

External Modem

Maestro + Wago Automation

By Torgeir Sundet / Wago Norge
November 2018

Basic Setup

Maestro + Ordinary SIM card

Maestro - LuCI

192.168.1.1/cgi-bin/luci

E Series
LAN / WAN / Wi-Fi / Cellular Router

maestro  empowering wireless

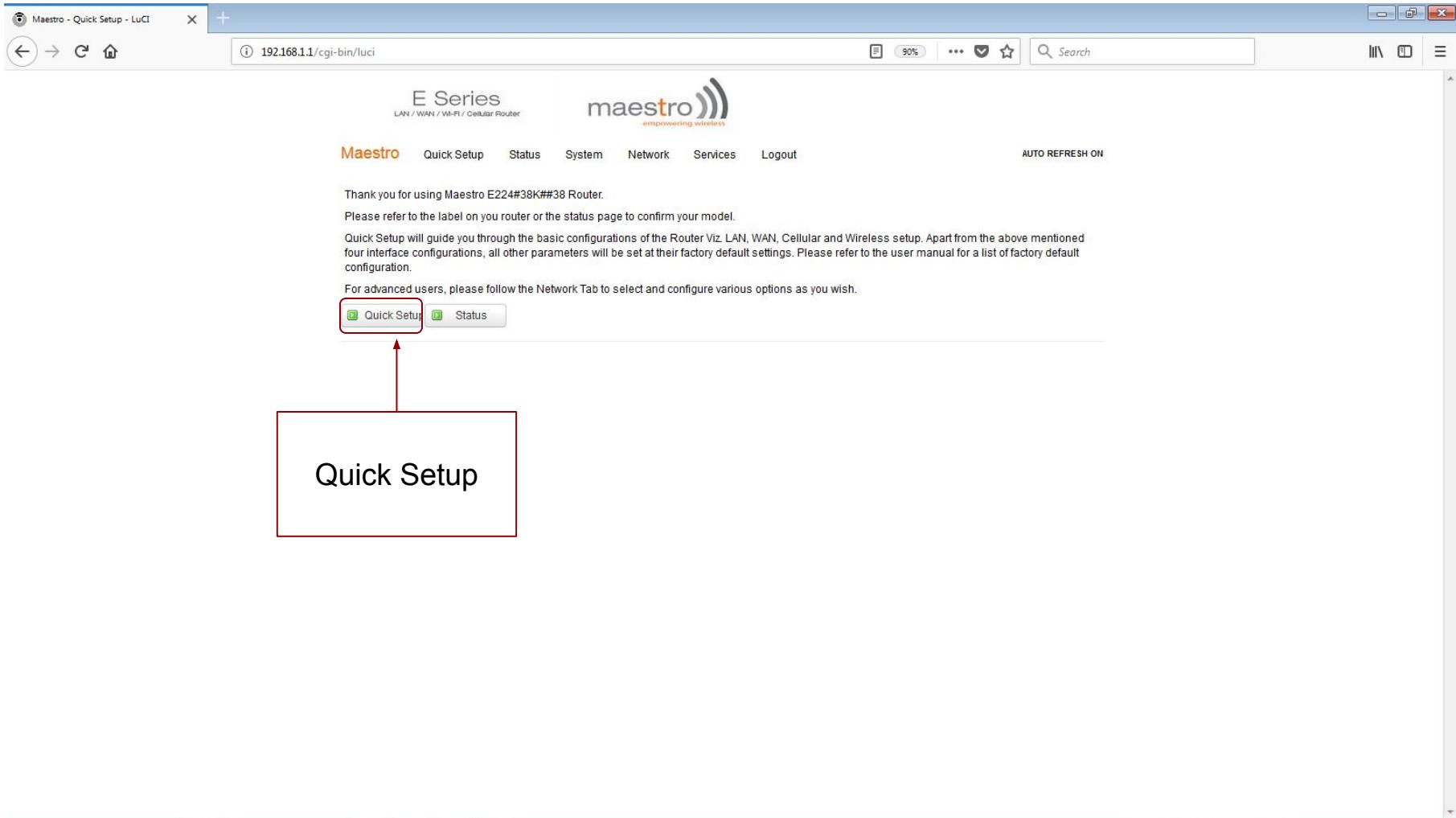
Maestro

Authorisation required
Please enter your username and password.

Username

Password

Default login:
Username / Password = admin / admin

Maestro - Quick Setup - LuCI X + 

192.168.1.1/cgi-bin/luci

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Maestro Quick Setup Status System Network Services Logout AUTO REFRESH ON

Thank you for using Maestro E224#38K##38 Router.

Please refer to the label on your router or the status page to confirm your model.

Quick Setup will guide you through the basic configurations of the Router Viz. LAN, WAN, Cellular and Wireless setup. Apart from the above mentioned four interface configurations, all other parameters will be set at their factory default settings. Please refer to the user manual for a list of factory default configuration.

For advanced users, please follow the Network Tab to select and configure various options as you wish.

Quick Setup Status

Quick Setup

Maestro - LuCI X

192.168.1.1/cgi-bin/luci;/stok=4e983811bf2b3eab73f75760666d7a77/admin/quicksetup/setup

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Maestro Quick Setup Status System Network Services Logout

Network Setup

Local Area Network (LAN)

IPv4-Address: 192.168.1.1

IPv4-Netmask: 255.255.255.0

Wide Area Network ((Wired) WAN)

Protocol: automatic

manual => Used if you have static IP allocated from ISP
automatic => Used if you need to do dhcp with ISP
PPPoE => Used if you need to do dial-up over ethernet with ISP

Cellular

APN: internet.public

PIN: ****

Username:

Password:

Wireless Lan (WLAN (Wi-Fi Master. AP mode)). For Wired WAN (WWAN (Wi-Fi Client mode)) go to Network->WiFi.

Disable

Mode: ap

Enter APN + PIN
(according to info from Tele provider)

Maestro - General Settings - LuCI

192.168.1.1/cgi-bin/luci/stok=4e983811bf2b3eab73f5760666d7a77/admin/network/firewall

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Maestro Quick Setup Status System Network Services Logout

General Settings Port Forwards Traffic Rules

Firewall - Zone Settings

The firewall creates zones over your network interfaces

General Settings

Enable SYN-flood protection

Drop invalid packets

Firewall

Input accept
Output accept
Forward accept

Zones

Zone ⇒ Forwardings

	Input	Output	Forward	Masquerading	MSS clamping
lan: lan: = wan	accept	accept	accept	<input checked="" type="checkbox"/>	<input type="checkbox"/>
wan: wan: wwan: (empty) cellular: openvpn_1: openvpn_2: =	accept	accept	accept	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Save & Apply Save Reset

Configure Firewall

E Series
LAN / WAN / Wi-Fi / Cellular Router**maestro** 
empowering wireless**Maestro**

Quick Setup

Status

System

Network

Services

Logout

AUTO REFRESH ON

Status

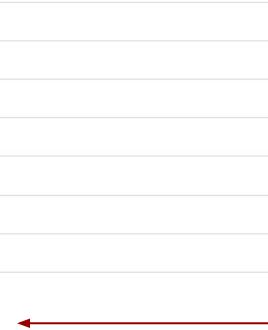
Cellular Data	Connected
Signal Strength	23
Network Status	Registered
Operator Name	N Telenor
Operator Number	24201
Operator Type	4G
Roaming Status	HOME
SIM Status	READY
IMSI	242013055231121

Memory

Total Available	100888 kB / 128560 kB (79%)
Free	70380 kB / 128560 kB (55%)

Network

WAN IP	0.0.0.0
WAN Gateway	0.0.0.0
WAN DNS	0.0.0.0
Cellular IP	46.66.179.41
Cellular Gateway	46.66.179.41



**Internet
Status**

Maestro - Overview - LuCI

192.168.1.1/cgi-bin/luci/stok=4e983811bf2b3eab73f5760666d7a77/admin/status

90% Search

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Maestro Quick Setup Status System Network Services Logout AUTO REFRESH ON

Interface Live Status

wan (eth0.1)
Offline

wwan ()
Offline

cellular (wwan0)
Online (tracking active)

DHCP Leases

Hostname	IPv4-Address	MAC-Address	Leasetime remaining
PFC200-40681C	192.168.1.130	00:30:de:40:68:1c	9h 2m 39s

DHCPv6 Leases

Hostname	IPv6-Address	DUID	Leasetime remaining
There are no active leases.			

Wireless

Generic 802.11bgn Wireless Controller (radio0)

0% SSID: Maestro E220
Mode: Master
Channel: 11 (2.462 GHz)
Bitrate: ? Mbit/s
BSSID: A4:AE:9A:01:72:E1
Encryption: mixed WPA/WPA2 PSK (CCMP)

Associated Stations

MAC-Address	Network	Signal	Noise	RX Rate	TX Rate

Localnet Status

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Maestro

Quick Setup

Status

System

Network

Services

Logout

AUTO REFRESH ON

Hostname

IPv6-Address

DUID

Leasetime remaining

There are no active leases.

Wireless

Generic 802.11bgn Wireless Controller (radio0)

 SSID: Maestro_E220
0% Mode: Master
Channel: 11 (2.462 GHz)
Bitrate: ? Mbit/s
BSSID: A4:AE:9A:01:72:E1
Encryption: mixed WPA/WPA2 PSK (CCMP)

Associated Stations

MAC-Address	Network	Signal	Noise	RX Rate	TX Rate
-------------	---------	--------	-------	---------	---------

No information available

Digital Input/Output

Digital Input 1		Low
Digital Input 2		Low
Digital Output 1		Open
Digital Output 2		Open

Local I/O Status

Innoks - torgeir.sundet@gmail.com X Google Contacts X Wago_And_MaestroModem - Google X Maestro - Port Forwards - LuCI X WAGO Ethernet Web-based Management X +

192.168.1.1/cgi-bin/luci/stok=f1298f18114632a7d31b5a0ad1eced7e/admin/network/firewall/forwards

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Maestro Quick Setup Status System Network Services Logout UNSAVED CHANGES: 1

General Settings Port Forwards Traffic Rules

Firewall - Port Forwards

Port forwarding allows remote computers on the Internet to access a computer or service within the private LAN.

Port Forwards

Name	Match	Forward to	Enable	Sort

This section contains no values yet

New port forward:

Name	Protocol	External zone	External port	Internal zone	Internal IP address	Internal port
PFCx00_WBM_Test	TCP+UDP	wan	10080	lan	192.168.1.130	80

Add

Save & Apply Save Reset

Configure portforwarding for remote access to nodes !

Innbooks - torgeir.sundet@gmail.com X Google Contacts X Wago_And_MaestroModem - Google X Maestro - Overview - LuCI X WAGO Ethernet Web-based Manager X +

46.66.184.94:10080/wbm/index.php#information

Web-based Management
WAGO 750-8202 PFC200 CS 2ETH RS

Login

Navigation

- Information
- PLC Runtime
- Networking
- Firewall
- Clock
- Administrat
- Package Server
- Mass Storage
- Software Uploads
- Ports and Services
- Cloud Connectivity
- SNMP
- Diagnostic
- OpenVPN / IPsec
- Security
- Legal Information

Status Information

Controller Details

Product Description: WAGO 750-8202 PFC200 CS 2ETH RS
Order Number: 750-8202

WBM

Local Time 14:28

A node in the remote network is now accessible via portforwarding !

MAC Address: 00:30:de:40:68:1c
IP Address: 192.168.1.130 (dhcp)
Subnet Mask: 255.255.255.0

U3 MS
U2 NS
U1 U7

Network Details X2

State: enabled
MAC Address: 00:30:de:40:68:1c
IP Address: 192.168.3.117 (dhcp)
Subnet Mask: 255.255.255.0

The screenshot shows the WAGO 750-8202 PFC200 CS 2ETH RS web-based management interface. The navigation menu on the left includes options like Information, PLC Runtime, Networking, Firewall, Clock, Administrat, Package Server, Mass Storage, Software Uploads, Ports and Services, Cloud Connectivity, SNMP, Diagnostic, OpenVPN / IPsec, Security, and Legal Information. The main content area displays 'Status Information' with 'Controller Details' showing the product description as 'WAGO 750-8202 PFC200 CS 2ETH RS' and order number '750-8202'. It also shows a 'WBM' section with the local time at '14:28'. A large callout box highlights the URL '46.66.184.94:10080/wbm/index.php#information'. Below this, there are two sections: 'Network Details X2' showing state as 'enabled' and MAC/IP/Subnet details, and another section with port mapping settings for U3, U2, and U1. A prominent message 'A node in the remote network is now accessible via portforwarding !' is displayed in a large box.

Testing Maestro Connectivity

PFCx00 + Wago Cloud



Web-based Management

WAGO 750-8202 PFC200 CS 2ETH RS

Username: admin

[Logout](#)

Navigation	
	Information
	PLC Runtime
	Networking
	Firewall
	Clock
	Administration
	Package Server
	Mass Storage
	Software Uploads
	Ports and Services
	Cloud Connectivity
	SNMP
	Diagnostic
	OpenVPN / IPsec
	Security
	Legal Information

Configuration of Cloud Connectivity

Changes will take effect after next reboot.

Software version

BETA-SOFTWARE: ONLY FOR TEST-PURPOSES (version 1.0.1.2312_FW11)

Status

Operation: running
Data collections: 3
Connection: connected
Heartbeat: 120 seconds
Telemetry data transmission: enabled
Cache fill level (QoS 1 and 2): 0.01 % (8 data blocks)

Settings

Service enabled:

Cloud platform:

Hostname:

Device ID:

Activation Key:

Status																			
WBM																			
Local Time	16:33																		
Local Date	23.10.2018																		
PLC Switch	RUN																		
LEDs	<table><tr><td>U6</td><td></td><td>SYS</td></tr><tr><td>U5</td><td></td><td>RUN</td></tr><tr><td>U4</td><td></td><td>IO</td></tr><tr><td>U3</td><td></td><td>MS</td></tr><tr><td>U2</td><td></td><td>NS</td></tr><tr><td>U1</td><td></td><td>U7</td></tr></table>	U6		SYS	U5		RUN	U4		IO	U3		MS	U2		NS	U1		U7
U6		SYS																	
U5		RUN																	
U4		IO																	
U3		MS																	
U2		NS																	
U1		U7																	

See Wago Application Note:

<https://www.wago.com/global/d/15718>

Sign in to continue

Email address

torgeir.sundet@wago.com

Password

Forgot your password?

 Remember me

Login

Need to sign up?

Register new user

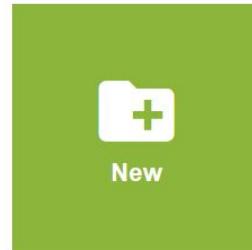
See Wago Application Note:

<https://www.wago.com/global/d/15718>

[Back to
WagoNorge-Cloud-Test-1](#)**Recent**[WagoNorge-Cloud-Test-1](#)

Home Welcome Mr. Torgeir Sundet

Create new project



Info



The WAGO Cloud Data Control is a cloud service + web-portal supporting:

- Decentralized data collection from the field level to the cloud
- Send commands from cloud to the controller

See Wago Application Note:
<https://www.wago.com/global/d/15718>

Projects overview

[New](#) [Open](#) [More](#) Search...

Project Name	Creation Date	Last Visit	Creator	My Role	Type	Description
WagoNorge-Cloud-Test	September 20, 2017 ...	October 23, 2018 4:...	torgeir.sundet@wag...	Project engineer	Created by myself	WagoNorge-Cloud-T...

[Projects overview](#)[Status overview](#)[Dashboard](#)[Trend](#)[Controllers](#)[Notifications](#)[Users](#)

ⓘ Status overview

Structure



WagoNorge-Cloud-Test-1

PFCx00-Test-1

PFCx00-Test-2

PFCx00-CloudCoupler-Test-1

Overview

Connection state connected

Data submission state enabled

Notifications 0 alarms

Node status

Date time October 21, 2018 7:30 PM

PLC switch Run

LEDs

U6		SYS
U5		RUN
U4		IO
U3		MS
U2		NS
U1		U7

Geo information



See Wago Application Note:
<https://www.wago.com/global/d/15718>

[Projects overview](#)[Status overview](#)[Dashboard](#)[Trend](#)[Controllers](#)[Notifications](#)[Users](#)

Controllers

Structure



Search...



WagoNorge-Cloud-Test-1

PFCx00-Test-1



PFCx00-Test-2



PFCx00-CloudCoupler-Test-1

FORMATION

See Wago Application Note:
<https://www.wago.com/global/d/15718>

General

Name Connection state

Device connectivity

IoT Hub Hostname Device id Activation key [?](#)Activation state Heart beat interval SecondsHeart beat timeout Seconds[Save](#)

Testing Mastro Connectivity

PFCx00 + SMS

Maestro - SMS Configuration - LuCI

192.168.1.1/cgi-bin/luci/stok=169e2fd9faef929448ce56b3e06cbe34/admin/services/sms/configuration/

50% Search

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Maestro Quick Setup Status System Network Services Logout

SMS Configuration Ethernet SMS Live Message

SMS Configuration

Enable Tick this checkbox to enable SMS.

AT Enable Tick this checkbox to enable AT commands.

SMS Administrator Mobile Number

SMS Administrator	Mobile Number
Admin 1	Please enter the mobile number for Admin 1.
Admin 2	91xxxxxxxxxx
Admin 3	91xxxxxxxxxx
Admin 4	91xxxxxxxxxx

Setup SMS

VPN Agents SMS Data D2sphere Last Caps Reporting Agent GPS Serial Content Filtering Events Dynamic DNS

Save & Apply Save Reset

List of Commands

No.	Command name	Command
1	Reboot	AT+REBOOT=1

WAN Diagnostics AT+WANDIAG?

Maestro - Ethernet SMS - LuCI

192.168.1.1/cgi-bin/luci/stok=f80400e9d7882406b01cb99113844ebb/admin/services/sms/sms_over_lan/ 50% Search

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Maestro Quick Setup Status System Network Services Logout

SMS Configuration Ethernet SMS Live Message

Ethernet SMS

Send Message Data format is AT#SENDSMS="+< Mobile number with country code >"< Message end with Ctrl+D >
Read Message Data format is AT#READSMS="< type(ALL/SMS ID) >"< Enter >
Delete Message Data format is AT#DELSMS="< type(ALL/SMS ID) >"< Enter >

Enable

Port 5555 Default port is 5555

Save & Apply Save Reset

Exchange SMS by serving simple AT-command strings from external Ethernet TCP Client (e.g. PFCx00)

FILE START VIEW PROGRAM DEBUG LIBRARIES

Devices/program structure Product Catalog Messages Settings I/O mapping Cross reference list Device Log Breakpoints Call stack Monitoring License administration Network/Devices Tabbed Workspaces Programming Tile horizontally Window Window

e!C_AT_CMD_SMS_Test_1.ecp - e!COCKPIT

WAGO

Program structure

Project library (POUs)

Applications

Application (Controller)

- DUT_StringAndBytes
- Library Manager
- PLC_PRG
- AT_CMD_SMS_CONSTRUCT
- AT_CMD_SMS_EVALUATE
- AT_CMD_SMS_SEQUENCER

Task Configuration

Library Manager

Add library Delete library Properties Details Placeholders Library repository

Name	Namespace	Effective version
_3SLicense = 3SLicense, 3.5.10.0 (3S - Smart Software Solutions GmbH)	_3S_LICENSE	3.5.10.0
BreakpointLogging = Breakpoint Logging Functions, 3.5.5.0 (3S - Smart Software Solutions GmbH)	BPLog	3.5.5.0
IoStandard = IoStandard, 3.5.10.0 (System)	IoStandard	3.5.10.0
Standard = Standard, 3.5.9.0 (System)	Standard	3.5.9.0
WagoAppProcessorLoad = WagoAppProcessorLoad, 2.0.0.0 (WAGO)	WagoAppProcessorLoad	2.0.0.0
WagoAppSocket = WagoAppSocket, 1.7.7.0 (WAGO)	WagoAppSocket	1.7.7.0
WagoSysComInternal = WagoSysCom_Internal_PFC, 1.0.2.1 (WAGO)	WagoSysCom_Internal	1.0.2.1
WagoSysKbusTerminalControl = WagoSysKbusTerminalControl, 1.6.1.7 (WAGO)	WagoSysKbusTerminalControl	1.6.1.7
WagoSysStandard = WagoSysStandard, 1.6.0.1 (WAGO)	WagoSysStandard	1.6.0.1

WagoAppSocket, 1.7.7.0 (WAGO)

Inputs/Outputs Graphical Documentation

FbTcpClient

```

xOpen BOOL
xTxTrigger BOOL
pTxBuffer POINTER TO BYTE
udiTxNBytes UDINT
pRxBuffer POINTER TO BYTE
udiRxBufferSize UDINT
udiRxIndex UDINT
xResetStatus BOOL
sServerName STRING
wPort WORD
xKeepAlive_Enable BOOL
tKeepAlive_MaxIdleTime TIME
tKeepAlive_Interval TIME
udiKeepAlive_Probes UDINT
    
```

e!COCKPIT => WagoAppSocket => FbTcpClient:
Exchange SMS by sending AT-commands to the Maestro modem (TCP Server)

The screenshot shows the WAGO eCockpit software interface. The top menu bar includes FILE, START, VIEW, PROGRAM, and DEBUG. The VIEW tab is selected, displaying various workspace options like Devices/program structure, Product Catalog, Messages, Settings, I/O mapping, Cross reference list, Device Log, Breakpoints, Call stack, Monitoring, Network/Devices, Programming, Workspaces, Tabbed, and Window.

The main area is titled "Program structure" and shows the project tree. Applications include Application (Controller), DUT_StringAndBytes, Library Manager, and PLC_PRG. Under PLC_PRG, there are three POU nodes: AT_CMD_SMS_CONSTRUCT, AT_CMD_SMS_EVALUATE, and AT_CMD_SMS_SEQUENCER. The AT_CMD_SMS_SEQUENCER node is currently selected.

The PLC_PRG editor window displays the following ladder logic:

```

1   FbTcpClient_AT_CMD_SMS()
2       oStatus      -> oStatus,
3       xOpen        := xOpen,
4       xIsOpen     -> xIsOpen,
5       xIsIdle     -> xIsIdle,
6       xError       -> xError,
7       xTxTrigger   := xTxTrigger,
8       pTxBuffer    := ADR(DUT_AT_CMD_SMS_TX.abBuffer),
9       udiTxNBytes  := LEN(DUT_AT_CMD_SMS_TX.sBuffer)+1,
10      pRxBuffer   := ADR(DUT_AT_CMD_SMS_RX.abBuffer),
11      udiRxBufferSize := SIZEOF(DUT_AT_CMD_SMS_RX.abBuffer),
12      udiRxIndex   := udiRxIndex,
13      xRxBufferFull -> xRxBufferFull,
14      xRxOverflow  -> xRxOverflow,
15      xResetStatus := xResetStatus,
16      sServerName  := sServerName,
17      wPort         := wPort,
18      xKeepAlive_Enable := xKeepAlive_Enable,
19      tKeepAlive_MaxIdleTime := tKeepAlive_MaxIdleTime,
20      tKeepAlive_Interval := tKeepAlive_Interval,
21      udiKeepAlive_Probes := udiKeepAlive_Probes;
22
23      AT_CMD_SMS_SEQUENCER();
24
25
26

```

The right-hand editor window shows the source code for the AT_CMD_SMS_SEQUENCER POU:

```

1 CASE iAtCmdSmsState OF
2
3     0:
4         xOpen := TRUE;
5         IF (xIsOpen = TRUE) THEN
6             iAtCmdSmsState := 10;
7             END_IF
8
9     10:
10        AT_CMD_SMS_CONSTRUCT();
11        IF (xTxTrigger = TRUE) THEN
12            udiRxIndex := 0;
13            iAtCmdSmsState := 20;
14            END_IF
15
16     20:
17        IF (xTxTrigger = FALSE) THEN
18            AT_CMD_SMS_EVALUATE();
19            xOpen := FALSE;
20            IF (xIsOpen = FALSE) THEN
21                iAtCmdSmsState := 0;
22                END_IF
23            END_IF
24
25
26 END_CASE

```

Ethernet SMS

Send Message Data format is AT#SENDSMS="+< Mobile number with country code >"< Message end with Ctrl+D >

Read Message Data format is AT#READSMS="< type(ALL/SMS ID) >"< Enter >

Delete Message Data format is AT#DELSMS="< type(ALL/SMS ID) >"< Enter >

The screenshot shows the WAGO e!COCKPIT software interface with the following details:

- Top Bar:** Includes FILE, START, VIEW, PROGRAM, DEBUG, and various tool icons.
- Left Sidebar:** Program structure, Product Catalog, Messages, Settings, I/O mapping, Cross reference list, Device Log, Breakpoints, Call stack, Monitoring, License administration, Network/Devices, Tabbed, Programming, Workspaces, Tile horizontally, Tile vertically, and Window.
- Program Structure View:** Shows the project tree with Application (Controller) containing DUT_StringAndBytes, Library Manager, and PLC_PRG. PLC_PRG contains AT_CMD_SMS_CONSTRUCT, AT_CMD_SMS_EVALUATE, and AT_CMD_SMS_SEQUENCER. AT_CMD_SMS_CONSTRUCT is currently selected.
- Code Editor (Top Window):** Title: PLC_PRG.AT_CMD_SMS_CONSTRUCT X. Content:

```
1 IF (iAtCmdType = 1) THEN (* SMS Send *)
2     DUT_AT_CMD_SMS_RX.sBuffer := 'AT#SENDSMS='+4797195836"Test SMS from Maestro E220...$04';
3 ELSEIF (iAtCmdType = 2) THEN (* SMS Read *)
4     DUT_AT_CMD_SMS_RX.sBuffer := 'AT#READSMS="ALL"$04';
5 ELSEIF (iAtCmdType = 3) THEN (* SMS Delete *)
6     DUT_AT_CMD_SMS_RX.sBuffer := 'AT#DELSMS="ALL"$04';
7 END_IF
```
- Callout Box:** "Constructing AT-command string" is highlighted in red around the code editor area.
- Code Editor (Bottom Window):** Title: PLC_PRG.AT_CMD_SMS_EVALUATE X. Content:

```
1 IF (iAtCmdType = 1) THEN (* SMS Send *)
2     IF (DUT_AT_CMD_SMS_RX.sBuffer = '') THEN
3         (* TO DO: Evaluate Response After Sending SMS... *);
4     END_IF
5 ELSEIF (iAtCmdType = 2) THEN (* SMS Read *)
6     IF (DUT_AT_CMD_SMS_RX.sBuffer = '') THEN
7         (* TO DO: Evaluate Response After Reading SMS... *);
8     END_IF
9 ELSEIF (iAtCmdType = 3) THEN (* SMS Delete *)
10    IF (DUT_AT_CMD_SMS_RX.sBuffer = '') THEN
11        (* TO DO: Evaluate Response After Deleting SMS... *);
12    END_IF
13 END_IF
```
- Callout Box:** "Evaluating Response from Maestro modem" is highlighted in red around the code editor area.
- Bottom Status Bar:** Connection, Last build: -, Version: 14.0

Testing Mastro Connectivity

PFCx00 + AddSecure SIM

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192.168.1.1/cgi-bin/luci;/stok=2ed616979b16754e27c16c7e927c9711/admin/quicksetup/setup

Search

E Series
LAN / WAN / Wi-Fi / Cellular Router

maestro
empowering wireless

Maestro Quick Setup Status System Network Services Logout

Network Quick Setup

Local Area Network (LAN)

IPv4-Address: 192.168.1.1

IPv4-Netmask: 255.255.255.0

Wide Area Network ((Wired) WAN)

Protocol: automatic

manual => Used if you have static IP allocated from ISP
automatic => Used if you need to do dhcp with ISP PPPoE
=> Used if you need to do dial-up over ethernet with ISP

Cellular

APN: mobiflex.tele2.m2m

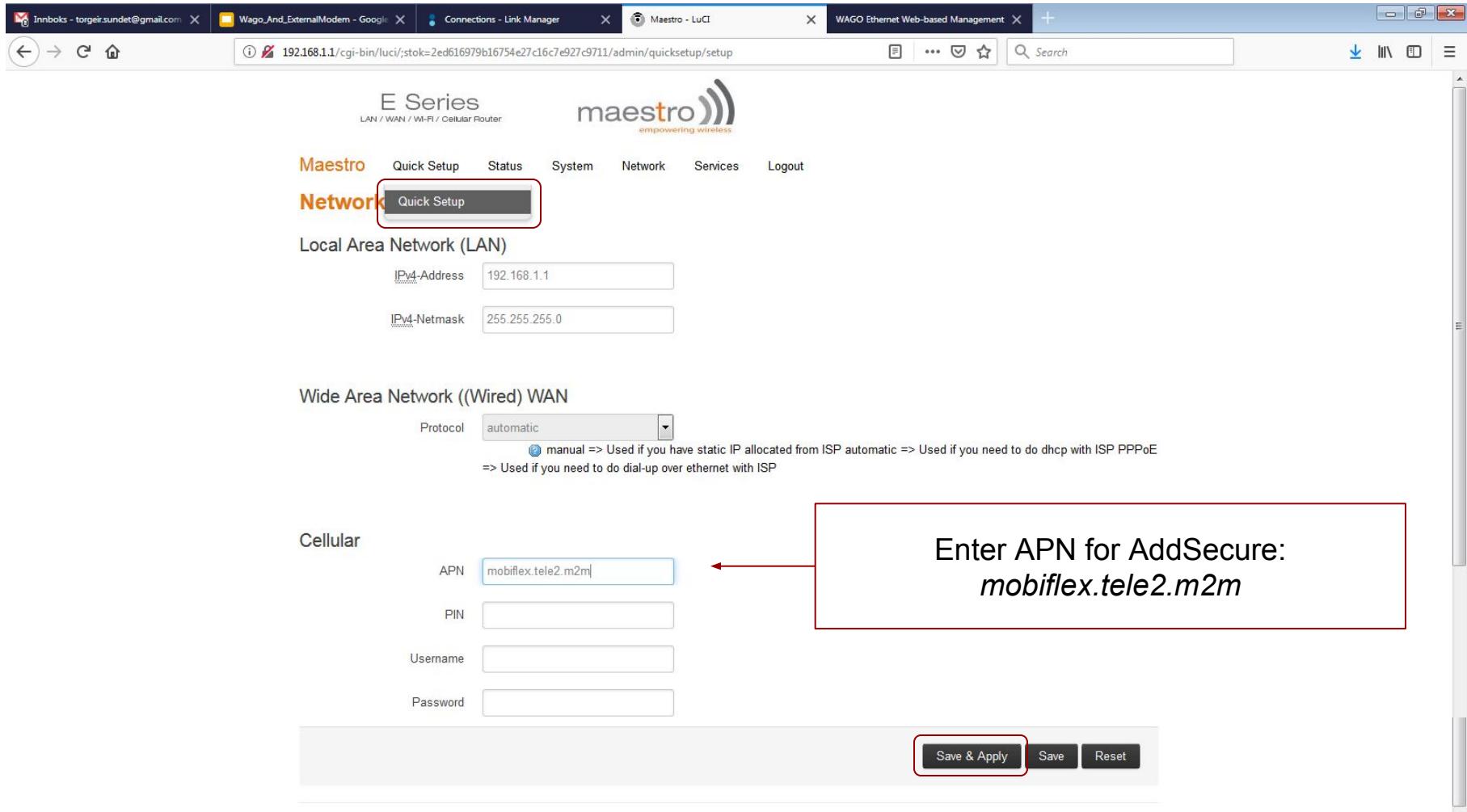
PIN:

Username:

Password:

Enter APN for AddSecure:
mobiflex.tele2.m2m

Save & Apply Save Reset



The screenshot shows a Windows taskbar at the top with several open windows:

- Oppdateringer av vikarene for bruk
- Wago_And_ExternalModem - Google
- Connections - Link Manager
- Maestro - Quick Setup - LuCI

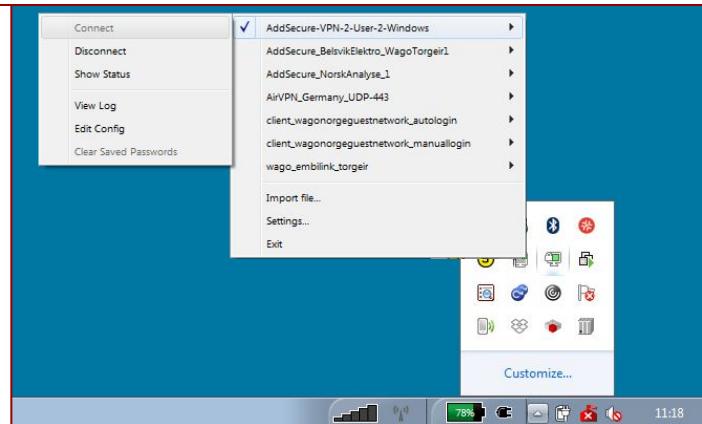
The main window is the Maestro E224#38K##38 Router's configuration interface, specifically the LuCI web interface. The URL in the address bar is 100.84.112.1/cgi-bin/luci. The page title is "Maestro" with the tagline "empowering wireless". The navigation menu includes "Maestro", "Quick Setup", "Status", and "S...". A message box displays the URL 100.84.112.1/cgi-bin/luci. On the right, there is a "AUTO REFRESH ON" button. The main content area contains the following text:

Thank you for using Maestro E224#38K##38 Router.
Please refer to the User Manual for more information.
Quick Setup will guide you through the basic interface configuration.
For advanced users, the full LuCI interface is available.

Quick Setup Status

Maestro modem accessible via AddSecure User Access !

OpenVPN Client on PC connects to AddSecure OpenVPN Server !



Oppdateringer av vilkårene for bruk X Wago_And_ExternalModem - Google X Connections - Link Manager X Maestro - Port Forwards - LuCI X +

100.84.112.1/cgi-bin/luci/stok=42a62df4474b1cb9170db0abf8bb93bc/admin/network/firewall/forwards/ Search

E Series maestro empowering wireless

Maestro Quick Setup Status System Network Services Logout

General Settings Port Forwards Traffic Rules

Firewall - Port Forwards

Port forwarding allows remote computers on the Internet to access a computer or service within the private LAN.

Port Forwards

Name	Match	Forward to	Enable	Sort

This section contains no values yet

New port forward:

Name	Protocol	External zone	External port	Internal zone	Internal IP address	Internal port
PFCx00_WBM_Test	TCP	wan	10080	lan	192.168.1.130	80

Add

Save & Apply Save Reset

Configure portforwarding for remote access to none-VPN nodes !

100.84.112.1/cgi-bin/luci/stok=42a62df4474b1cb9170db0abf8bb93bc/admin/network/firewall/forwards/

Oppdateringer av vikarene for bruker X Wago_And_ExternalModem - Google X Connections - Link Manager X Maestro - Port Forwards - LuCI X WAGO Ethernet Web-based Management X +

100.84.112.1:10080/wbm/index.php#information

Web-based Management
WAGO 750-8202 PFC200 CS 2ETH RS

Login

Navigation

- Information
- PLC Runtime
- Networking
- Firewall
- Clock
- Administrativ
- Package Server
- Mass Storage
- Software Uploads
- Ports and Services
- Cloud Connectivity
- SNMP
- Diagnostic
- OpenVPN / IPsec
- Security
- Legal Information

Status Information

Controller Details

Product Description: WAGO 750-8202 PFC200 CS 2ETH RS
Order Number: 750-8202

WBM

Local Time 12:40

A none-VPN-node in the remote network is now accessible via portforwarding !

MAC Address: 00:30:de:40:68:1c
IP Address: 192.168.1.130 (dhcp)
Subnet Mask: 255.255.255.0

U3 MS
U2 NS
U1 U7

Network Details X2

State: enabled
MAC Address: 00:30:de:40:68:1c
IP Address: 192.168.3.117 (dhcp)
Subnet Mask: 255.255.255.0

100.84.112.1:10080/wbm/index.php#information

Testing Mastro Connectivity

PFCx00 + AddSecure System Access

Innbooks - torgeir.sundet@gmail.com X Wago_And_ExternalModem - Google X Maestro - OpenVPN - LuCI + 192.168.1.1/cgi-bin/luci/stok/d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/ Search ↴ ⌂ ⌃ ⌁ ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ ⌊ ⌋ ⌊ ⌋

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Maestro Quick Setup Status System Network Services Logout AUTO REFRESH ON

PPTP IPSEC OpenVPN **VPN**

OpenVPN Back to Overview »

Profile Name Status

OPENVPN_1	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.) (tun0)
OPENVPN_2	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.) (tun1)

Agents SMS Data D2sphere Last Gasp Reporting Agent GPS Serial Content Filtering Events Dynamic DNS

ect Stop Edit ect Stop Edit

Configure VPN Client

OpenVPN instances

Below is a list of configured OpenVPN instances and their current state

Enabled	Started	Start/Stop	Port	Protocol
This section contains no values yet				

AddSecureSystemAccess| Client configuration for a routed [] Add

Client configuration for an ethernet bridge VPN
Client configuration for a routed multi-client VPN
Simple client configuration for a routed point-to-point VPN
Server configuration for an ethernet bridge VPN
Server configuration for a routed multi-client VPN
Simple server configuration for a routed point-to-point VPN

Save & Apply

This screenshot shows the configuration interface for an OpenVPN client on a Maestro device. The 'VPN' tab is selected in the top navigation bar. On the left, there's a section titled 'Configure VPN Client'. In the center, it lists two OpenVPN instances: 'OPENVPN_1' (using tun0) and 'OPENVPN_2' (using tun1). Below this, there's a table for managing OpenVPN instances, which currently displays 'This section contains no values yet'. At the bottom, a dropdown menu offers options for different types of VPN configurations, with 'Client configuration for a routed multi-client VPN' being selected. A large red box highlights this specific configuration option. Finally, at the bottom right, there's a prominent 'Save & Apply' button.

*C:\Users\WagoTorgeir\Dropbox (Wago Norge)\Torgeir\Development\Open_Projects\Modem\AddSecureLinkConfig_Maestro\Test>AddSecureSystemAccess.conf - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

AddSecureSystemAccess.conf AddSecure.ca

```

40 # Try to preserve some state across restarts
41 persist-key
42 persist-tun
43
44 # Verify server certificate by checking
45 remote-cert-tls server
46
47 # Select a cryptographic cipher
48 cipher AES-128-CBC
49
50 # We will use Compression
51 comp-lzo
52
53 # Set log file verbosity.
54 verb 3
55
56 # Certificates
57 # Root Certificate
58 <ca>
59
60 </ca>
61
62 # Client Certificate
63 <cert>
64
65 </cert>
66
67 # Client Certificate Key
68 <key>
69
70 </key>
71
72 # TLS Protection against DDoS and flooding
73 key-direction 1
74 <tls-auth>
75
76 </tls-auth>
77

```

Extract to "AddSecure.ca"

Extract to "AddSecure.cert"

Extract to "AddSecure.key"

Extract to "tlsauth.key"

Extract security files from AddSecure OpenVPN Client File

Innbooks - torgeir.sundet@gmail.com X Wago_And_ExternalModem - Google X Maestro - LuCI + 192.168.1.1/cgi-bin/luci/stok=d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/basic/AddSecureSystem

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Maestro Quick Setup Status System Network Services Logout
PPTP IPSEC OpenVPN

Overview » Instance "AddSecureSystemAccess"
Switch to advanced configuration »

tun_ipv6 Make tun device IPv6 capable
nobind Do not bind to local address and port
client Configure client mode
client_to_client Allow client-to-client traffic

Additional Field --
verb
nice
port
dev_type
ifconfig
server
server_bridge
comp_lzo
keepalive
proto
remote
auth_user_pass
secret
pkcs12
ca
dh
cert
key

Add Save & Apply Save Reset

Configuration according to AddSecure OpenVPN Client File

```

17 # This is a client
18 client
19
20 # What kind of interface type. In our case only Routed Tu
21 dev tun
22
23 # Protocol (udp,tcp)
24 proto udp
25
26 # Will we use a specific tunnel interface on client. Comm
27 # dev-node "Interface Name"
28
29 # Open VPN Server to Connect
30 # Use DNS Entry here. Multiple lines for load balancing
31 remote as-w591.cloud.iot.addsecure.se 1194
32
33 # Section with default values
34 # Resolve DNS
35 resolv-retry infinite
36
37 # No specific port to bind against
38 nobind
39
40 # Try to preserve some state across restarts
41 persist-key
42 persist-tun
43
44 # Verify server certificate by checking that the certific
45 remote-cert-tls server
46
47 # Select cryptographic cipher.
48 cipher AES-128-CBC
49
50 # We will use Compression
51 comp-lzo
52
53 # Set log file verbosity.
54 verb 3
55

```

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192.168.1.1/cgi-bin/luci/stok/d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/basic/AddSecureSystem

Search

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Maestro Quick Setup Status System Network Services Logout

PPTP IPSEC OpenVPN

Overview » Instance "AddSecureSystemAccess"

Switch to advanced configuration »

verb 3 Set output verbosity

port 1194 TCP/UDP port # for both local and remote

dev_type tun Type of used device

tun_ipv6 Make tun device IPv6 capable

nobind Do not bind to local address and port

comp_lzo yes Use fast LZO compression

keepalive 10 60 Helper directive to simplify the expression of --ping and --ping-restart in server mode configurations

proto udp Use protocol

client Configure client mode

client_to_client Allow client-to-client traffic

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192.168.1.1/cgi-bin/luci/stok=d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/basic/AddSecureSystem

Search

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Maestro Quick Setup Status System Network Services Logout

keepalive 10 60

proto udp

client Configure client mode

client_to_client Allow client-to-client traffic

remote as-w591.cloud.iot.addsecure.se

ca Uploaded File (1.75 KB) Certificate authority

cert Uploaded File (1.86 KB) Local certificate

key Uploaded File (930.00 B) Local private key

Additional Field Add

Save & Apply Save Reset

Development > Open_Projects > Modem > AddSecureLinkConfig_Maestro > Test

Name	Date modified	Type	Size
AddSecure.ca	13.11.2018 20:48	CA File	2 KB
AddSecure.cert	13.11.2018 20:49	CERT File	2 KB
AddSecure.key	13.11.2018 20:49	Registration Entries	1 KB
AddSecureSystemAccess.conf	14.11.2018 21:39	CONF File	7 KB
tlsauth.key	13.11.2018 20:49	Registration Entries	1 KB

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Maestro Quick Setup Status System Network Services Logout

ifconfig_nowarn Don't warn on ifconfig inconsistencies

route_noexec Don't add routes automatically

mtu_test Empirically measure MTU

comp_lzo yes Use fast LZO compression

-- Additional Field --

mode
local
lport
rport
dev
dev_node
ifconfig
route
route_gateway
route_delay
mtu_disc
link_mtu
tun_mtu
tun_mtu_extra
sndbuf
rcvbuf
bxqueuelen
shaper
inactive

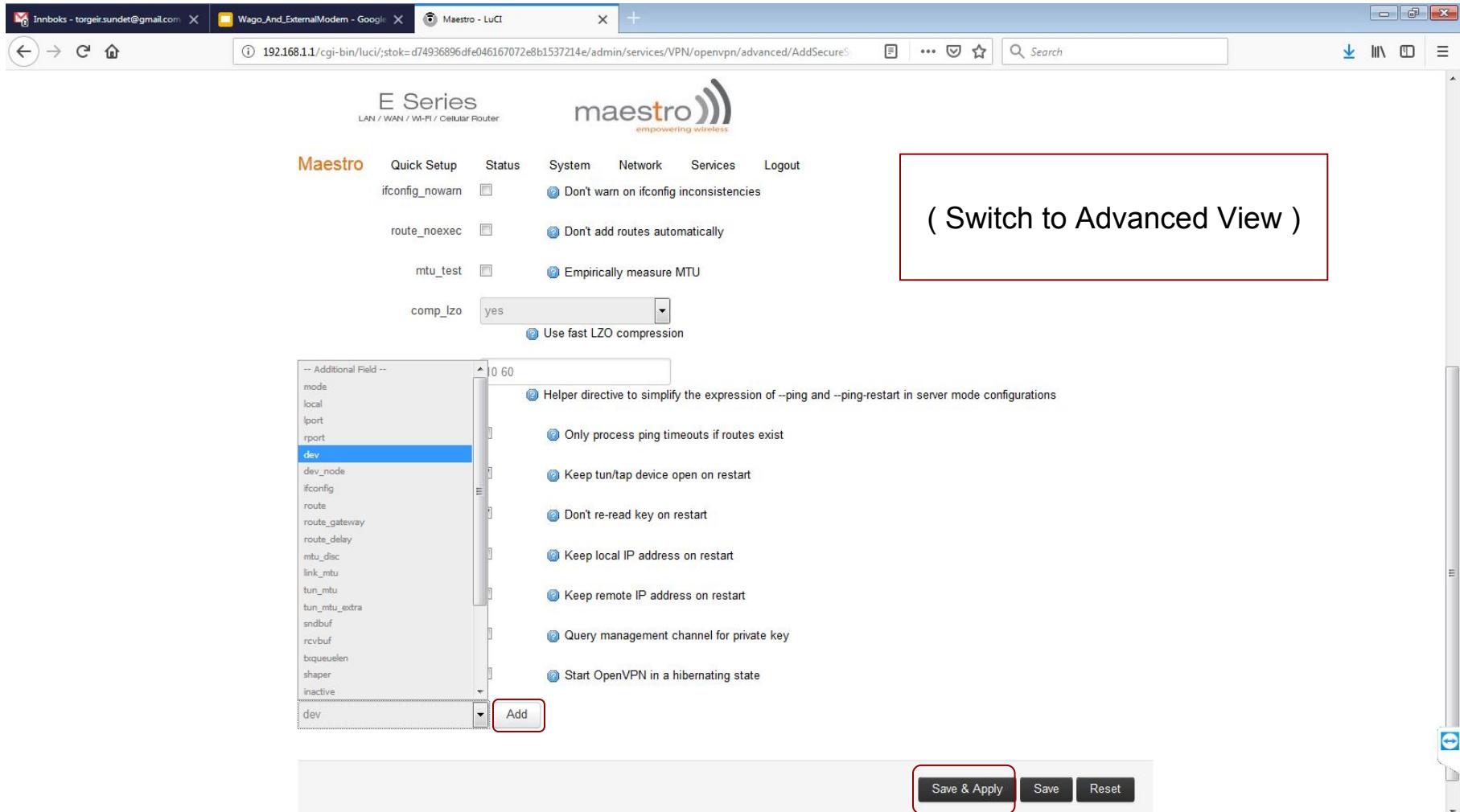
0 60

Helper directive to simplify the expression of --ping and --ping-restart in server mode configurations
Only process ping timeouts if routes exist
Keep tun/tap device open on restart
Don't re-read key on restart
Keep local IP address on restart
Keep remote IP address on restart
Query management channel for private key
Start OpenVPN in a hibernating state

Add

(Switch to Advanced View)

Save & Apply Save Reset



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192.168.1.1/cgi-bin/luci/stok=d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/advanced/AddSecureS

Search

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Maestro Quick Setup Status System Network Services Logout

PPTP IPSEC OpenVPN

Overview » Instance "AddSecureSystemAccess"
« Switch to basic configuration

Configuration category: Service | Networking | VPN | Cryptography

Networking

port 1194
TCP/UDP port # for both local and remote

float Allow remote to change its IP or port

nobind Do not bind to local address and port

dev tun0
tun/tap device

dev_type tun
Type of used device

tun_ipv6 Make tun device IPv6 capable

ifconfig_noexec Don't actually execute ifconfig

ifconfig_nowarn Don't warn on ifconfig inconsistencies

route_noexec Don't add routes automatically

mtu_test Empirically measure MTU

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192.168.1.1/cgi-bin/luci;/stok=d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/advanced/AddSec... Search

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Maestro Quick Setup Status System Network Services Logout UNSAVED CHANGES: 1

Overview » Instance "AddSecureSystemAccess"
« Switch to basic configuration

Configuration category: Service | Networking | VPN | Cryptography

VPN

client Configure client mode

pull Accept options pushed from server

Username

Password 

-- Additional Field --
auth_user_pass
auth_retry
explicit_exit_notify
connect_retry
http_proxy
http_proxy_timeout
http_proxy_option
socks_proxy
socks_proxy_retry
resolv_retry
redirect_gateway

as-w591.cloud.io.t.addsecure.se 
 Remote host name or ip address

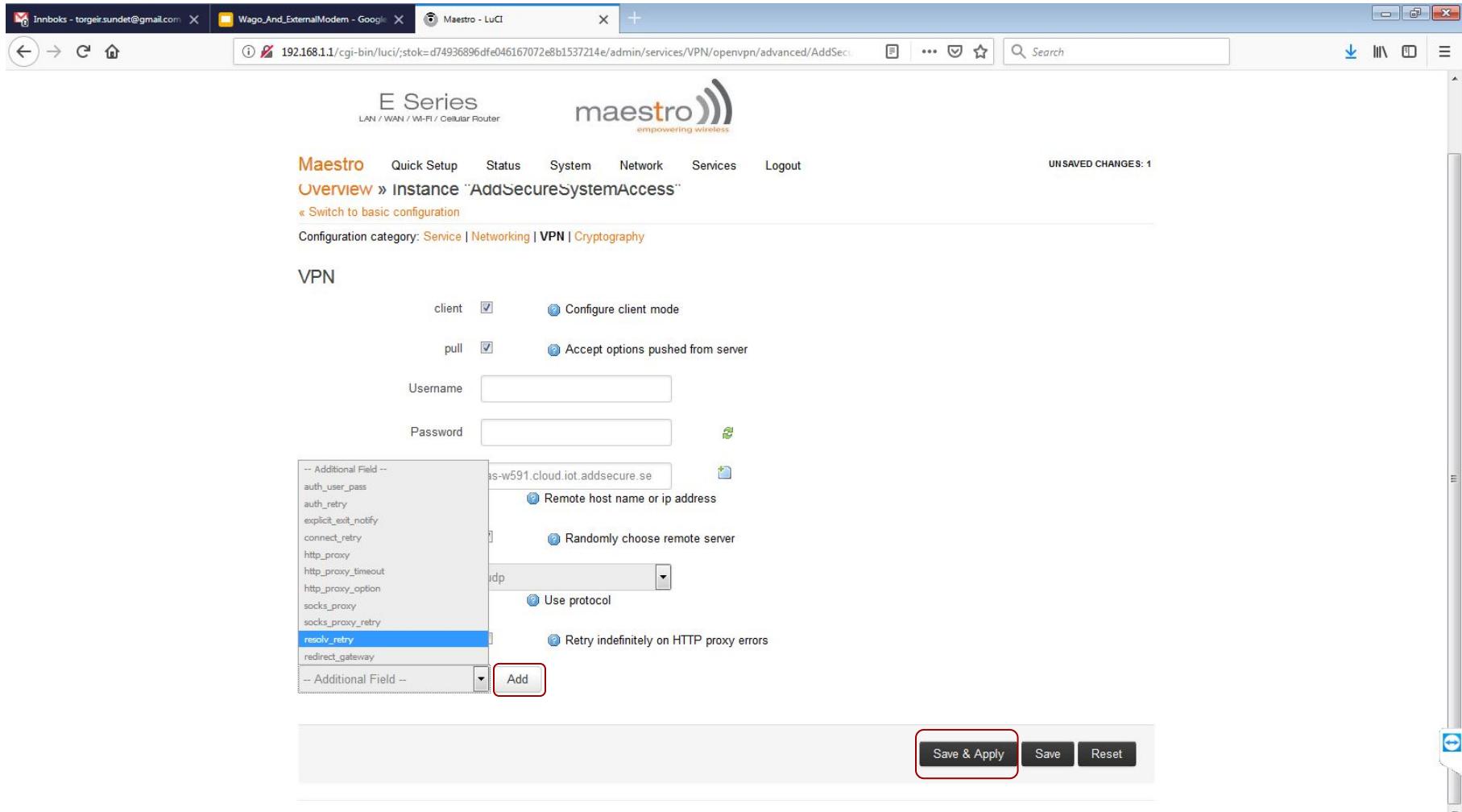
Randomly choose remote server

tcp/udp
 Use protocol

Retry indefinitely on HTTP proxy errors

- Additional Field - Add

Save & Apply **Save** **Reset**



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192.168.1.1/cgi-bin/luci/stok/d74936896dfe046167072e8b1537214e/admin/services/VPN/openvpn/advanced/AddSecure

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no_replay Disable replay protection

mute_replay_warnings Silence the output of replay warnings

no_iv Disable cipher initialisation vector

tls_client

cipher

engine

relay_window

relay_persist

dh

pkcs12

key_method

tls_cipher

tls_timeout

reneg_bytes

reneg_pkts

reneg_sec

hand_window

tran_window

tls_auth

tls_remote

ns_cert_type

remote_cert_tls

crl_verify

- Additional Field -

uploaded File (1.75 KB)
 Certificate authority

uploaded File (1.86 KB)
 Local certificate

uploaded File (930.00 B)
 Local private key

Allow only one session

Exit on TLS negotiation failure

Don't cache --askpass or --auth-user-pass passwords

Save & Apply

Oppdateringer av vilkårene for bruk X Wago_And_ExternalModem - Google Maestro - LuCI System accesses - Link Manager Problem loading page +

192.168.1.1/cgi-bin/luci/stok=c15737fa0fce5ef1e08de4ae395f35c4/admin/services/VPN/openvpn/advanced/AddSecureSy... Search

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Maestro Quick Setup Status System Network Services Logout

PPTP IPSEC OpenVPN

Overview » Instance "AddSecureSystemAccess"
« Switch to basic configuration

Configuration category: Service | Networking | VPN | Cryptography

Cryptography

cipher AES-128-CBC
 Encryption cipher for packets

no_replay
 Disable replay protection

mute_replay_warnings
 Silence the output of replay warnings

no_iv
 Disable cipher initialisation vector

tls_client
 Enable TLS and assume client role

ca Uploaded File (1.75 KB)

 Certificate authority

cert Uploaded File (1.86 KB)

 Local certificate

key Uploaded File (930.00 B)

 Local private key

single_session
 Allow only one session

Oppdateringer av vikarene for bruker X Wago_And_ExternalModem - Google X Maestro - LuCI X System accesses - Link Manager X Problem loading page X +

192.168.1.1/cgi-bin/luci/stok/c15737fa0cfef5f1e08de4ae395f35c4/admin/services/VPN/openvpn/advanced/AddSecureS...

Search

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Maestro Quick Setup Status System Network Services Logout

tls_client Enable TLS and assume client role

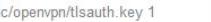
ca Uploaded File (1.75 KB) 
 Certificate authority

cert Uploaded File (1.86 KB) 
 Local certificate

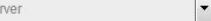
key Uploaded File (930.00 B) 
 Local private key

single_session Allow only one session

tls_exit Exit on TLS negotiation failure

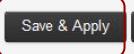
tls_auth /etc/openvpn/tlsauth.key 1 
 Additional authentication over TLS

auth_nocache Don't cache --askpass or --auth-user-pass passwords

remote_cert_tls server 
 Require explicit key usage on certificate

-- Additional Field --  Add

Save & Apply **Save** **Reset**



Administrating SSH/TLS in the Maestro modem

PPTP IPSEC OpenVPN

[Overview](#) » Instance "AddSecureSystemAccess"
« Switch to basic configuration

Configuration category: [Service](#) | [Networking](#) | [VPN](#) | [Cryptography](#)

tls_auth

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192.168.1.1/cgi-bin/luci/stok=d74936896dfe046167072e8b1537214e/admin/system/admin

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Maestro Quick Setup Status System Network Services Logout

Router Password
Changes the administrator password for access

Password: Confirmation:

System Administration Software Backup / Flash Firmware Custom Commands Reboot

SSH Access
Dropbear offers SSH network shell access and an integrated SCP server

Dropbear Instance

Interface: cellular: lan: openvpn_1: openvpn_2: wan: wwan: (no interfaces attached) unspecified

Configuring SSH access
for copying TLS file to modem

192.168.1.1/cgi-bin/luci/stok=d74936896dfe046167072e8b1537214e/admin/system/admin

The diagram illustrates the workflow for generating an SSH key and adding it to a Maestro device configuration.

PutTY Key Generator (Right Panel):

- Key:** Public key for pasting into OpenSSH authorized keys file:
ssh-rsa AAAAB3NzaC1yc2EAAAQABJQAAQEA...
ow3+GvFwbdOh20Q73WF/hxotViszq+zt6+FGpUuQ7JS
+likql4fabPostlGn2mN1P0L4zFAF1M5ByTGuYVzcMleXEY3AJ8Uld/w97XeEWoXdrM
- Key fingerprint:** ssh-rsa 2048 cb:c1:e3:8f:d2:ad:25:dc:c1:d9:2d:3b:8c:8d:03:37
- Key comment:** rsa-key-20181113
- Actions:**
 - Generate a public/private key pair **Generate**
 - Load an existing private key file **Load**
 - Save the generated key **Save public key** **Save private key**
- Parameters:**
 - Type of key to generate:
 SSH-2 RSA SSH-2 DSA
 - Number of bits in a generated key: 2048

Maestro Administration - LuCI (Top Center):

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Generate SSH Key using PuTTYgen

Quick S

Port: 22

Listen only on the given interface or, if unspecified, on all

Specifies the listening port of this Dropbear instance

Password authentication: Allow SSH password authentication

Gateway ports: Allow remote hosts to connect to local SSH forwarded ports

SSH-Keys (Bottom Left):

Add

SSH-Keys

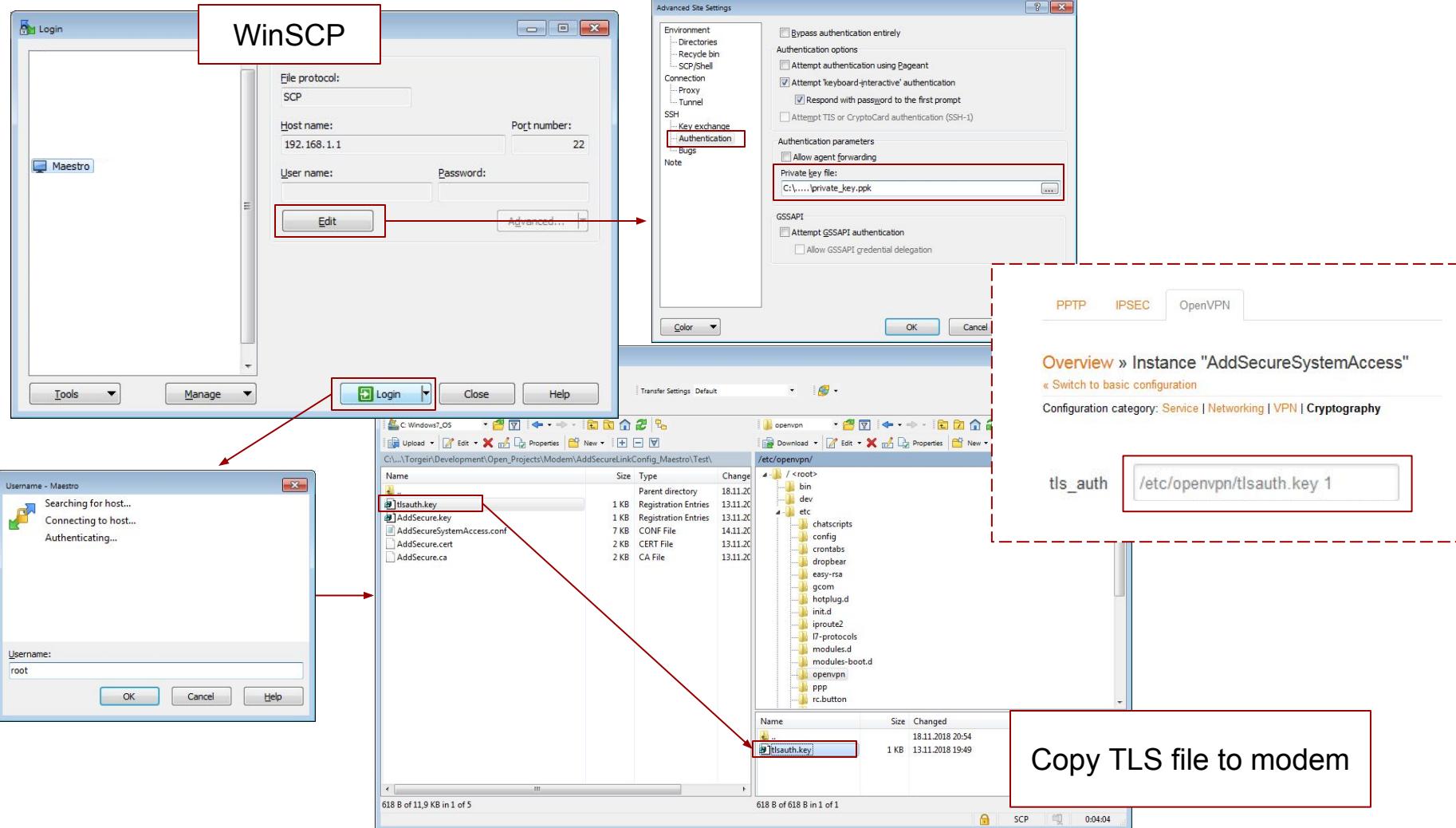
Here you can paste public SSH-Keys (one per line) for SSH public-key authentication.

private_key.ppk

public_key

Bottom Right Buttons:

Save & Apply **Save** **Reset**



Innbooks - torgeir.sundet@gmail.com X Wago_And_ExternalModem - Google X Maestro - OpenVPN - LuCI +

192.168.1.1/cgi-bin/luci/stok=3ed012d10802af73e256d079801fbc31/admin/services/VPN/openvpn/ Search

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Maestro Quick Setup Status System Network Services Logout AUTO REFRESH ON

PPTP IPSEC OpenVPN

OpenVPN

Back to Overview »

Profile Name	Status	Actions
OPENVPN_1 (tun0)	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	Connect Stop Edit
OPENVPN_2 (tun1)	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	Connect Stop Edit

OpenVPN instances

Below is a list of configured OpenVPN instances and their current state

	Enabled	Started	Start/Stop	Port	Protocol
AddSecureSystemAccess	<input checked="" type="checkbox"/>	no	start	1194	udp

Client configuration for an ethernet Add

Start OpenVPN Client in modem

Oppdateringer av vilkårene for bruk X Wago_And_ExternalModem - Google Maestro - OpenVPN - LuCI System accesses - Link Manager Problem loading page +

192.168.1.1/cgi-bin/luci/stok=c15737fa0cfef5ef1e08de4ae395f35c4/admin/services/VPN/openvpn

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Maestro Quick Setup Status System Network Services Logout AUTO REFRESH ON

PPTP IPSEC OpenVPN

OpenVPN

Back to Overview »

Profile Name	Status	Actions
OPENVPN_1	Uptime: 0h 14m 10s RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.) IPv4: 100.127.136.78/32	
OPENVPN_2	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	

Assigned VPN-IP from AddSecure OpenVPN Server

OpenVPN instances

Below is a list of configured OpenVPN instances and their current state

Enabled	Started	Start/Stop	Port	Protocol	
<input checked="" type="checkbox"/>	yes (26476)	 stop	1194	udp	 Edit  Delete

Client configuration for an ethernet 



Oppdateringer av viktige informasjoner

Wago_And_ExternalModem - Google

Maestro - Reboot - LuCI

System accesses - Link Manager

Problem loading page

192.168.1.1/cgi-bin/luci/stok=c15737fa0cfe5ef1e08de4ae395f35c4/admin/system/reboot

Search

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Maestro Quick Setup Status System Network Services Logout

Reboot Schedule Reboot

System

Reboot

Reboots the operating system of your device

 Reboot

Oppdateringer av vikkarene for bruk X Wago_And_ExternalModem - Google X Connections - Link Manager X WAGO Ethernet Web-based Management X Maestro - System Log - LuCI +

192.168.1.1/cgi-bin/luci/stok=8147563bf0e88e44660fe671c126a257/admin/status/syslog

Search

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Maestro Quick Setup Status System Network Services Logout

Overview reSystemAccess)[1359]: Closing TUN/TAP interface
Firewall reSystemAccess)[1359]: /sbin/ifconfig tun0 0.0.0.0
Routes interface 'tun0' link is down
jenvpn_1 has link connectivity loss
jenvpn_1 is now down
jenvpn_1 is disabled
System Log [SystemAccess][1359]: SIGTERM[hard.] received, process exiting
Realtime Graphs

Communication with AddSecure OpenVPN Server Running OK !

```
Mon Nov 19 10:57:56 2018 daemon.warn openvpn[AddSecureSystemAccess][6116]: WARNING: file '/lib/uci/upload/cbid.openvpn.AddSecureSystemAccess.key'  
Mon Nov 19 10:57:56 2018 daemon.warn openvpn[AddSecureSystemAccess][6116]: WARNING: file '/etc/openvpn/tlsauth.key' is group or others accessible  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Control Channel Authentication: using '/etc/openvpn/tlsauth.key' as a Open  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Outgoing Control Channel Authentication: Using 160 bit message hash 'SH  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Incoming Control Channel Authentication: Using 160 bit message hash 'SH  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Socket Buffers: R=[163840->131072] S=[163840->131072]  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: UDPv4 link local: [undef]  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: UDPv4 link remote: [AF_INET]85.117.180.197:1194  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: TLS: Initial packet from [AF_INET]85.117.180.197:1194, sid=fc91e476 9ebf  
Mon Nov 19 10:57:56 2018 user.notice 32-vpn: ifup:cellular:wwan0  
Mon Nov 19 10:57:56 2018 user.notice 32-vpn: INTERFACE_UPDOWN::cellular::wwan0::ifup  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: VERIFY OK: depth=1, C=SE, ST=EU, L=Gothenburg, O=as-w591.cloud.io  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Validating certificate key usage  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: ++ Certificate has key usage 00a0, expects 00a0  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: VERIFY KU OK  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Validating certificate extended key usage  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: ++ Certificate has EKU (str) TLS Web Server Authentication, expects TLS  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: VERIFY EKU OK  
Mon Nov 19 10:57:56 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: VERIFY OK: depth=0, C=SE, ST=EU, L=Gothenburg, O=as-w591.cloud.io  
Mon Nov 19 10:57:56 2018 user.notice Content filtering: Stopped  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Data Channel Encrypt: Cipher 'AES-128-CBC' initialized with 128 bit key  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Data Channel Encrypt: Using 160 bit message hash 'SHA1' for HMAC auth  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Data Channel Decrypt: Cipher 'AES-128-CBC' initialized with 128 bit key  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Data Channel Decrypt: Using 160 bit message hash 'SHA1' for HMAC auth  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Control Channel: TLSv1, cipher TLSv1/SSLv3 DHE-RSA-AES256-SHA, 102  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Control Channel: TLSv1/SSLv3 DHE-RSA-AES256-SHA, 102  
Mon Nov 19 10:57:58 2018 daemon.notice openvpn[AddSecureSystemAccess][6116]: Session Certificate1 successfully loaded.
```

Oppdateringer av vilkårene for bruk X Wago_And_ExternalModem - Google X Connections - Link Manager X WAGO Ethernet Web-based Management X Maestro - System Log - LuCI X WAGO Ethernet Web-based Management X +

192.168.1.130/wbm/index.php#information

Web-based Management
WAGO 750-8202 PFC200 CS 2ETH RS

Login

192.168.1.130/wbm/index.php#information

All nodes in remote network are now accessible via AddSecure System Access !

Firmware Revision: 02.08.31(11)

PLC Switch RUN

LEDs U6 (SYS) U5 (RUN) U4 (IO)

Network Details X1

State: ✓ enabled

MAC Address:

IP Address:

Subnet Mask:

Network Details X2

State: ✓ enabled

MAC Address: 00:30:de:40:68:1c

IP Address: 192.168.3.117 (dhcp)

Subnet Mask: 255.255.255.0

OpenVPN Client on PC connects to AddSecure OpenVPN Server !

Connect AddSecure-VPN-2-User-2-Windows

Disconnect

Show Status

View Log

Edit Config

Clear Saved Passwords

Import file...

Settings...

Exit

Customize...

WAGO • Hansastr. 27 • D-32423 Minden • WAGO is a registered

11:18

Backup/Restore of Maestro Configuration

Google Contacts X Wago_And_MaestroModem - Google ... Maestro - Backup / Flash Firmware + WAGO Ethernet Web-based Management X

192.168.1.1/cgi-bin/luci/stok=7d9caa2000483d7ac6433956971709d/admin/system/flashops

Search

E Series maestro empowering wireless

Maestro Quick Setup Status System Network Services Logout

Flash operations

Actions Configuration

System Administration Software **Backup / Flash Firmware**

Custom Commands Reboot

Backup / Restore

Click "Generate archive" to download a tar archive with squashfs images.

Download backup: Generate archive

Reset to defaults: Perform reset

To restore configuration files, you can upload a previously generated backup archive here.

Restore backup: Browse... No file selected. Upload archive...

Flash new firmware image

Upload a sysupgrade-compatible image here to replace the running firmware. Check "Keep settings" to retain compatible firmware image.

Keep settings:

Image: Browse... No file selected. Flash image...

Opening backup-Maestro-2018-11-19.tar.gz

You have chosen to open:

backup-Maestro-2018-11-19.tar.gz
which is: gzip
from: http://192.168.1.1

What should Firefox do with this file?

Open with Browse...
 Save File

Do this automatically for files like this from now on.

OK Cancel

192.168.1.1/cgi-bin/luci/stok=7d9caa2000483d7ac6433956971709d/admin/system/flashops