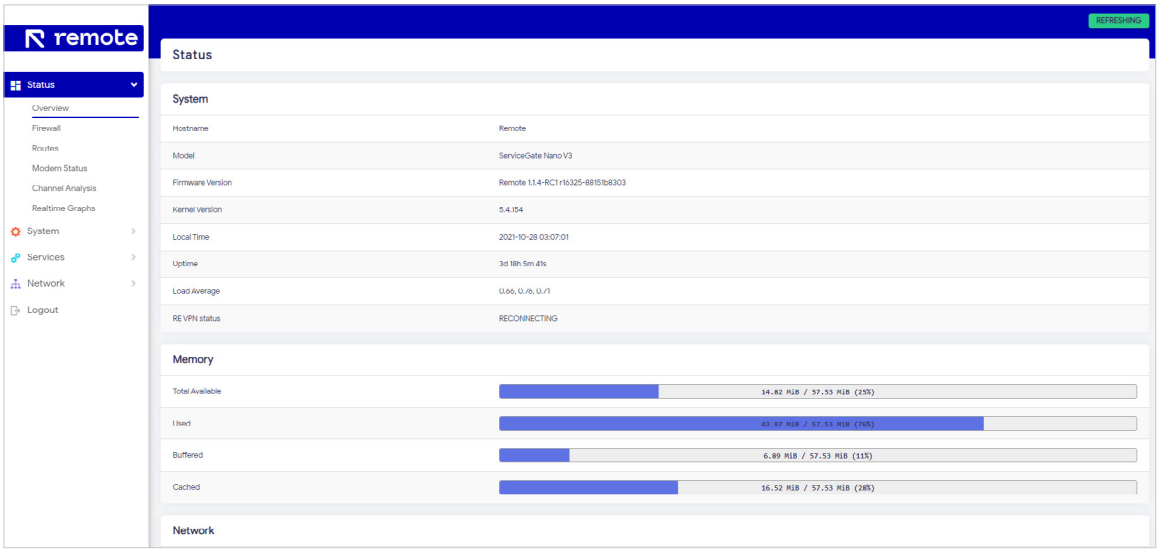
5. Now log in using the default username (Admin) and password (REAdmin) or the combination of username and password you set yourself.

3. Status menu

After logging in, you will enter the router's status menu. You can choose submenus here or go to one of the other menus (System, Services or Network). If you choose one of the other menus, a list of submenus opens there too.

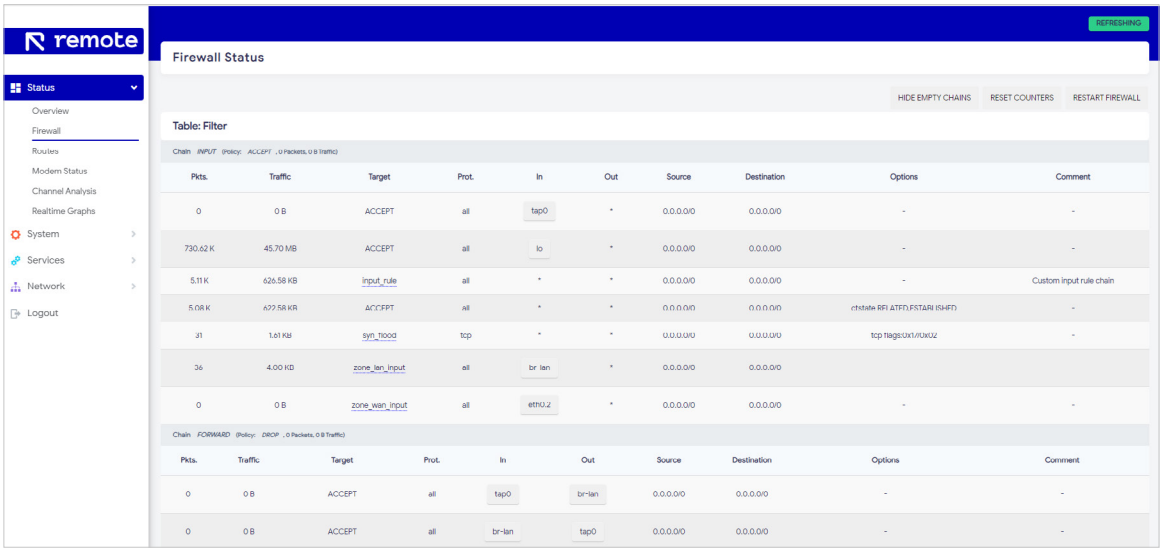
Overview

This overview screen shows information such as the version number of the firmware, available working memory and available networks and services.



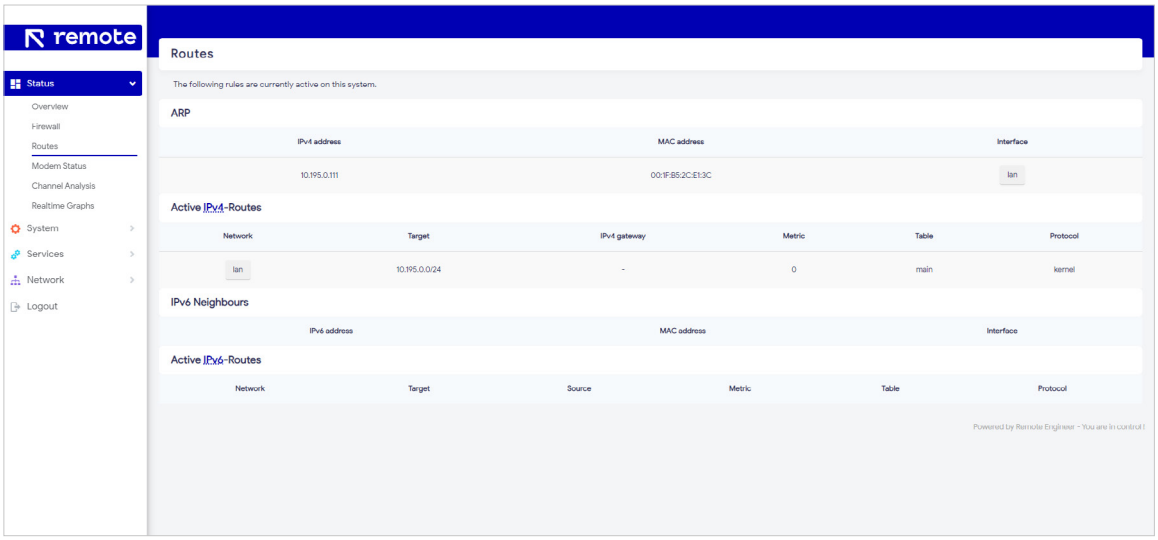
Firewall

This screen lists the active firewall rules and their associated counters. You can reset the counters; you can also do this by restarting the firewall.



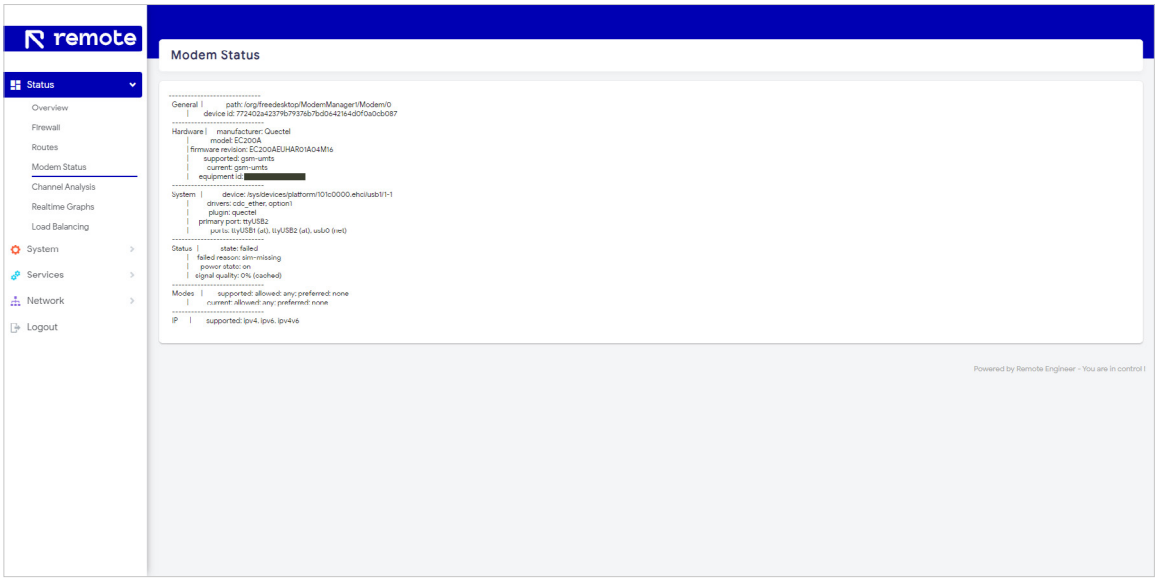
Routes

This screen shows the active router rules and the combinations of IP and MAC addresses found by the ServiceGate Nano V3.



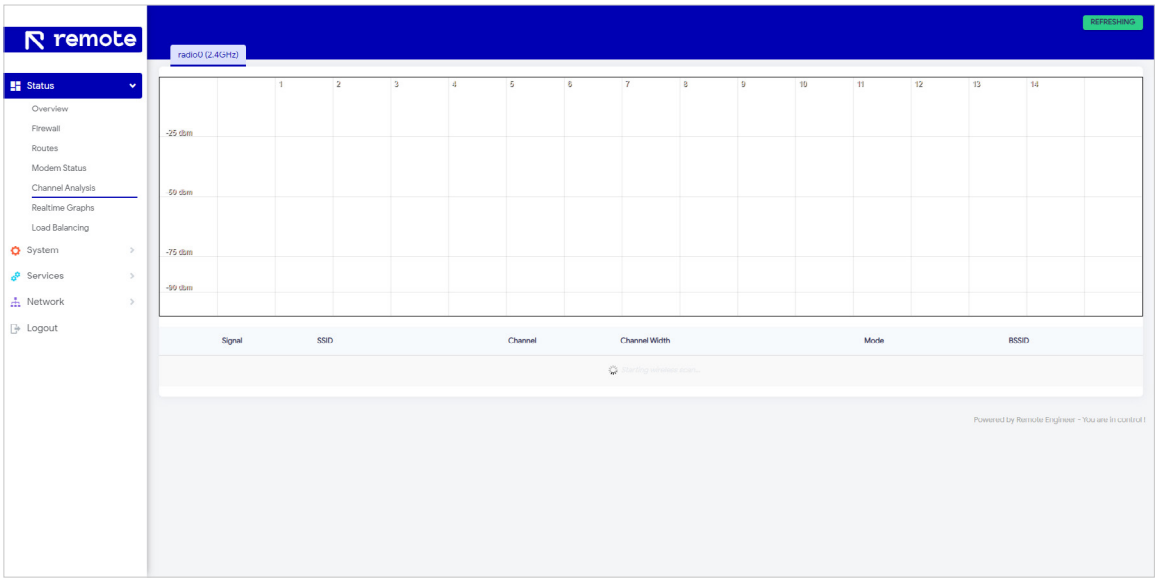
Modem Status

The modem status screen shows the status of the system, SIM card and modem hardware. Any error messages are also displayed here, for example if the SIM card is missing.



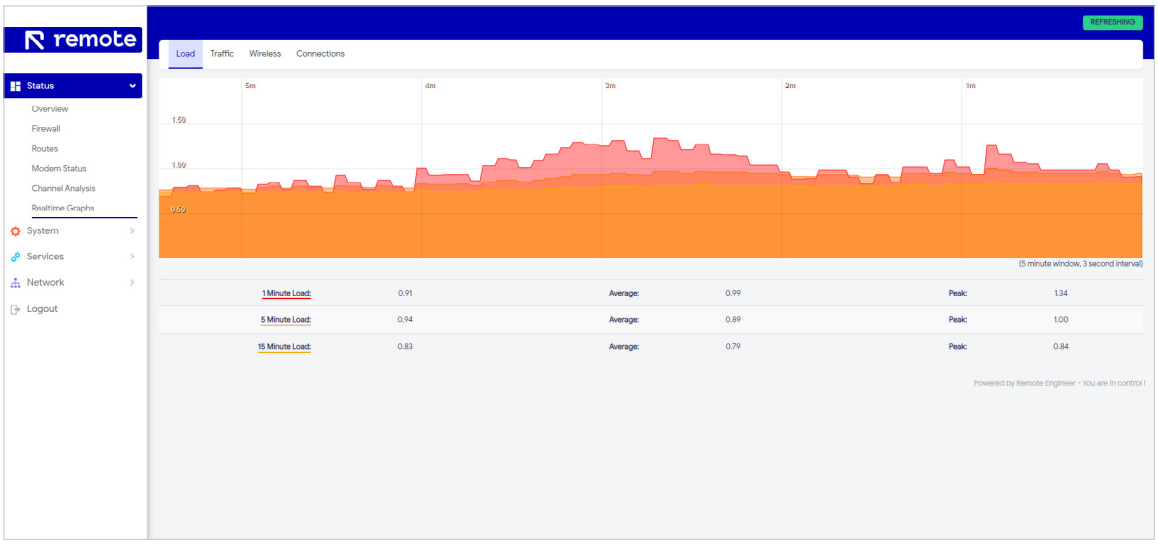
Channel Analysis

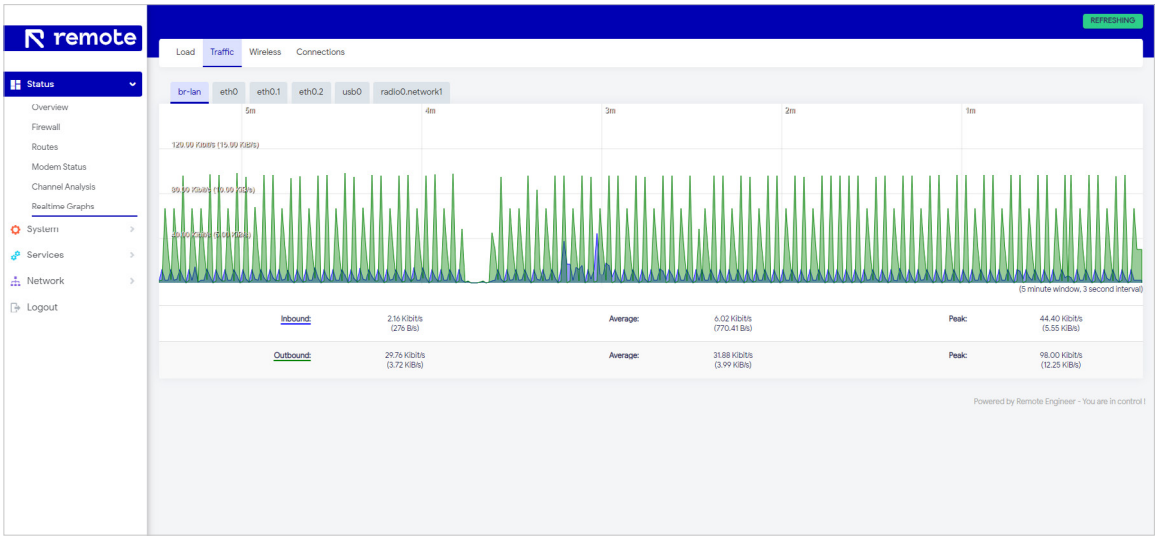
The channel analysis screen displays the current active Wi-Fi networks in your area, and the Wi-Fi network bands on which these networks are active.

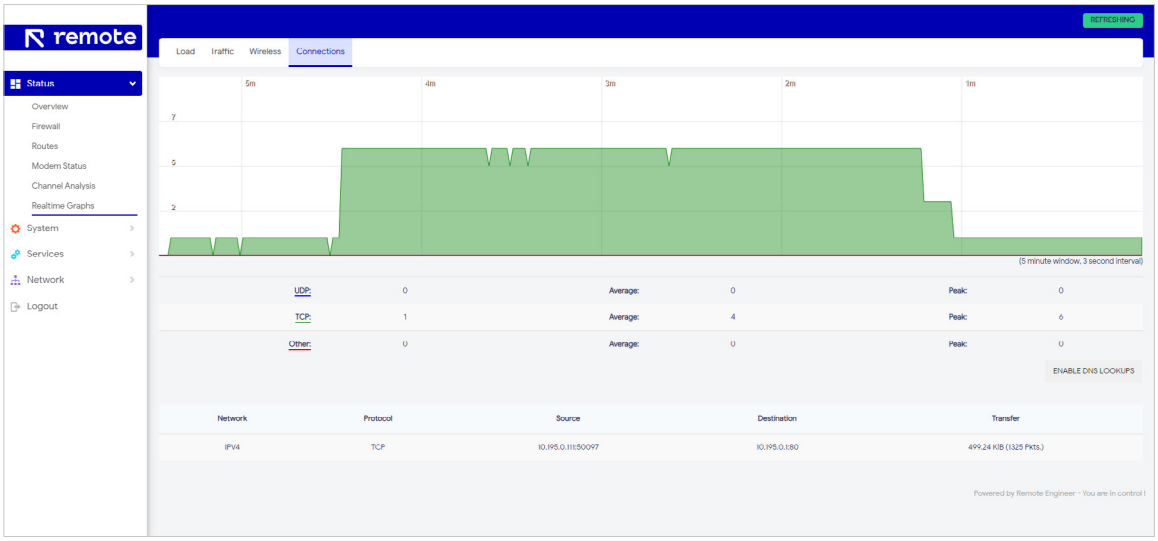


Realtime Graphs

The ServiceGate Nano V3 tracks the current load, the amount of data traffic and the systems involved in real time. In this submenu, you will find the corresponding real-time graphs.



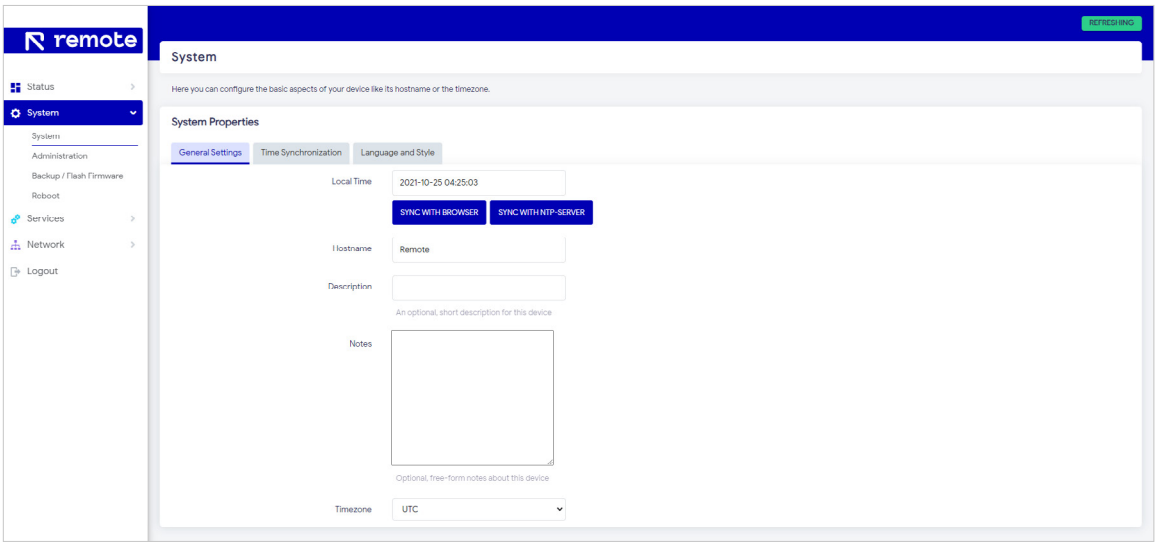

remote
Status
Overview
Firewall
Routes
Modem Status
Channel Analysis
Realtime Graphs
System
Services
Network
Logout
REFRESHING
Load
Traffic
Wireless
Connections
br-lan
eth0
eth0.1
eth0.2
usb0
radio0.network1
5m
4m
3m
2m
1m
(5 minute window, 3 second interval)
Inbound:
2.16 Kibit/s (276 B/s)
Average:
6.02 Kibit/s (770.41 B/s)
Peak:
44.40 Kibit/s (5.55 KiB/s)
Outbound:
29.76 Kibit/s (3.72 KiB/s)
Average:
31.88 Kibit/s (3.99 KiB/s)
Peak:
98.00 Kibit/s (12.25 KiB/s)
Powered by Remote Engineer - You are in control !

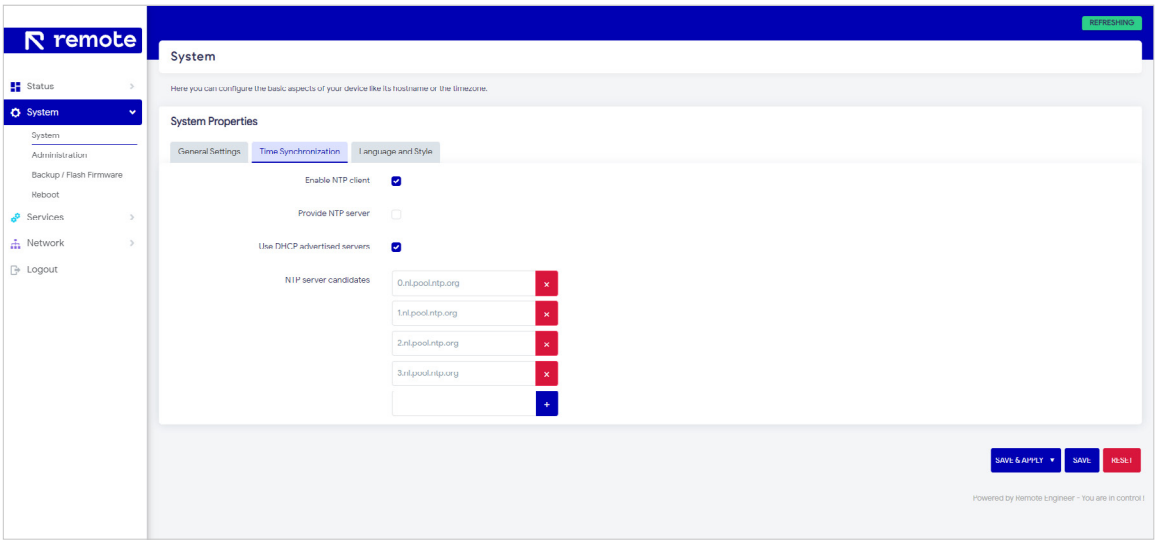

remote
Status
Overview
Firewall
Routes
Modem Status
Channel Analysis
Realtime Graphs
System
Services
Network
Logout
REFRESHING
Load
Traffic
Wireless
Connections
5m
4m
3m
2m
1m
7
5
2
(5 minute window, 3 second interval)
UDP:
0
Average:
0
Peak:
0
TCP:
1
Average:
4
Peak:
6
Other:
0
Average:
0
Peak:
0
ENABLE DNS LOOKUPS
Network
Protocol
Source
Destination
Transfer
IPV4
TCP
10.195.0.111:50097
10.195.0.1:80
499.24 KiB (1325 Pkts.)
Powered by Remote Engineer - You are in control !

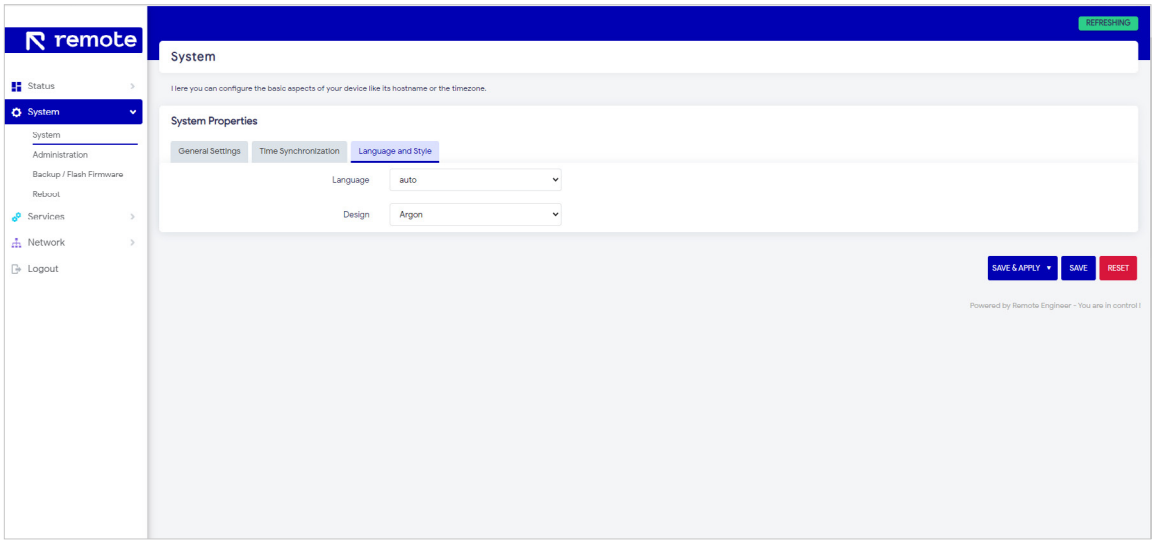
4. System menu

System

This submenu allows you to set some basic properties of the ServiceGate Nano V3, such as host-name and time zone.

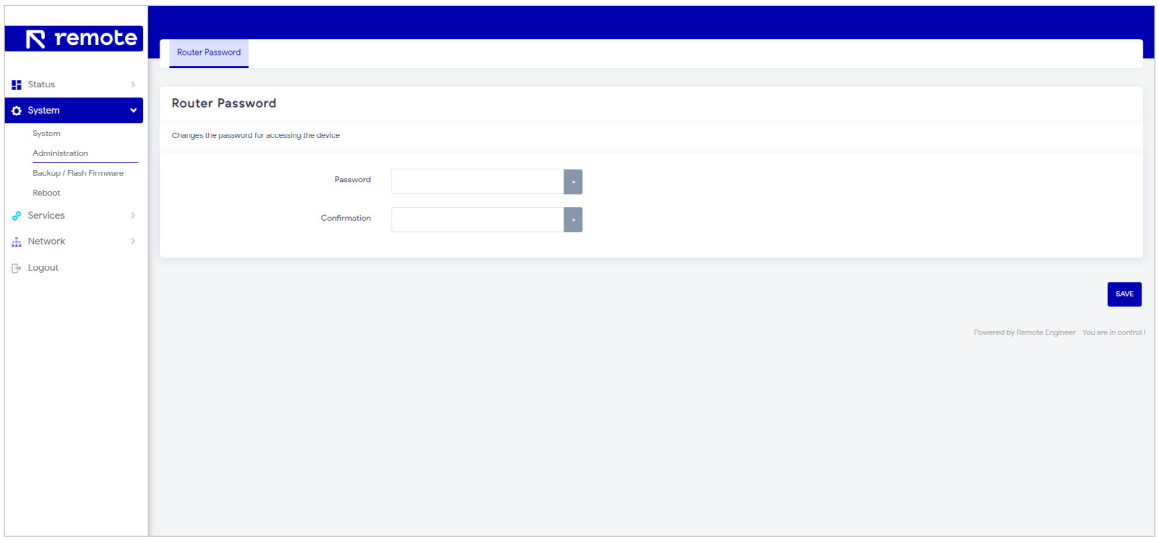






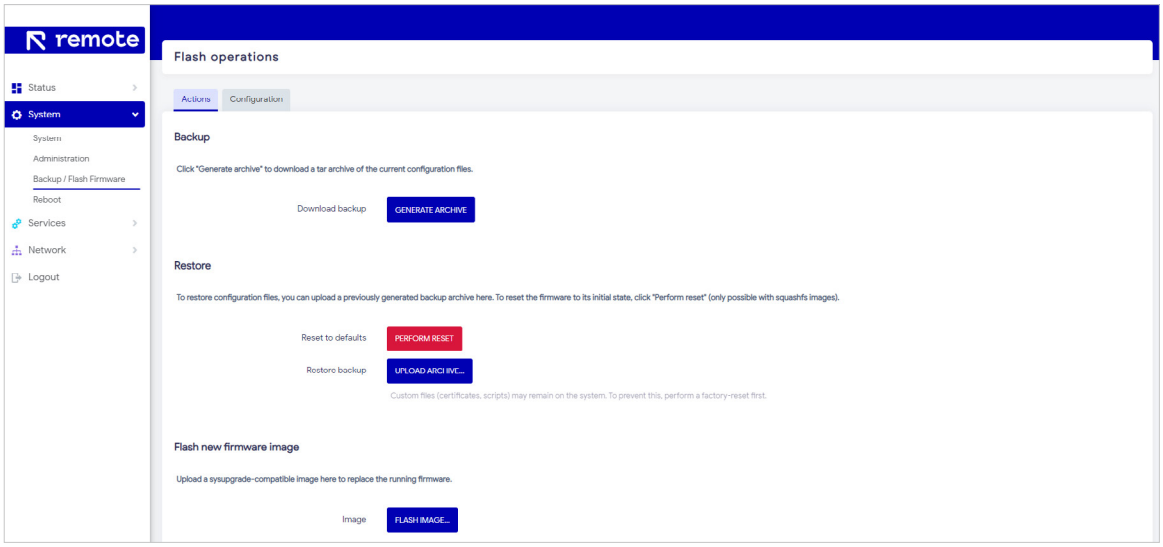
Administration

In this screen, you can change the admin user's password.

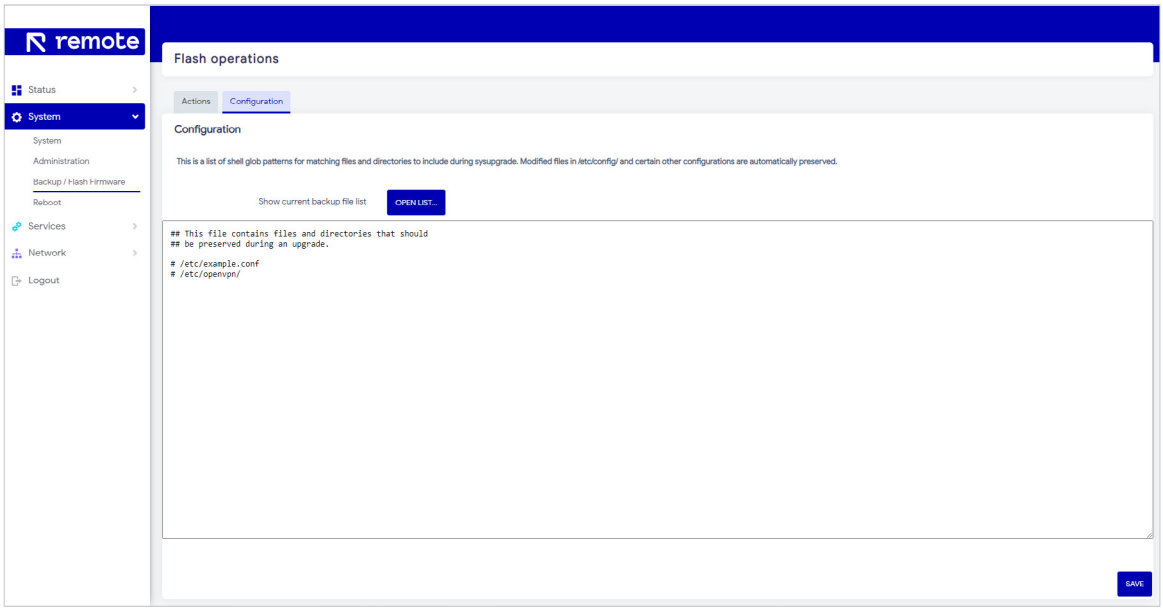


Backup / Flash Firmware

In the screen behind the ‘Actions’ tab, you can back up or restore all settings. You can also clear all settings here. The ‘flash new firmware image’ function allows you to update the ServiceGate Nano V3 with new software as soon as a new version of the firmware is available.

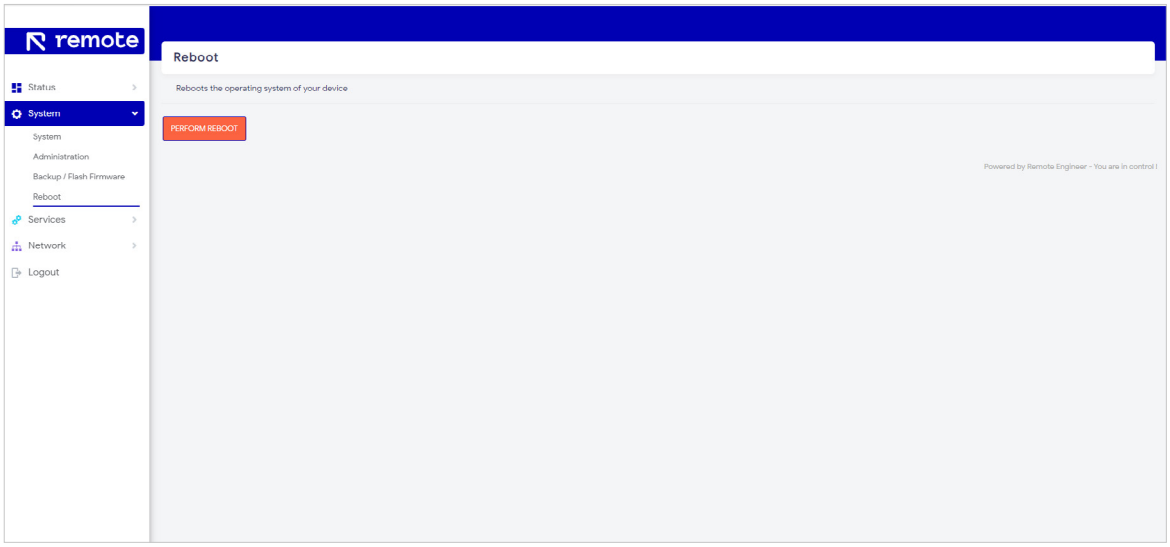


In the screen behind the ‘Configuration’ tab, you can specify which settings and files should be included when backing up.



Reboot

In this screen, issue the command to restart the ServiceGate Nano V3.

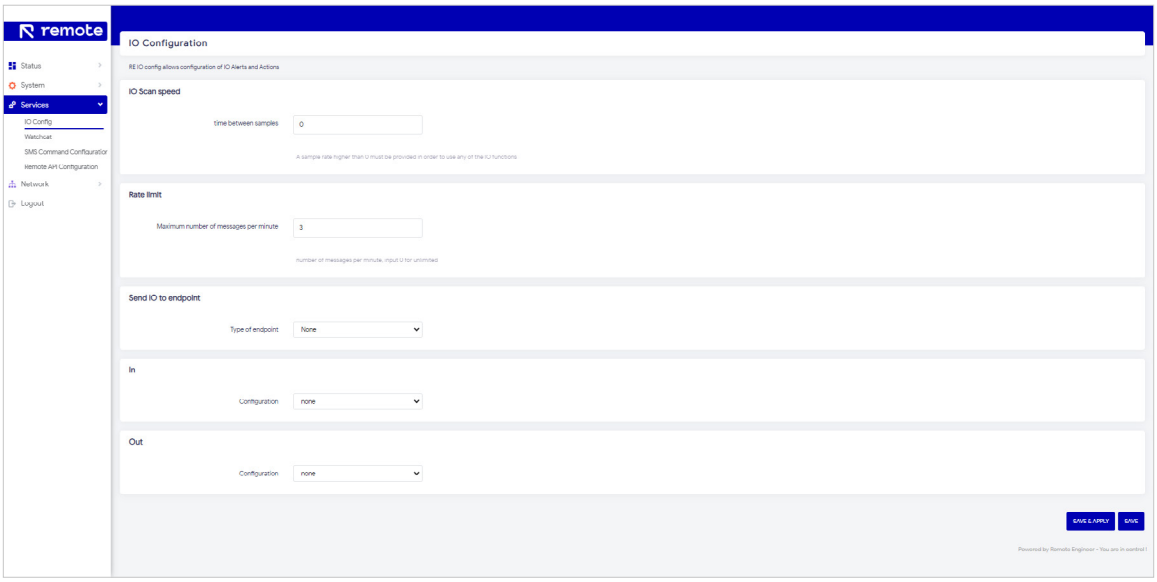


5. Services menu

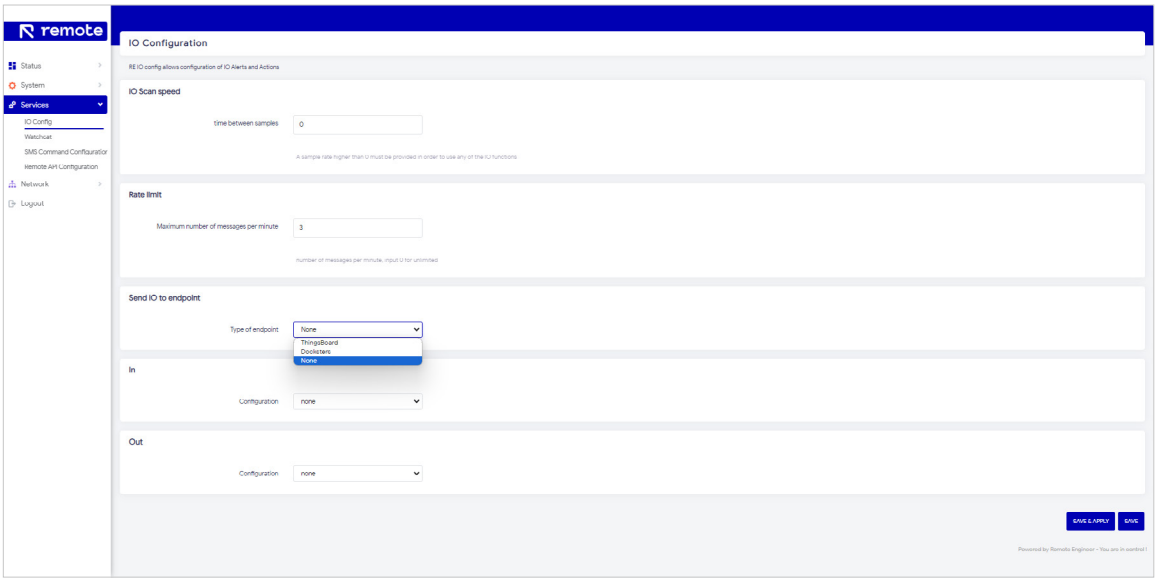
IO Config

In this screen, you can configure the IO functionality of the ServiceGate Nano V3. You activate the functionality by changing the ‘IO Scan speed’ from 0 to the number of desired seconds between each IO measurement.

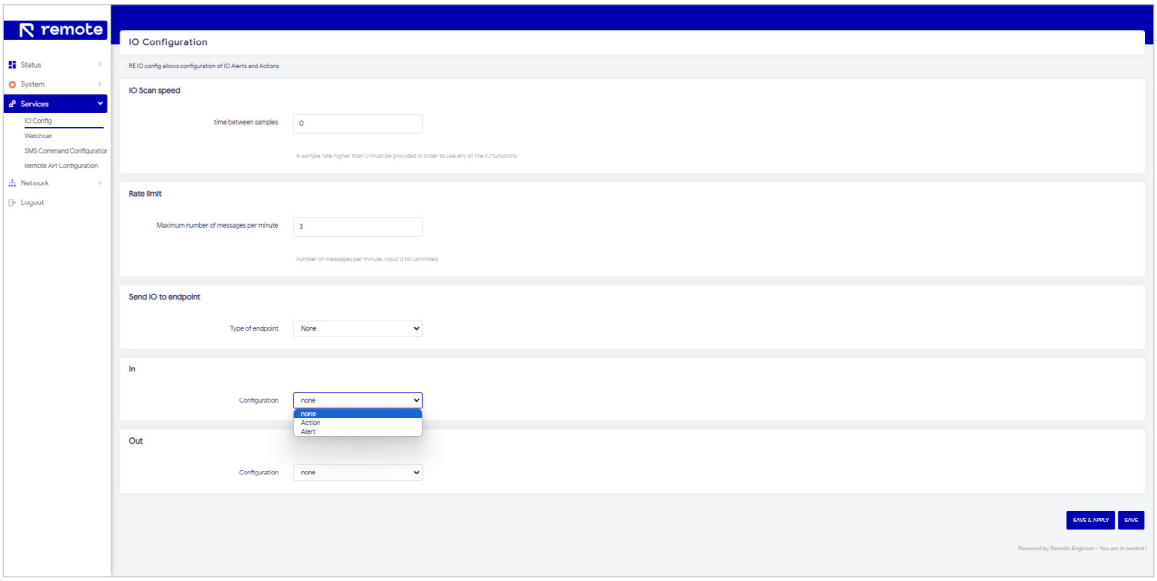
In the ‘Rate limit’ section, you can set the maximum number of messages per minute, defaulting to 3. If you enter 0 here, it represents an infinite number of messages per minute.



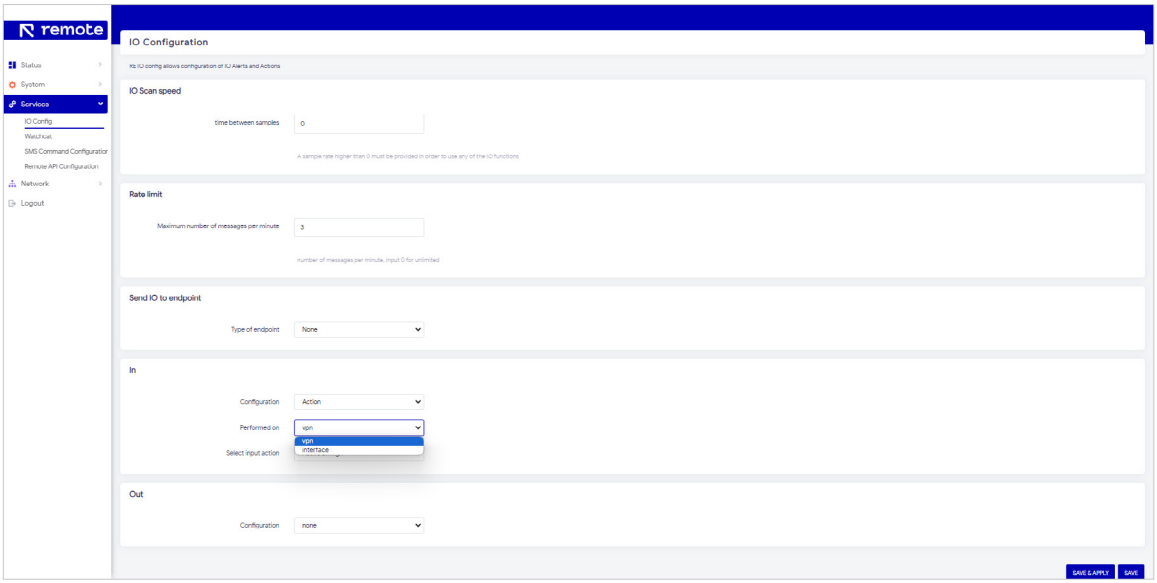
In the ‘Send IO to endpoint’ section, you can select an endpoint type to which the measured IO values should be sent.



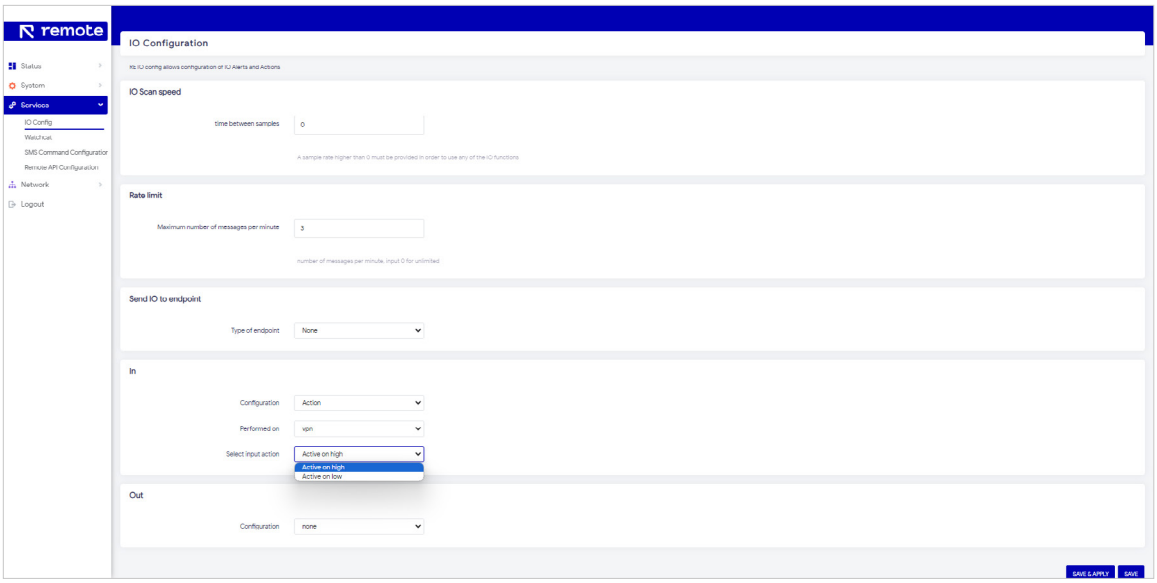
In the ‘In’ section, you can configure the input of the IO. You can choose between ‘Action’ and ‘Alert’.



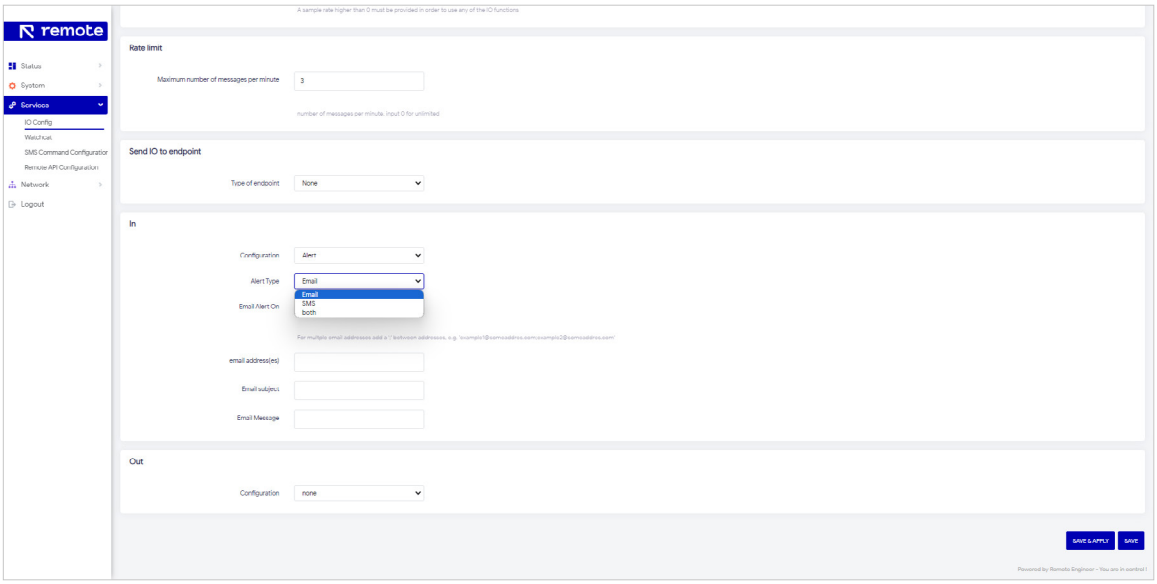
Select the ‘Action’ option, then choose whether the action should be applied to ‘vpn’ or ‘interface’.



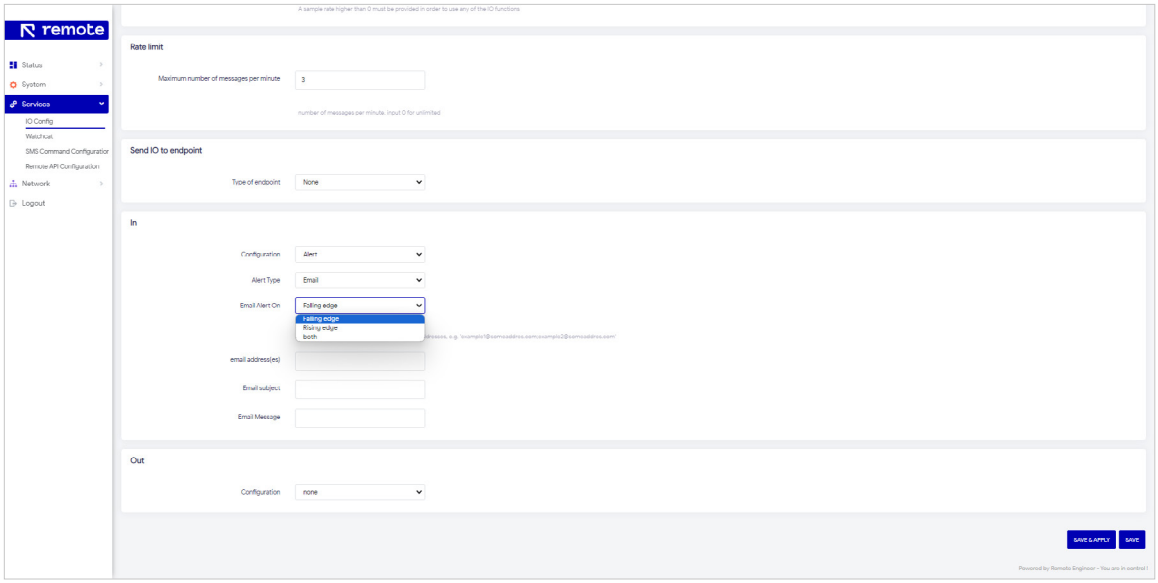
You then set whether the action should be executed (active) at high or low input.



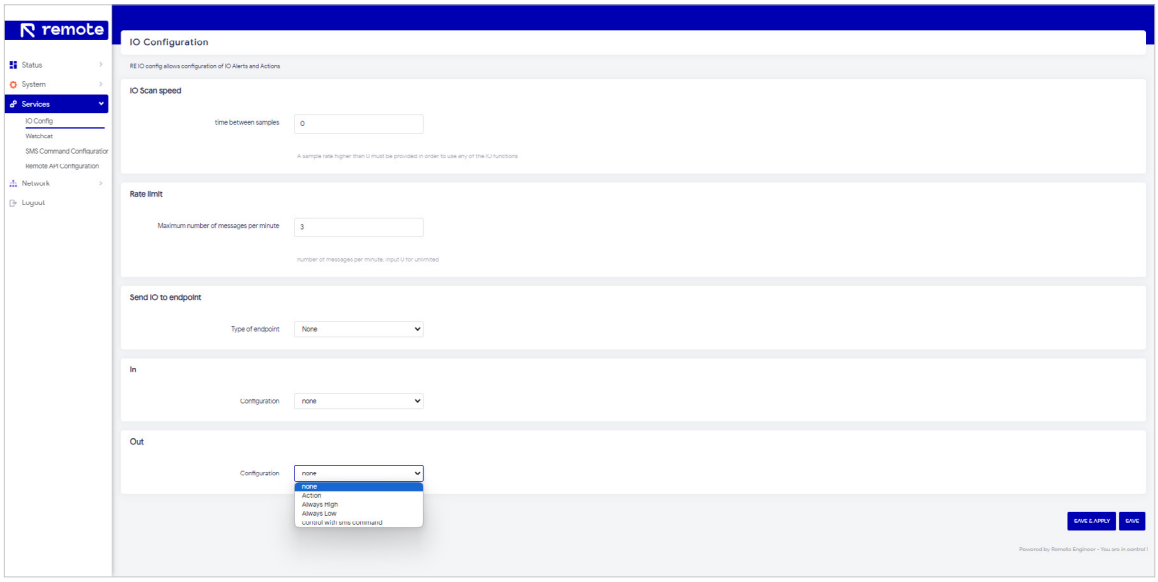
If you select the ‘Alert’ option, another configuration list appears. Here you select the notification type: ‘Email’, ‘SMS’ or ‘both’. If you choose ‘SMS’ or ‘both’, the ServiceGate Nano V3 must have a configured and active modem or LTE connection.



Having selected the notification type, you select when the notification should be sent in case of ‘Falling edge’, ‘Rising edge’ or ‘both’.

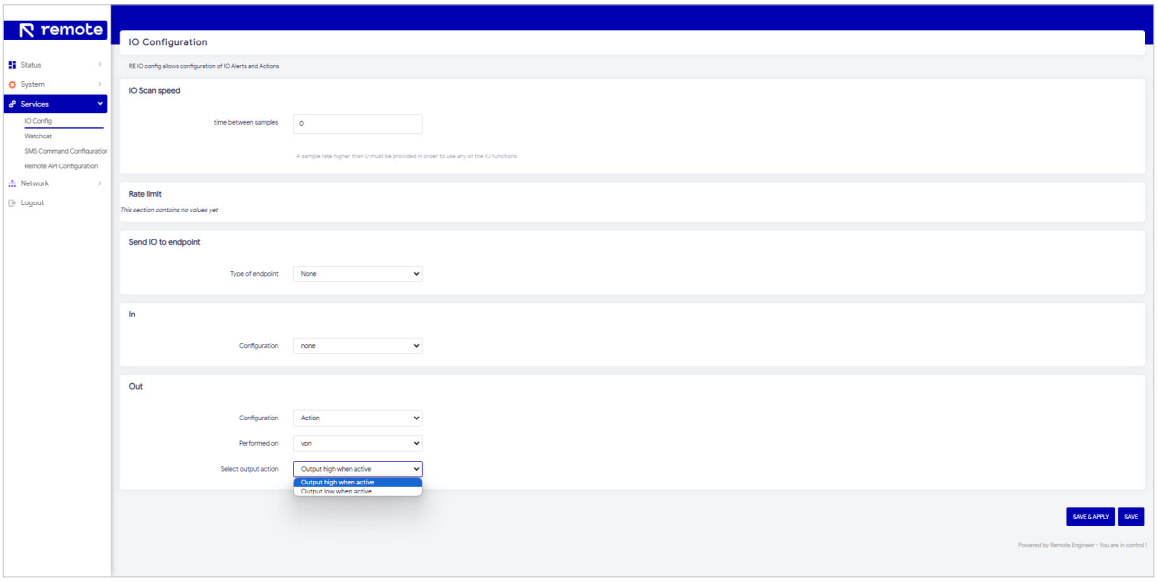


In the ‘Out’ section, you can select one of the following five options: ‘none’, ‘Action’, ‘Always High’, ‘Always Low’ or ‘control with SMS command’.



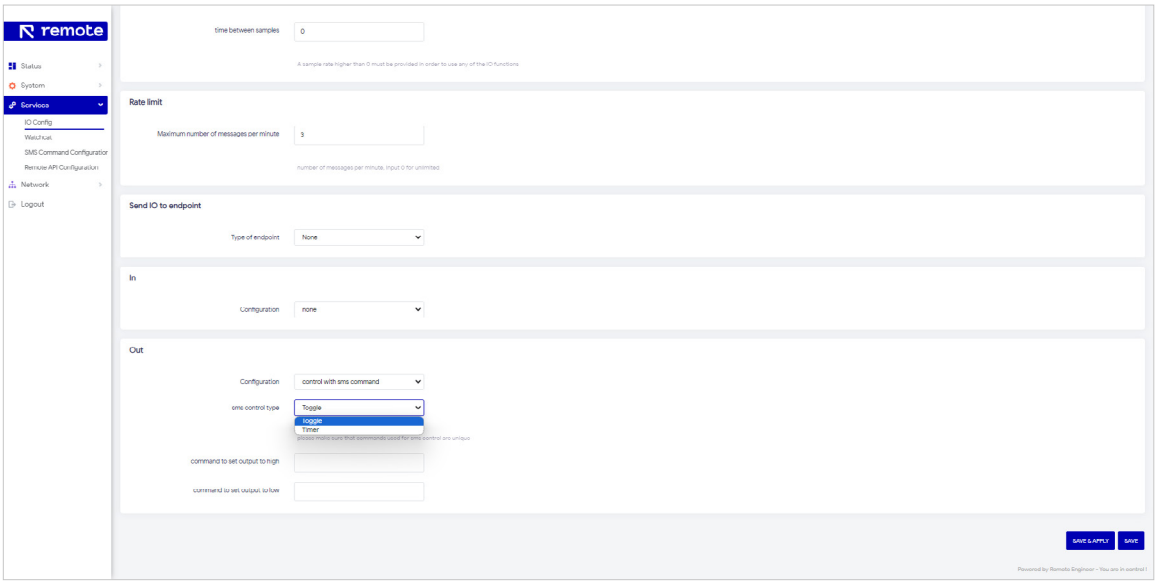
If you select the ‘Action’ option, then, as in the ‘In’ section, you choose whether the action should be applied to ‘vpn’ or ‘interface’.

You then set whether the output should be high or low when the VPN or interface is active.



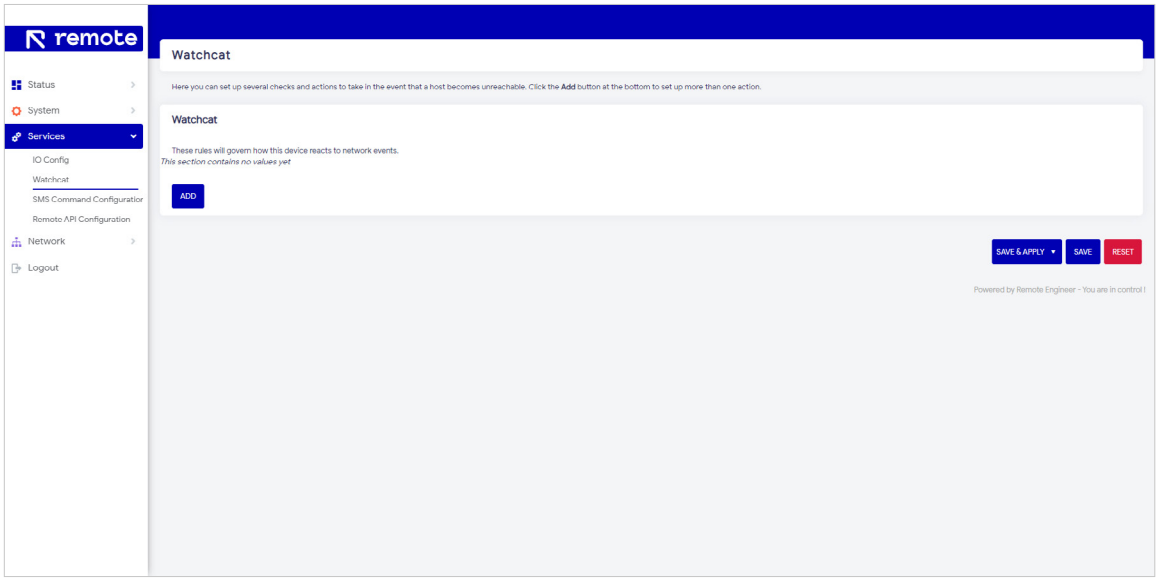
You can also configure the output for SMS control. To use SMS control, the ServiceGate Nano V3 must have a configured and active modem or LTE connection.

Having selected SMS control, you can then set the control type: ‘Toggle’ or ‘Timer’. If you choose ‘Toggle’, you can configure two commands: for deciding the output for high and low.

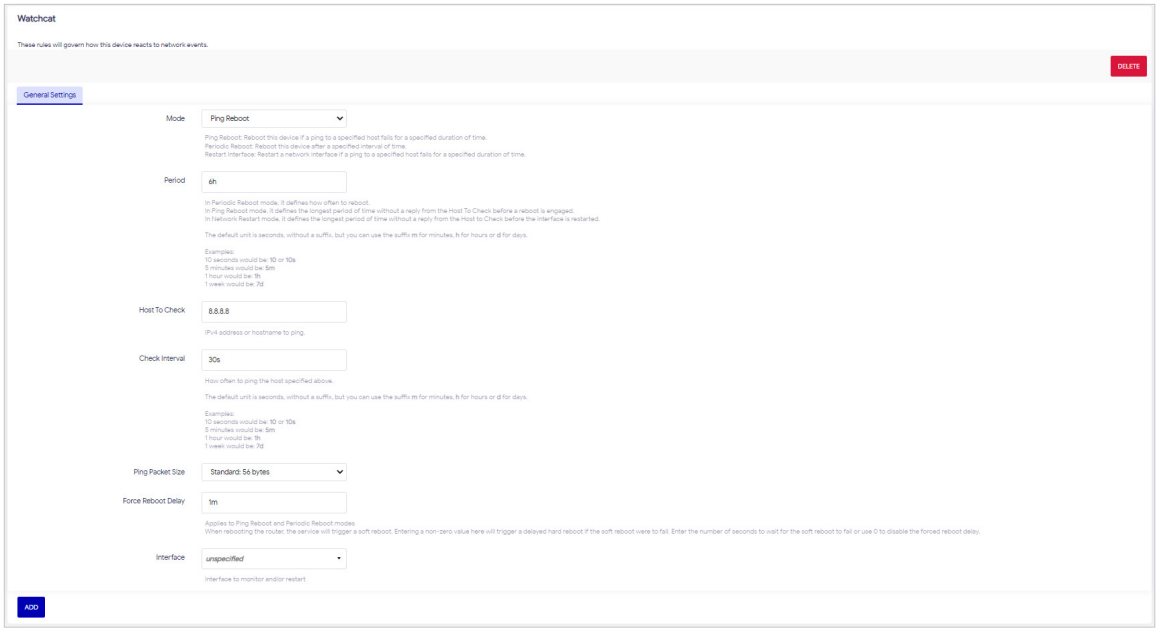


Watchcat

In this screen, you can set how long the internet connection should be disconnected before the ServiceGate Nano V3 is rebooted. By default, this option is disabled.



The ‘Add’ button allows you to add configuration options.



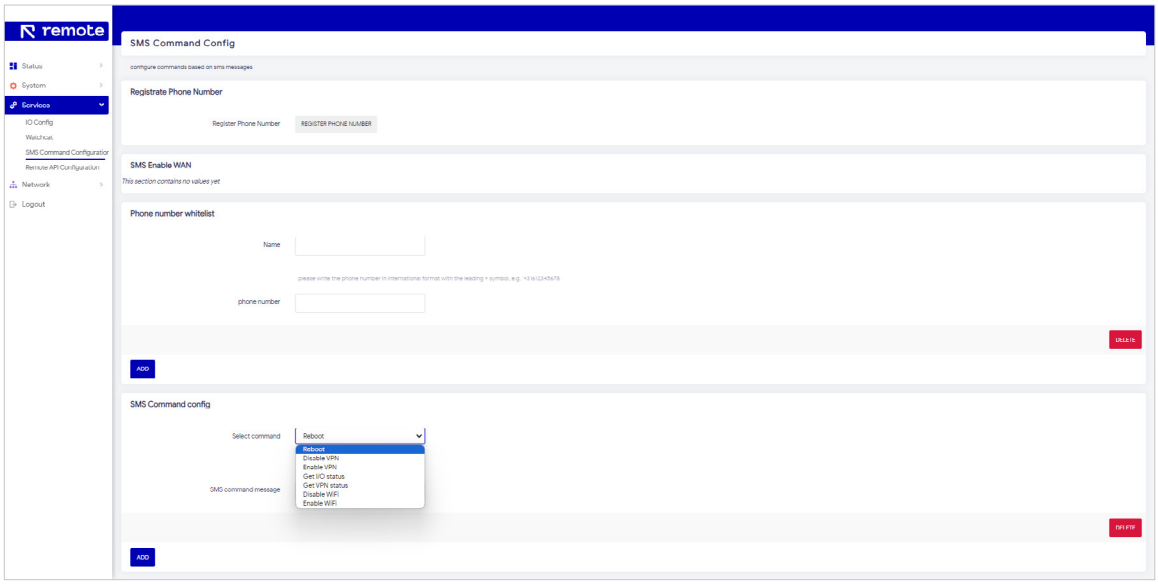
SMS Command Configuration

In this screen, you can enter various SMS commands to be executed by the ServiceGate Nano V3. To use SMS commands, the ServiceGate Nano V3 must have a configured and active modem or LTE connection.

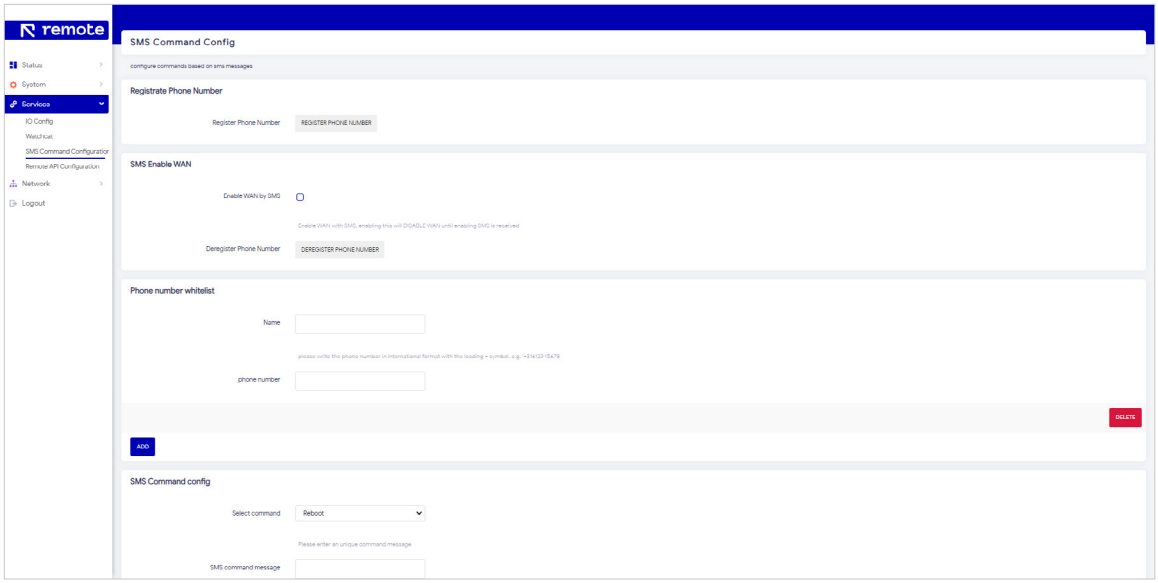
Clicking on the ‘Register Phone Number’ button will link the SIM card to the router and further complete the ‘SMS Enable WAN’ section. To see the full section after registering the SIM card, refresh the page. Due to SMS communication, it may take a few minutes to see the full section. In this section, you can activate and deactivate the router’s WAN connection from the user portal: you decide whether the ServiceGate Nano V3 is online or offline.

You can also configure various commands to be executed by the router in this screen. Once you have selected the desired command, you can configure a message to be executed by the ServiceGate Nano V3 when the router has received the message.

You can see this in the ‘SMS Command Config’ screen before the SIM card is registered:

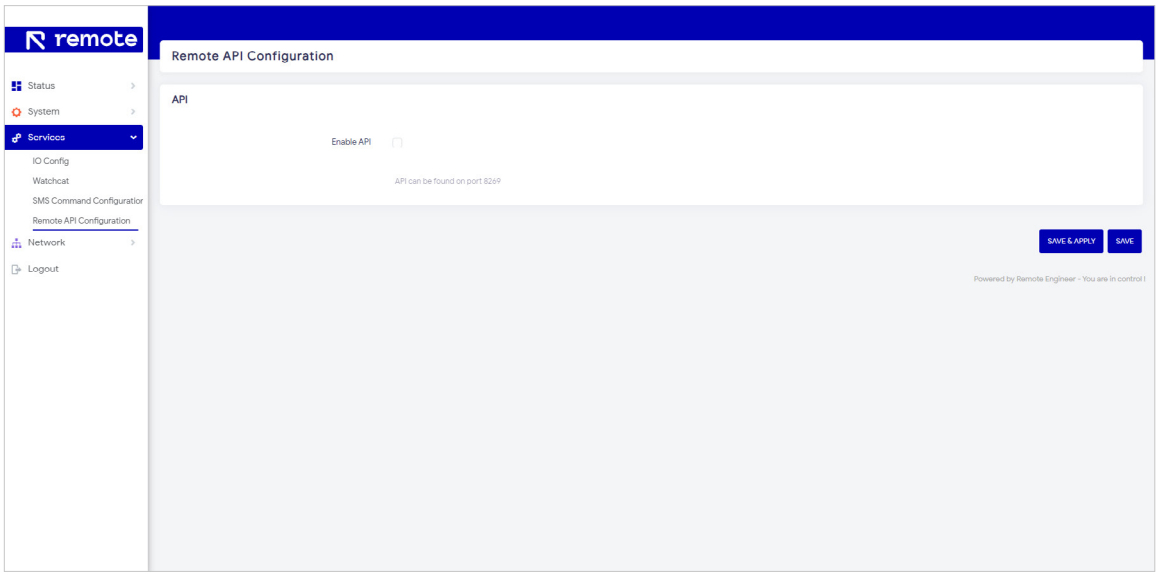


You will see this in the ‘SMS Command Config’ screen when the SIM card is registered and the ‘SMS Enable WAN’ section is filled in:



Remote API Configuration

You activate the API by checking the ‘Enable API’ box in this screen. Once the API is enabled, you can access it via the ServiceGate Nano V3’s IP address and port 8269.



API commands

The API allows you to retrieve data about the ServiceGate V3 and send commands to the router.

API 'get' commands

Commands for mobile connection information

> Signal information
Command: Get 10.195.0.1:8269/api/v1/get/mobile/signal
Example JSON-output: {"signal_strength":"-75","quality":"Fair"}

> Sim status information
Command: Get 10.195.0.1:8269/api/v1/get/mobile/simstate
Example JSON-output: {"sim":"unlocked"}

The output can also be an error message with information about why the requested information cannot be given. Example: { "error": "sim not inserted"}

> Provider information
Command: Get 10.195.0.1:8269/api/v1/get/mobile/provider
Example JSON-output: {"mode":"automatic","format":"long format alphanumeric","operator":"KPN","network":"4G/LTE"}

The output can also be an error message with information about why the requested information cannot be given. Example: { "error": "sim not inserted"}

> > Status information related to mobile connection Command
Command: Get 10.195.0.1:8269/api/v1/get/mobile/connection
Example JSON-output: {"connection":"connected"}

The output can also be an error message with information about why the requested information cannot be given. Example: { "error": "sim not inserted"}

> The modem IMEI number
Command: Get 10.195.0.1:8269/api/v1/get/mobile/imei
Example JSON-output: {"imei":"123456789123456"}

> The IP address of the current data connection
Command: Get 10.195.0.1:8269/api/v1/get/mobile/ip
Example JSON-output: {"ip":"12.123.12.123"}

> All information on the mobile connection
Command: Get 10.195.0.1:8269/api/v1/get/mobile/all

Commands for network information

> The MAC address of the WAN interface
Command: Get 10.195.0.1:8269/api/v1/get/network/wanmac
Example JSON-output: {“mac”:”ab:cd:ef:12:34:56”}

> The MAC address of the LAN interface
Command: Get 10.195.0.1:8269/api/v1/get/network/lanmac
Example JSON-output: {“mac”:”ab:cd:ef:12:34:56”}

> Route information
Command: Get 10.195.0.1:8269/api/v1/get/network/routeinfo
Example JSON-output: {“route”:”Kernel IP routing table Destination Gateway Genmask Flags Metric Ref Use Ifacedefault 89-200-67-189.m 0.0.0.0 UG 3 0 0 wwan010.8.0.0 * 255.255.0.0 U 0 0 0 tap010.195.0.0 * 255.255.255.0 U 0 0 0 br-lan89.200.67.184 * 255.255.255.248 U 3 0 0 wwan089.200.67.189 * 255.255.255.255 UH 3 0 0 wwan0”}

> The IP address of the WAN interface
Command: Get 10.195.0.1:8269/api/v1/get/network/wanip
Example JSON-output: {“wan”:”eth1 Link encap:Ethernet HWaddr ab:cd:ef:12:34:56 inet addr:12.123.123.123 UP BROADCAST MULTICAST MTU:1500 Metric:1 RX packets:0 errors:0 dropped:0 overruns:0 frame:0 TX packets:0 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:0 (0.0 B) TX bytes:0 (0.0 B) Interrupt:4 “}

> The IP address of the LAN interface
Command: Get 10.195.0.1:8269/api/v1/get/network/lanip
Example JSON-output: {“lan”:”br-lan Link encap:Ethernet HWaddr ab:cd:ef:12:34:56 inet addr:10.195.0.1 Bcast:10.195.0.255 Mask:255.255.255.0 UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:4445 errors:0 dropped:531 overruns:0 frame:0 TX packets:2733 errors:0 dropped:0 overruns:0 carrier:0 colli sions:0 txqueuelen:1000 RX bytes:782955 (764.6 KiB) TX bytes:650187 (634.9 KiB)”}

> All network information
Command: Get 10.195.0.1:8269/api/v1/get/network/all

Commands for Wi-Fi network information

> The wifi SSID
Command: Get 10.195.0.1:8269/api/v1/get/wifi/ssid
Example JSON-output: {“ssid”:”RemoteEngineer”}

> Radio status information
Command: Get 10.195.0.1:8269/api/v1/get/wifi/radiostate
Example JSON-output: {“radiostate”:”disabled”}

> All Wi-Fi network information
Command: Get 10.195.0.1:8269/api/v1/get/wifi/all

Remote-VPN network information command

> The VPN connection status
Command: Get 10.195.0.1:8269/api/v1/get/remote/vpn
Example JSON-output: {“revpn”:”CONNECTED”}

Command to obtain all the above information

> Command: Get 10.195.0.1:8269/api/v1/get/all

API ‘post’ commands

> Sending a text message
Command: Post 10.195.0.1:8269/api/v1/sendsms

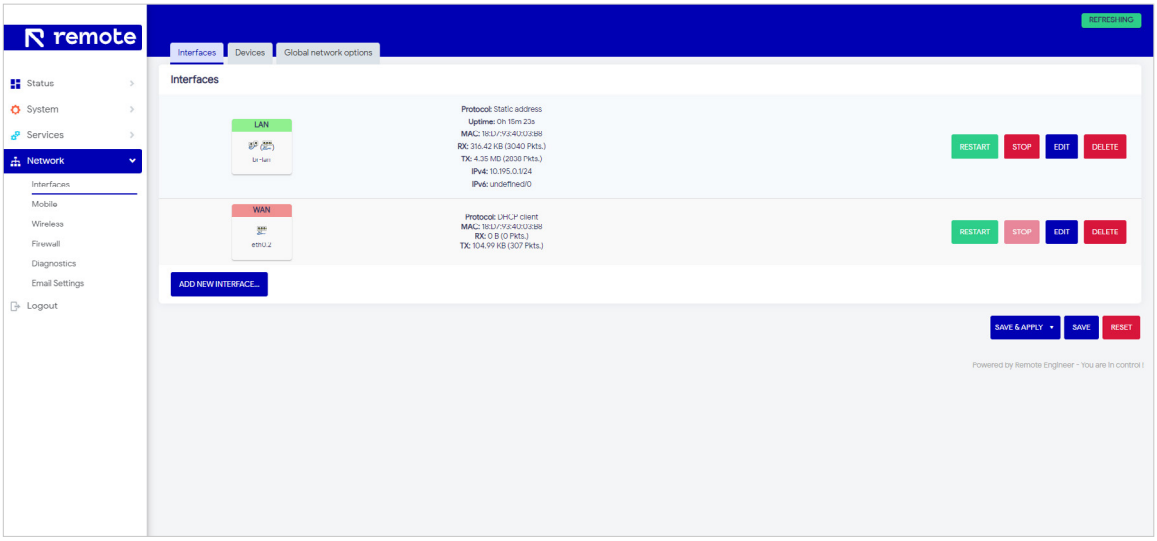
The body of the post message must contain the following fields:
- ‘number’: the number of the receiver
- ‘message’: the message to be sent

SMS command example: {“number”:”+31612345678”,”message”:”test”}

6. Netwerk menu

Interfaces

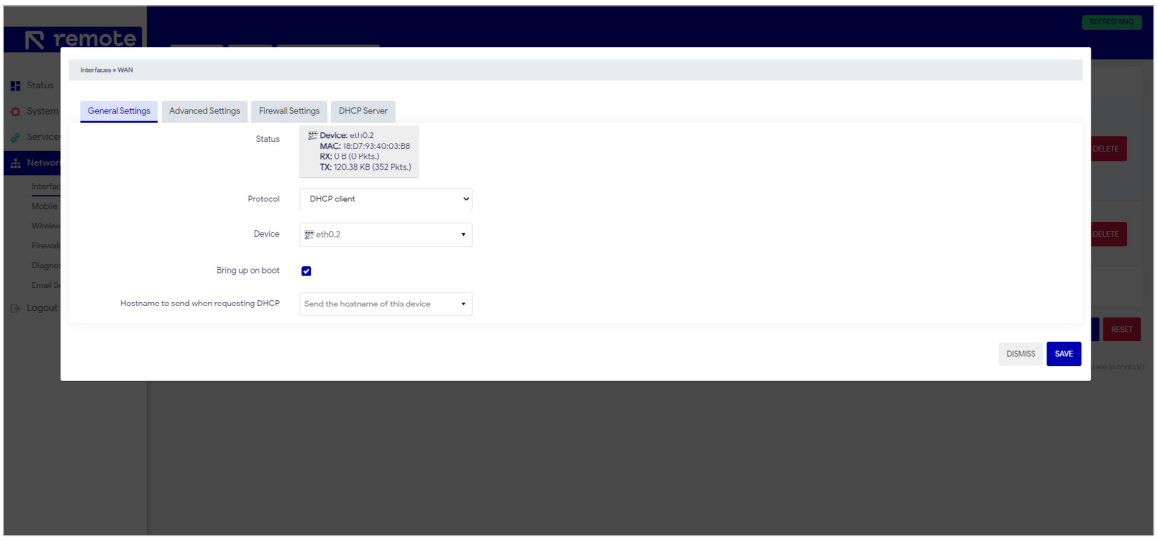
This submenu provides an overview of the various functions of the ServiceGate Nano V3. You can immediately see which interfaces there are, how much data has been consumed and how long the interface has been active.



By default, the ServiceGate Nano V3 is configured with the most common settings. If you want to view or change the settings of an interface, just select the relevant function. You can also disable, start, or delete an interface. CAUTION: We do not recommend disabling the LAN interface

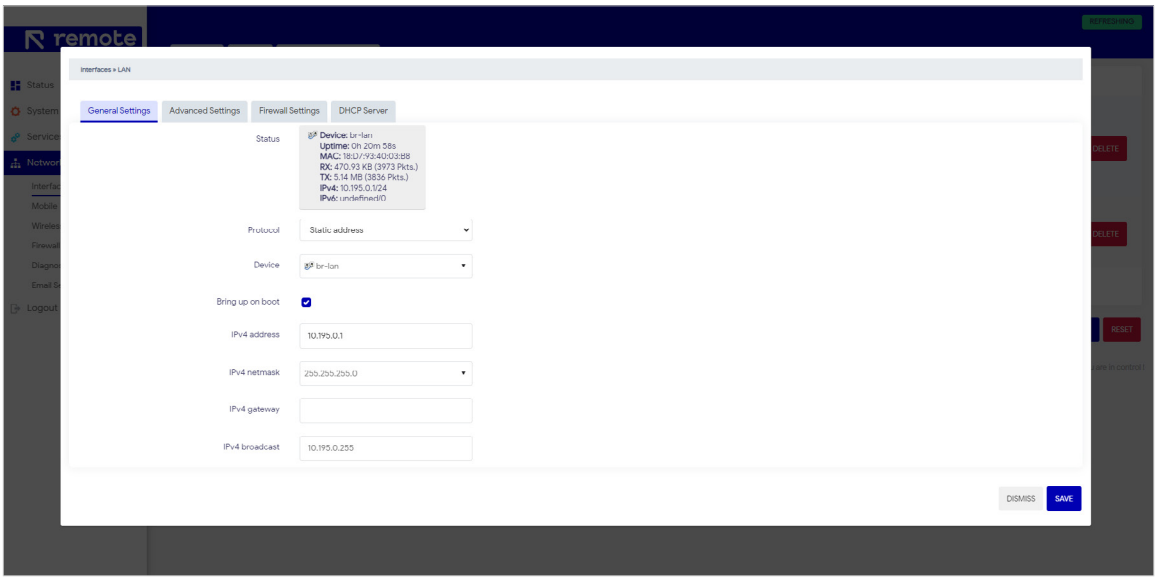
Changing the WAN interface

Clicking on the ‘EDIT’ button of the WAN interface will take you to the relevant configuration screen. Here you can select the desired protocol to set up how the WAN port of the ServiceGate Nano V3 should work. The options and settings depend on the protocol selected.



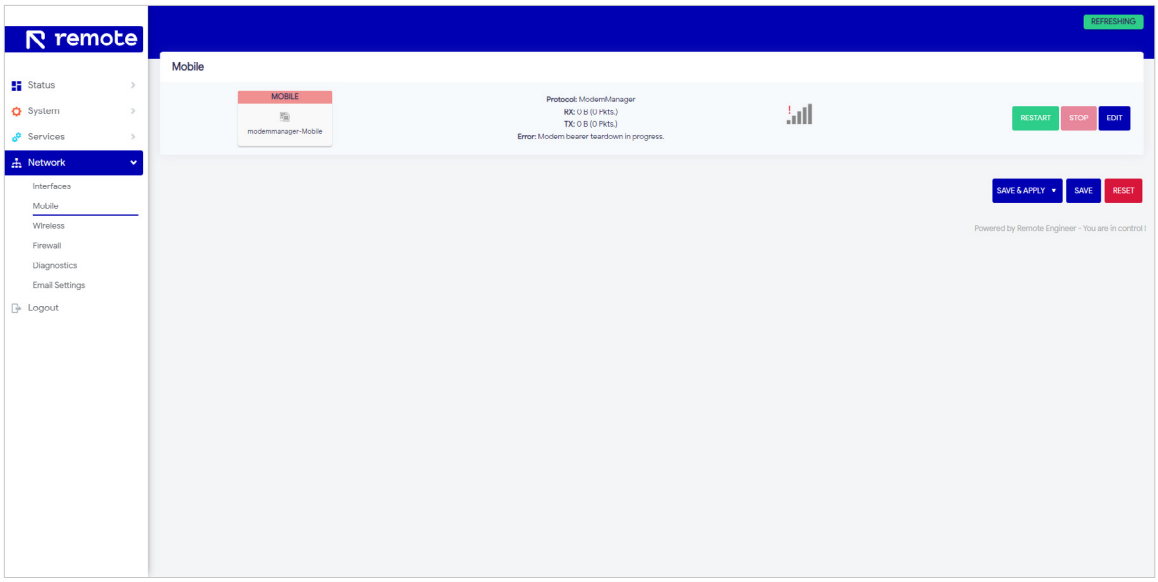
Changing the LAN interface

If you click on the ‘EDIT’ button of the LAN interface, you will enter the corresponding configuration screen. Here you can set how the LAN port of the ServiceGate Nano V3 should work and specify whether the router should serve as a DHCP server for connected devices.

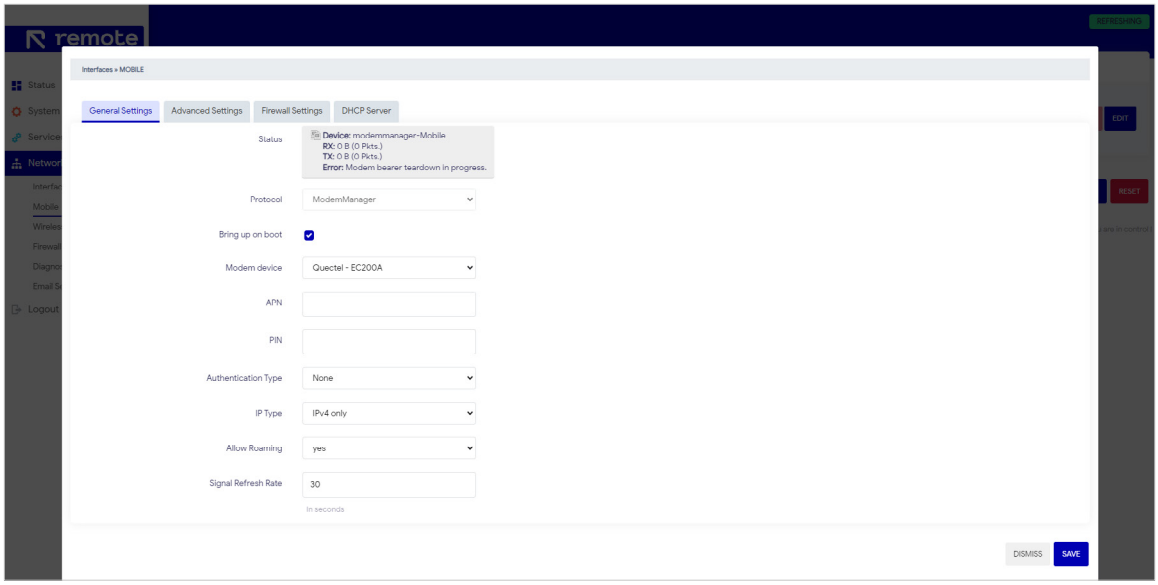


Mobile

This screen shows an overview of the mobile connection and the status of the connection. To set up a mobile connection, insert a SIM card in the SIM card tray of the router and power up the router (again).

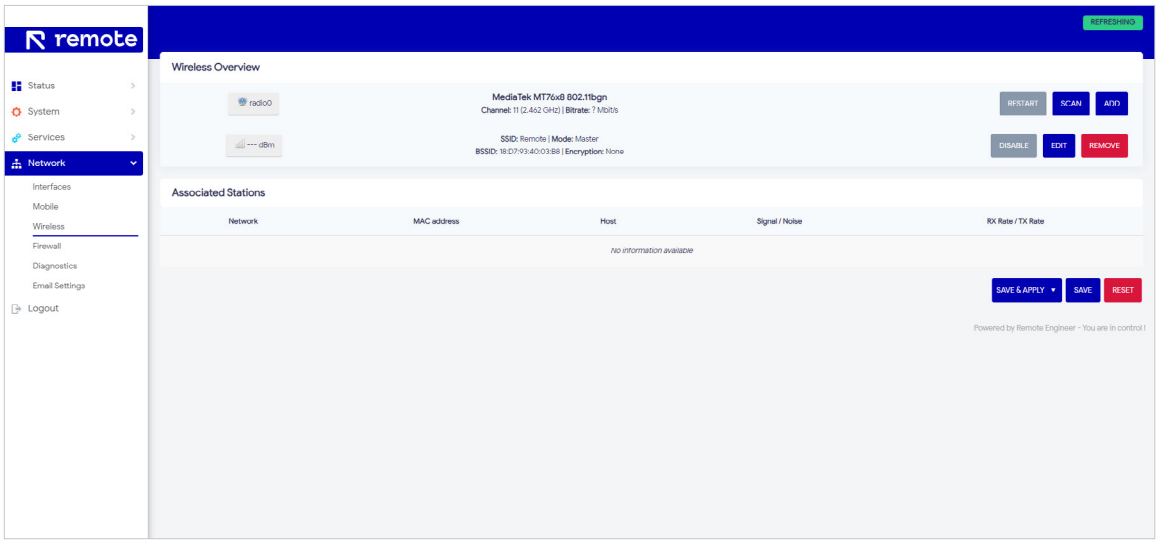


Clicking on the ‘EDIT’ button will take you to the screen where you can enter additional provider-specific information for setting up a mobile connection if necessary.

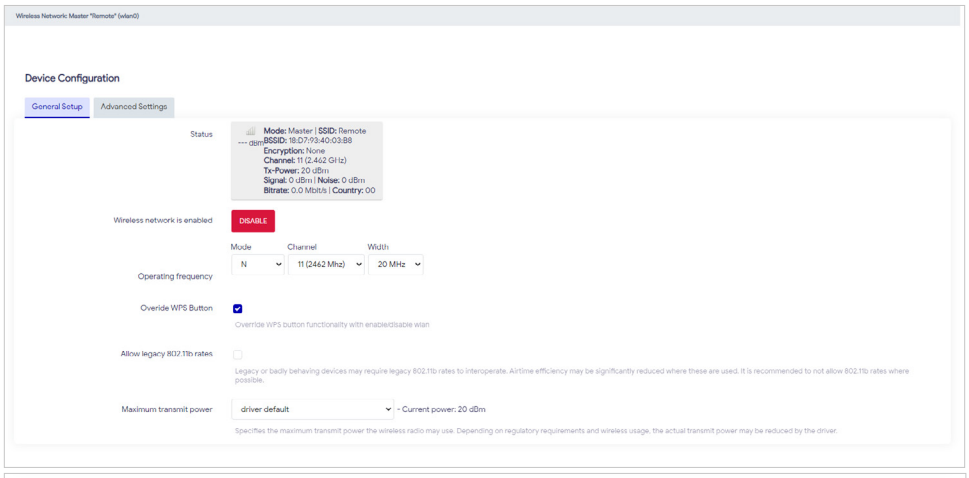


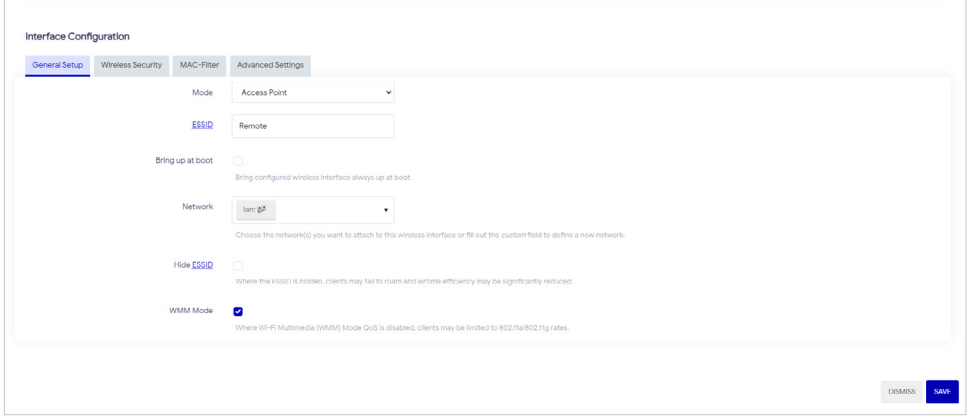
Wireless

In this screen, you set the Wi-Fi of the ServiceGate Nano V3. Via the ‘ENABLE’/’DISABLE’ button, you turn the Wi-Fi on or off.



If you click the ‘EDIT’ button of the wireless interface, you will enter the relevant configuration screen. In this screen, you can set the Wi-Fi’s encryption and key, among other things. By default, no key or encryption is set.

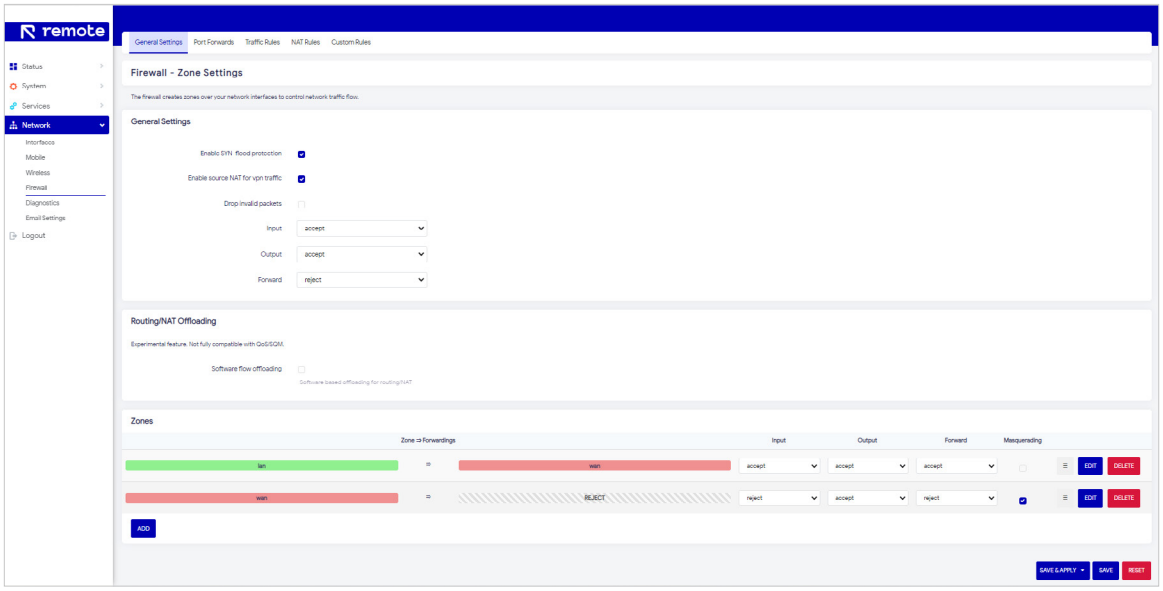




Firewall

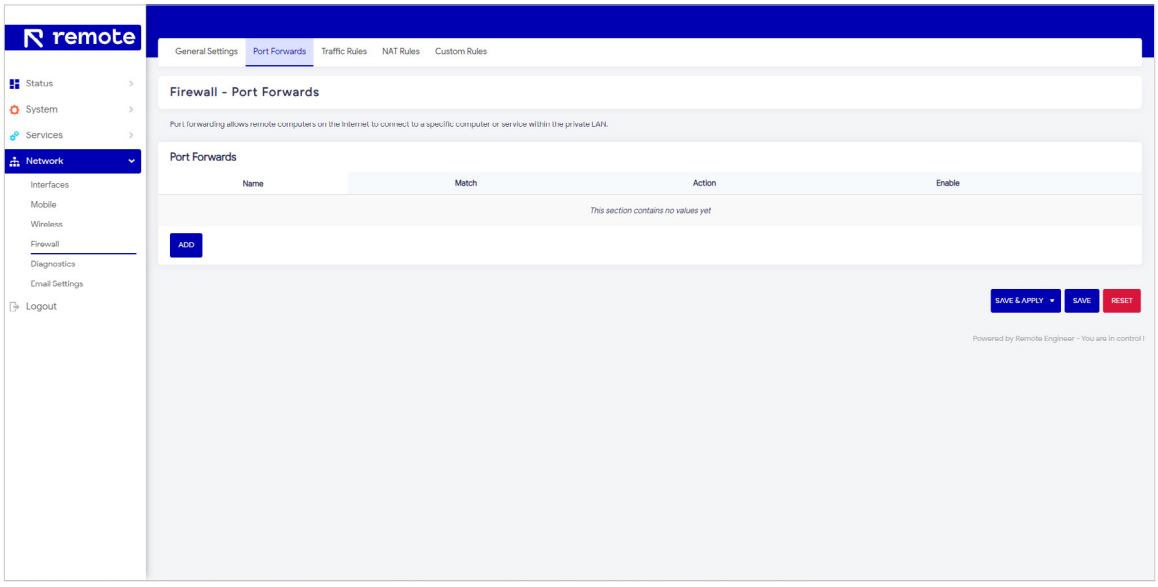
General Settings

In the screen behind the ‘General Settings’ tab, you can set zones for your network to regulate data traffic.



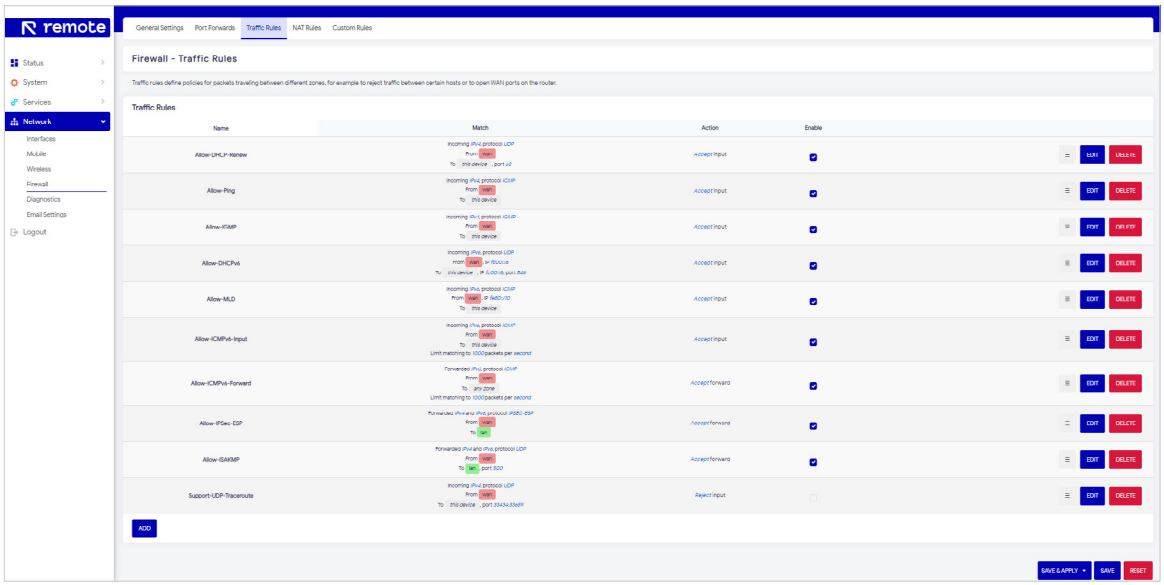
Port Forwards

In the screen behind the ‘Port Forwards’ tab, you can set up port forwarding. You indicate what the forward should be called, what protocol it is, which zone you mean, plus the port number to which this forward applies. Then specify the IP address and port to which the packet should be sent. Once you have entered everything, click on the ‘ADD’ button to confirm the forward, and on the ‘SAVE & APPLY’ button to activate and save the forward immediately.

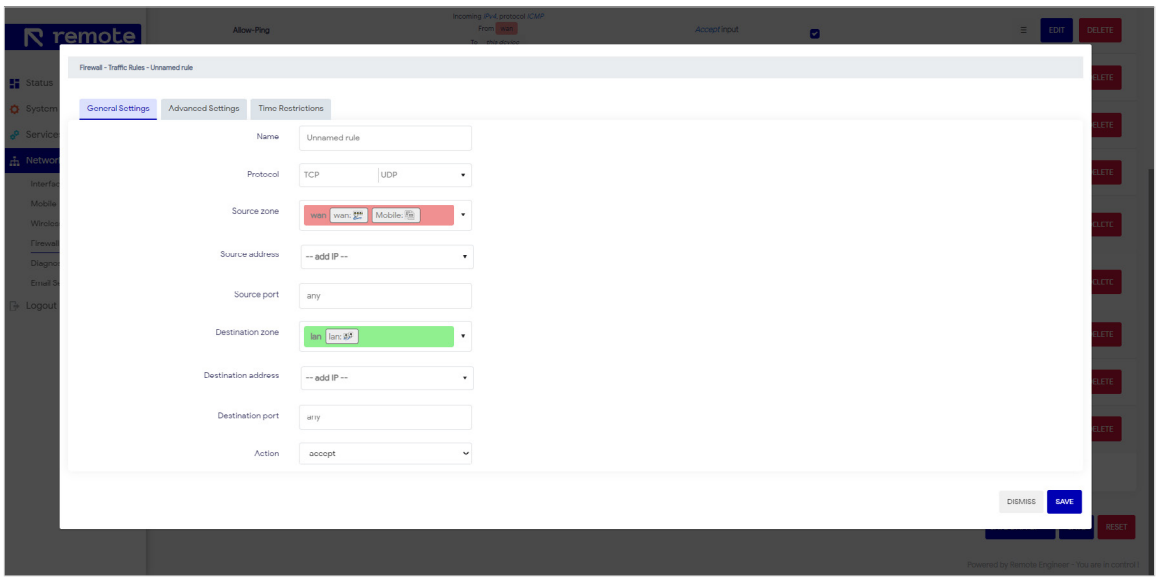


Traffic Rules

In the screen behind the ‘Traffic Rules’ tab, you can specify traffic rules that also directly adjust the firewall and define different types of policies between zones. Examples include opening a port or denying data traffic coming from a certain host.

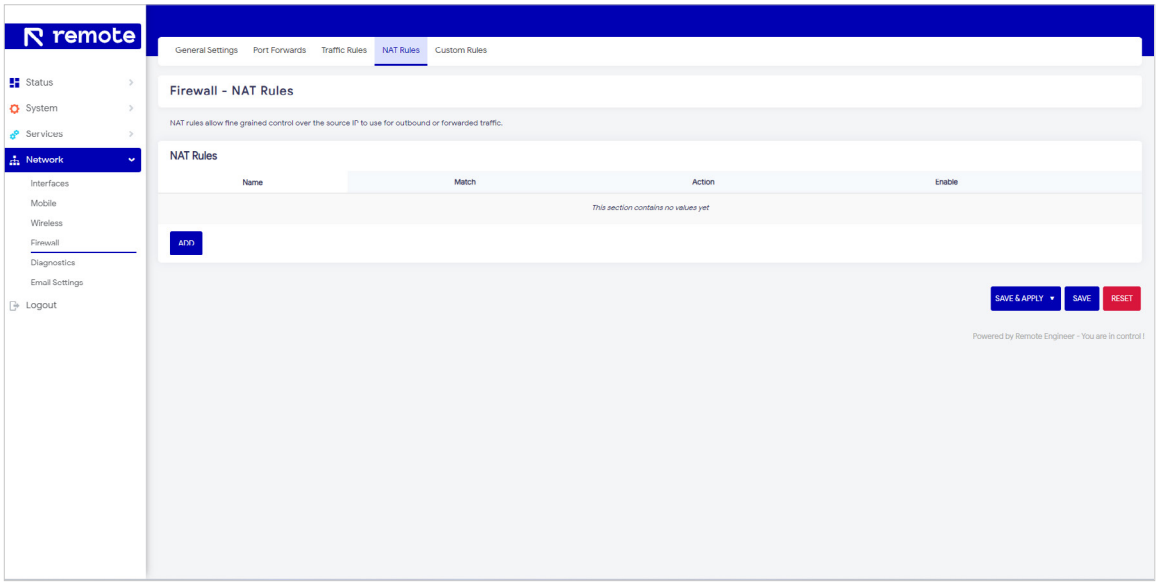


If you click on the ‘ADD’ button, you will enter the screen for settings related to traffic rules.

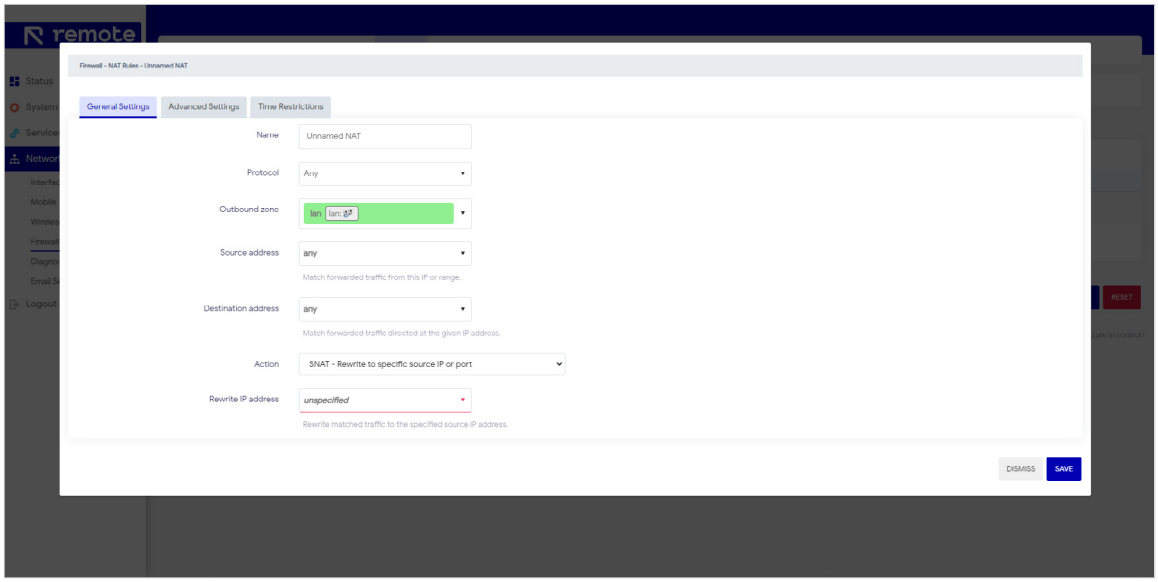


NAT Rules

In the screen behind the ‘NAT Rules’ tab, you can specify NAT rules that also directly adjust the firewall and define different types of policies between zones.

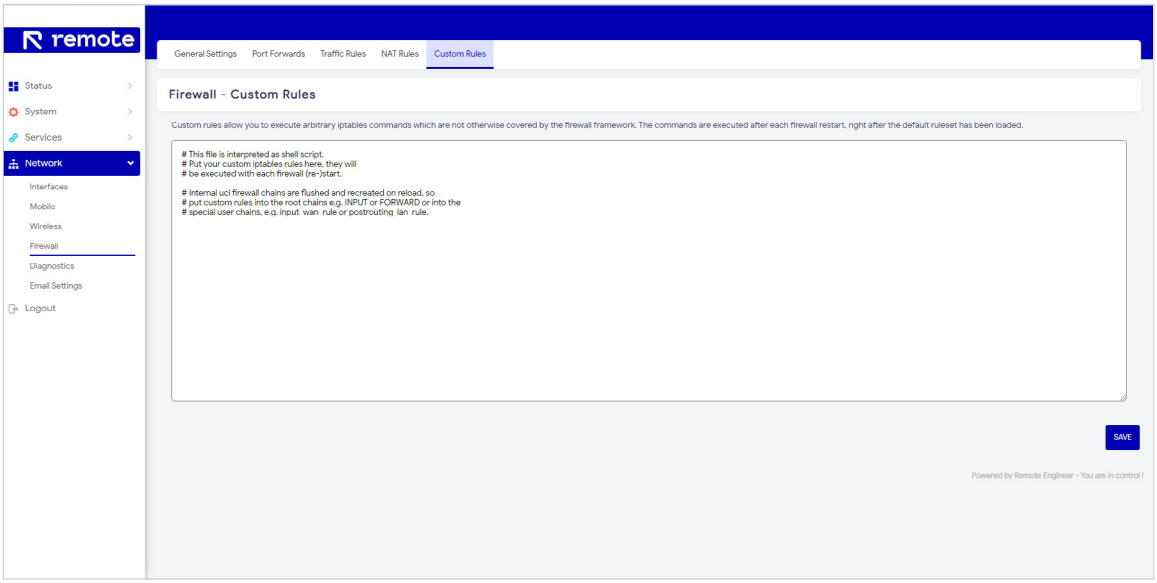


Clicking on the ‘ADD’ button will take you to the screen for settings related to NAT rules.



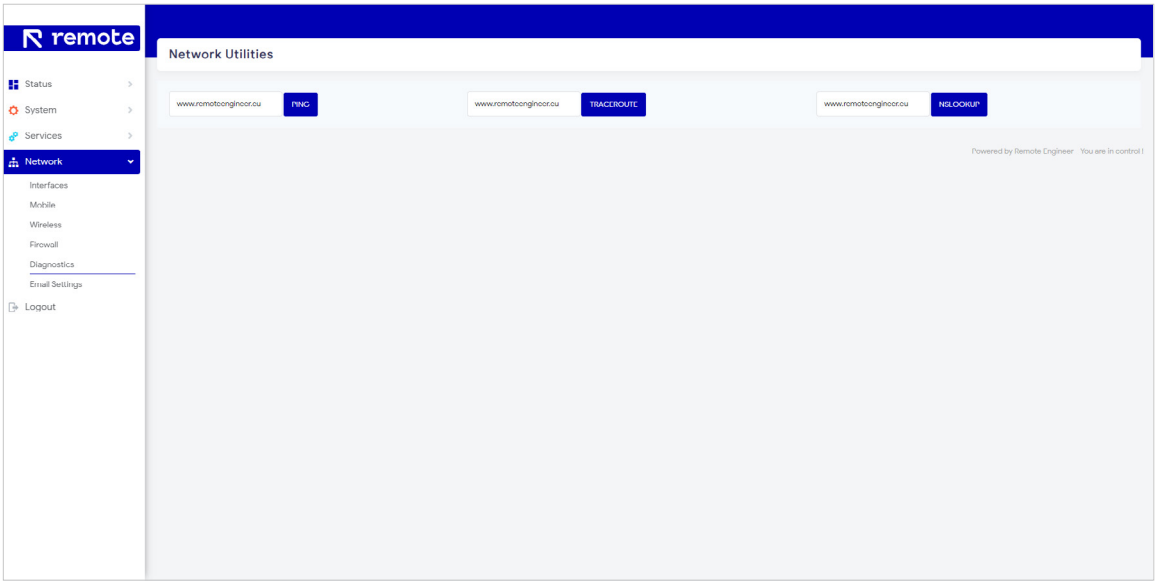
Custom Rules

In the screen behind the ‘Custom Rules’ tab, you can add your own specific custom rules.



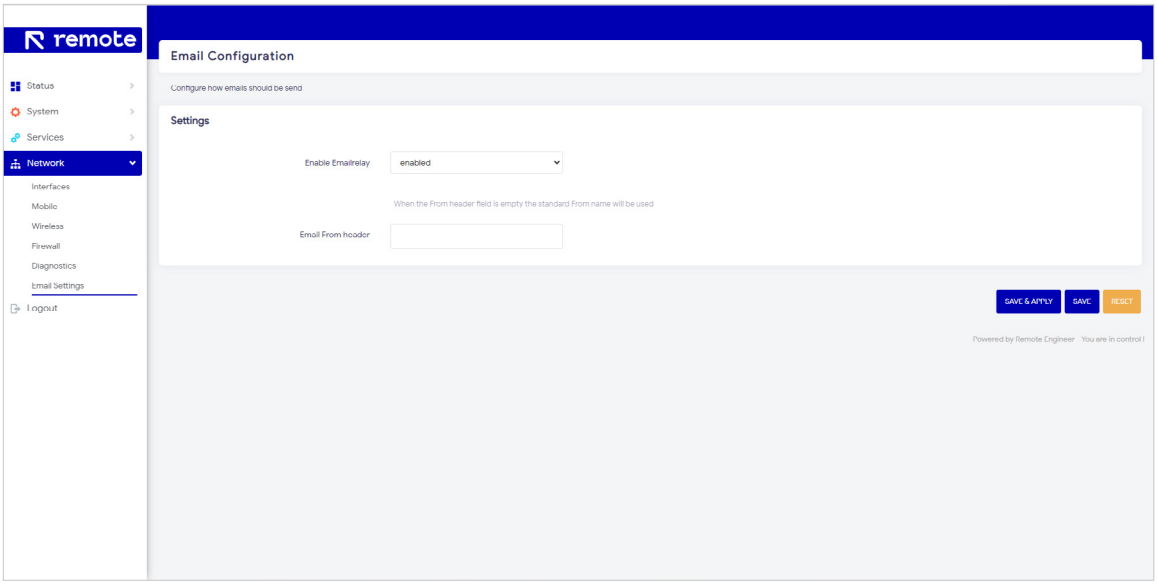
Diagnostics

In this screen, you can easily test whether the ServiceGate Nano V3 is connected to the internet.



Email Settings

In this screen, you can turn the e-mail relay function on or off and set the name of the sender.



7. Router reset & Wi-Fi

To reset the router and load the default configuration, the router must be booted.

There are two ways to reset the ServiceGate Nano V3.

To perform an ordinary reset, the “Reset” button must be clicked briefly. Once this is done, the Nano will reboot.

To get the Nano to its default settings, the “Reset” button must be kept pressed until the blue light by “SYS” starts flashing. When this happens, the button can be released. The ServiceGate Nano V3 will then return to its default settings. The Nano will reboot after the entire procedure. This may take several minutes.

Wi-Fi

To turn WI-FI on and off, press the “WPS” button for 2 seconds. When WI-FI is enabled, the Wi-Fi’s blue LED lights up.

8. Technical support

Congratulations! Your ServiceGate Nano V3 has been installed and the basic configuration has been configured. For advanced settings and more detailed information, please refer to the user manual.

Remote Engineer Technical Support

Remote Engineer provides technical support between 08:00-18:00 (CET) Monday to Friday. Customers in Europe can get technical support via the information below:

Website: www.remoteengineer.eu

Email: helpdesk@remoteengineer.eu

Phone number: +31 566 796 515

Because wireless products and control systems are constantly evolving, it is necessary for Remote Engineer to release updated software from time to time to continue to take advantage of new technologies and comply with industry standards. For the latest software, firmware, drivers, and technical support available, please visit Remote Engineer's website: www.remoteengineer.eu

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9. Statement of agreement

This device complies with the essential requirements of the R & TTE Directive 1999/5 / EC. The following test methods have been applied with this directive:

- EN 60950-1: 2001

Safety of Information Technology Equipment

- EN 300328 V1.6.1: 2004

Technical requirements for spread spectrum radio equipment

- EN 301489-1 V1.4.1: 2002, EN301 489-17 V1.2.1: 2002

EMC requirements for wide-spectrum radio equipment

- EN 50371: 2002

Use

This device is a 2.4 GHz wireless LAN transceiver, intended for indoor and office use..

Limited use

This device is a 2.4 GHz wireless transceiver intended for indoor and office use in all EU and EFTA Member States, except in France, Belgium and Italy where restricted use applies.

In Italy, the end-user must apply to the national spectrum authorities for a licence to use the device to establish outdoor radio links.

In Belgium, there is a restriction in outdoor use. The frequency range in which outdoor activity is allowed in Belgium is 2460 - 2483.5 MHz.

This device must not be used to establish outdoor radio links in France. For more information, please visit http://www.anfr.fr/ and/or http://www.art-telecom.fr

10. Warranty

Remote Engineer warranty statement

Remote Engineer products come with a 1-year limited warranty from the date of purchase.

Remote Engineer guarantees proper operation if used under proper conditions. This warranty does not cover non-Remote Engineer installed components. If Remote Engineer products malfunction during the warranty period, Remote Engineer will, at its discretion, repair or replace the product free of charge, provided that the product has not been subjected to misuse, abuse or non-Remote Engineer authorised alterations, modifications, or repairs. When returning a product, please enclose the original proof of purchase. Return requests cannot be processed without valid proof of purchase. Shipping of returned products to Remote Engineer is the responsibility of the buyer.

All expressed and implied warranties for the Remote Engineer product line, including, but not limited to, the warranties of merchantability and fitness for a particular purpose, are limited to the period specified above.

In no event shall Remote Engineer be liable in any way by the user for any damages, including lost profits, lost savings or other incidental or consequential damages arising out of the use of, or inability to use, the Remote Engineer products.

Remote Engineer reserves the right to revise or update its products, software, or documentation without the obligation to notify any person or entity.

Important notice

Be sure to keep your proof of purchase to get warranty and support. All defective products should be returned with a copy of the proof of purchase. In no event will Remote Engineer's liability exceed the price paid for the product due to direct, indirect, special, incidental, or consequential damages arising from the use of the product, associated software or documentation. Remote Engineer will not provide refunds for any product.

Contact details

Remote Engineer B.V.

It Vegelinskampke 11, 8491 PD Akkrum (NL)

www.remoteengineer.eu,

Tel: +31 566 796 515,

sales@remoteengineer.eu