



General

This document describes the initial steps and actions that are necessary to connect an **mbNET** router to the **mbCONNECT24** portal server.

Prerequisites/components:

mbCONNECT24	from V 1.5.0
mbDIALUP*	from V 3.0
mbCHECK*	from V 1.1.1
mbNET*	from V 3.2.0 firmware

*The latest version can be downloaded from www.mbconnectline.com.

General explanation of symbols



Note



Important

mbCONNECT24 – Explanation of symbols



Add New Entry



Edit Entry



Download/transfer mbconnect24.mbn(x) configuration file



Establish VPN connection from machine to portal



Stop VPN connection

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remote maintenance so-
lutions

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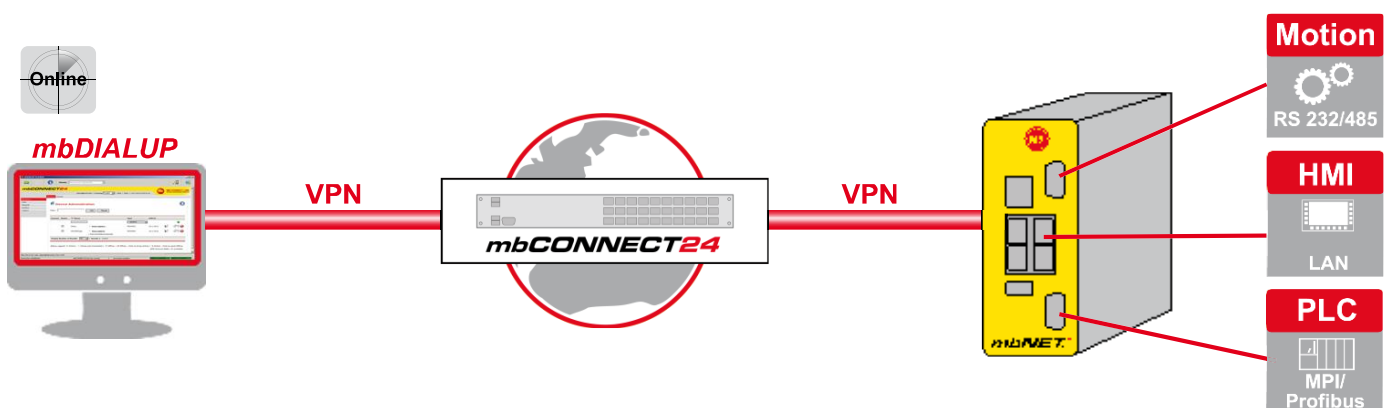
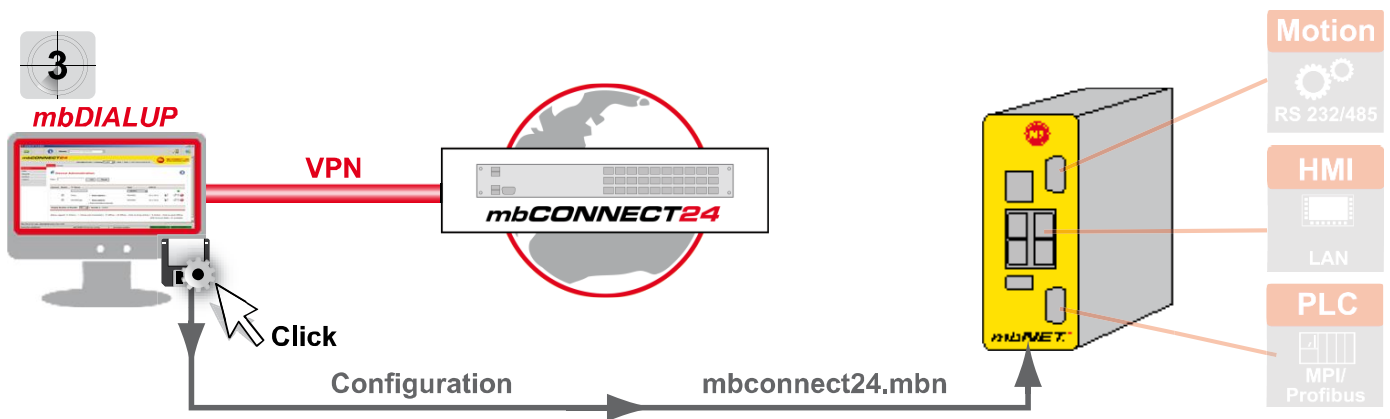
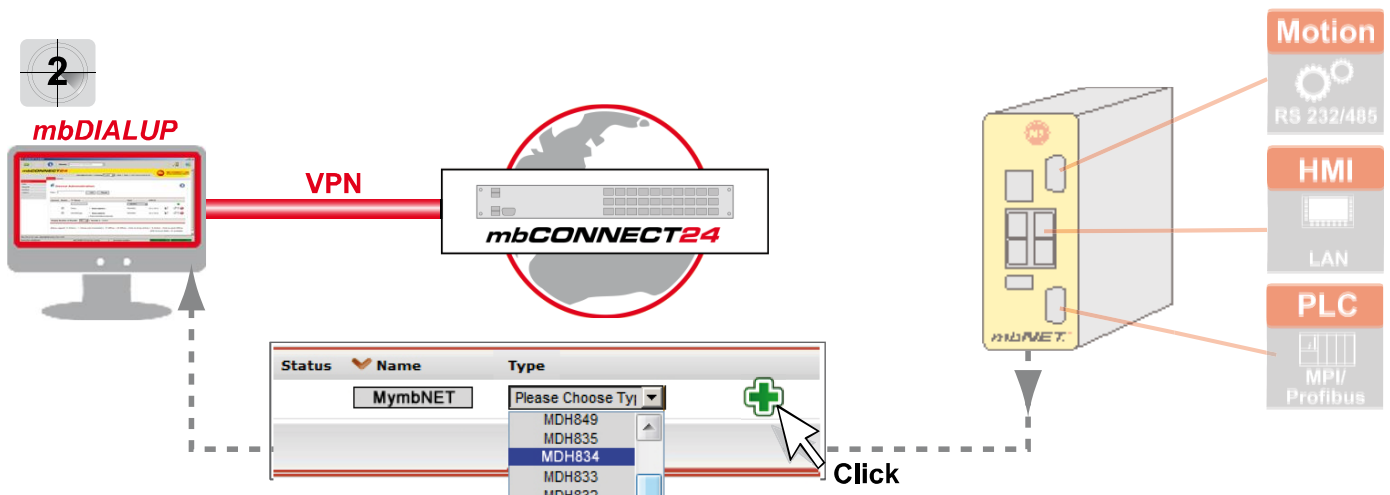
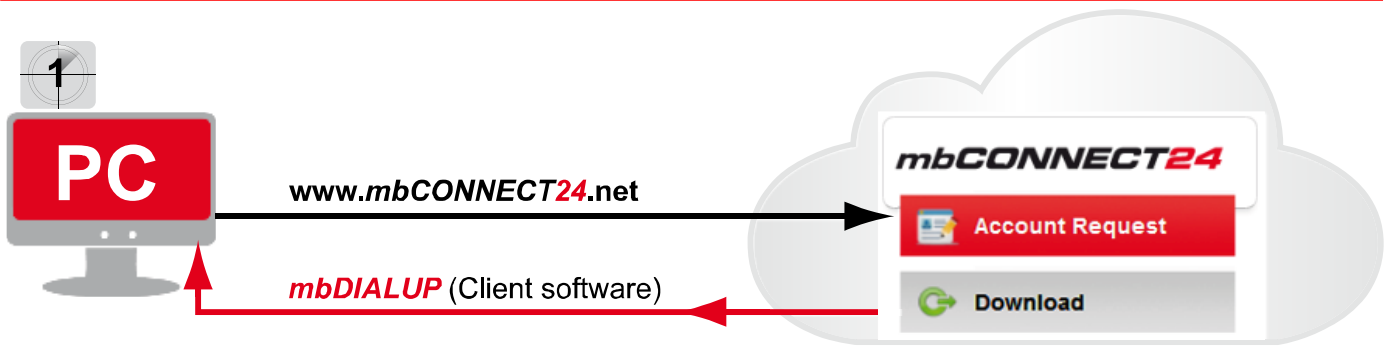
Despite a detailed description of the device and its functions, we cannot be held liable for the correctness of the content.

The latest information can be obtained on our homepage.

We welcome any comments or suggestions for improvement.

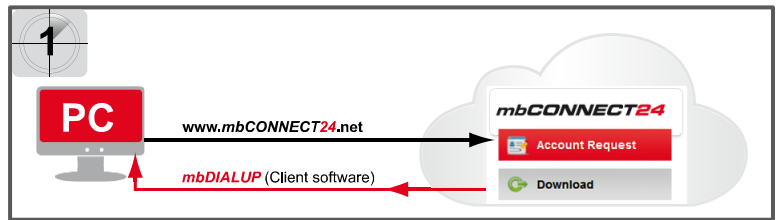
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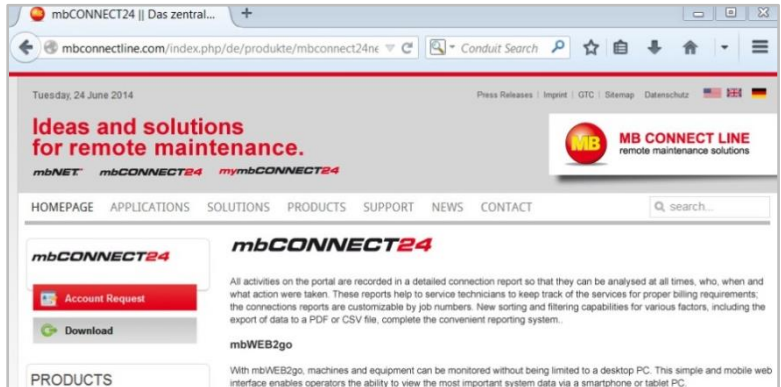
1. mbCONNECT24.net login

Please go to www.mbconnect24.net to download the software required for secure connection to the portal.



If you still cannot access the portal, simply register under **"Request Access"**. Once you have registered, you will receive an e-mail containing your access details.

Click on **"Download"** to access the secure Downloads area.





1.1 Software installation

Under **"Software"**, load the programs **"setupmbdialup"** and **"mbcheck USA / CAN"** or **"mbcheck EUROPE"**.

If, when logging in to **mbCONNECT24**, you selected the server location **USA/Canada** you will need the **"mbcheck USA / CAN"** file.

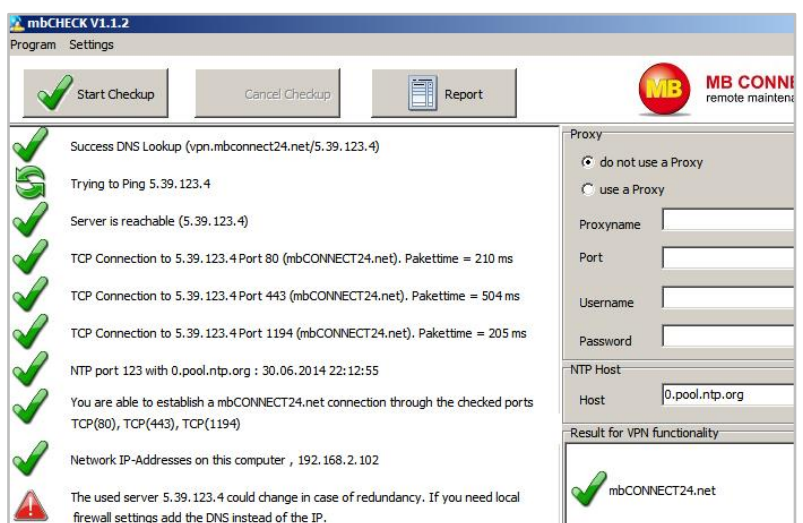
If you selected the **Europe** server location, you will need the **"mbcheck EUROPE"** file.

Software Downloads

Filename	Version	
mbCHECK (EUROPE) 	V 1.1.2	Size: 784K Checksum: 1055835a4fc2a1ae72e3e0c30a5f5487
mbCHECK (USA/CAN) 	V 1.1.2	Size: 784K Checksum: 3f4ec5812b4ea9b0beca785206a30ea
mbDIALUP	V 3.1 R0.2	Size: 22M Checksum: d7a90a0e4320054f2c39e9298e90b67a

1.2 mbCHECK

After downloading and extracting the two files, you will first need to run the **"mbcheck.exe"** program. The program checks that at least one of the 80TCP, 443TCP or 1194TCP ports is enabled in the firewall. At least one of these ports is needed by **mbDIALUP** and the **mbNET** router for connection to **mbCONNECT24**. You will then be notified whether connection via **mbDIALUP** to the **mbCONNECT24** portal is possible.



*The data vary depending on the server selected:


(vpn.mbconnect24.net/5.39.123.4) = EUROPE server selected
(vpn.mbconnect24.us/198.50.162.20) = USA/CAN server selected

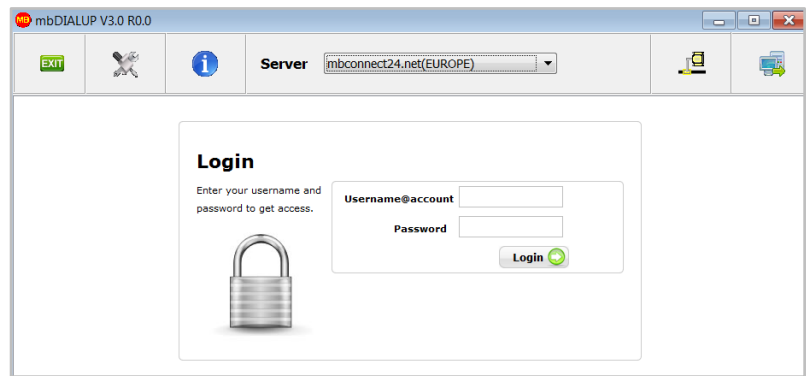


mbDIALUP

The **mbDIALUP** client software enables you to establish a secure VPN connection to the **mbCONNECT24** portal server.

To install **mbDIALUP**, run the "setupmbdialup.exe" program and then start the program.


 During the installation process, you must ensure that you are logged in as Administrator.



1.2.1 Selecting the server

Before you connect to the portal server for the first time, please select your mbconnect24.net server.

Please also make sure that you select the same server as when you logged in to mbCONNECT24 under "Server Location".

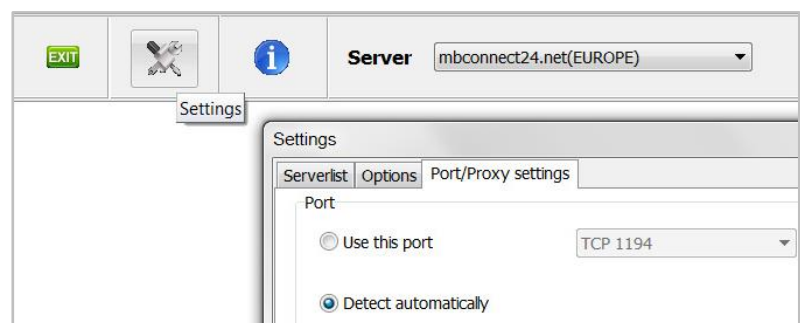
 **If you do not select the correct server, it is not possible to establish a connection.**

If, for example, you selected Europe as the server location when logging in to **mbCONNECT24** and you now select "mbconnect24.us (USA/CAN)", you will receive an "Authentication failed" error message when trying to connect to the portal.



1.2.2 Access via the proxy server

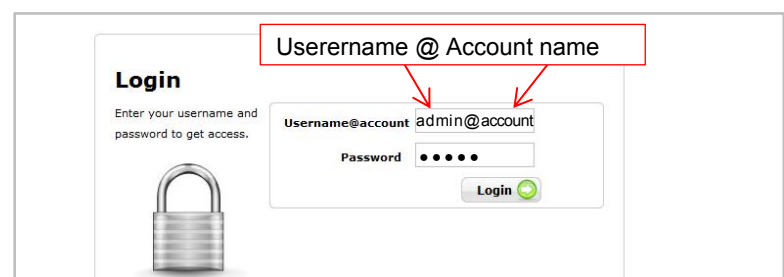
If the Internet can only be accessed via a proxy server, the relevant settings can be applied in the menu "Settings", submenu "Port/Proxy settings".



1.3 mbCONNECT24 login

You can now log in to the portal with the user data (username, password) that were sent to you when you registered.

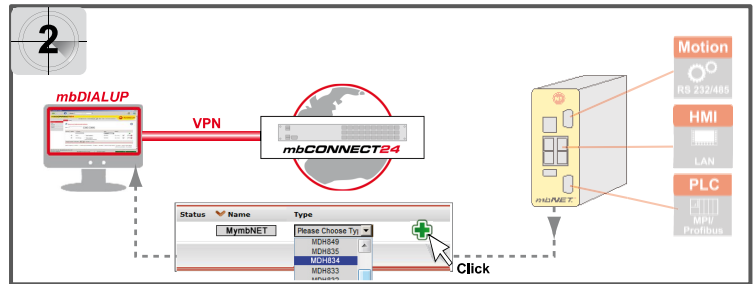
A secure VPN connection to your account on **mbCONNECT24** is now established.



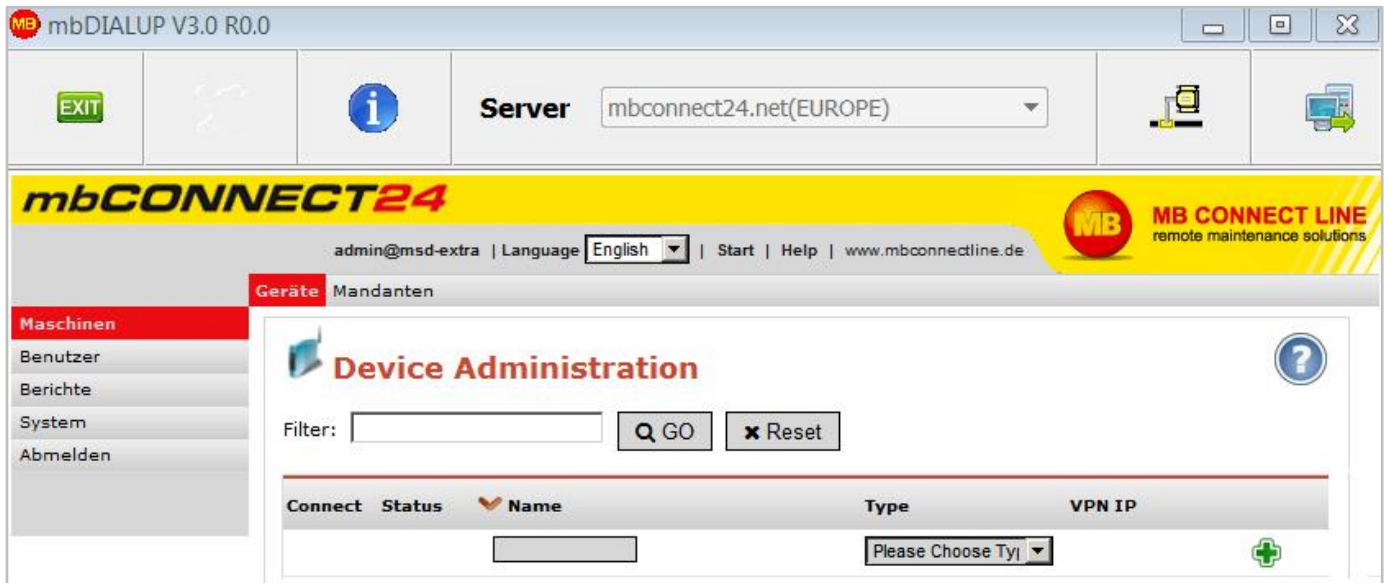
2. mbCONNECT24 Configuration

Here you can:

- create a new device
- generate a configuration file and
- transfer it to your **mbNET**

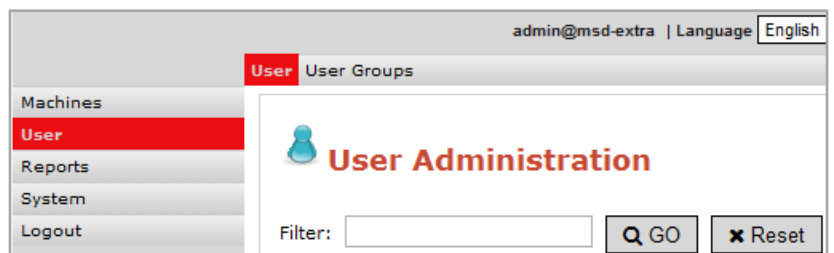


If the VPN connection is established, the browser window of your account opens on **mbCONNECT24**.



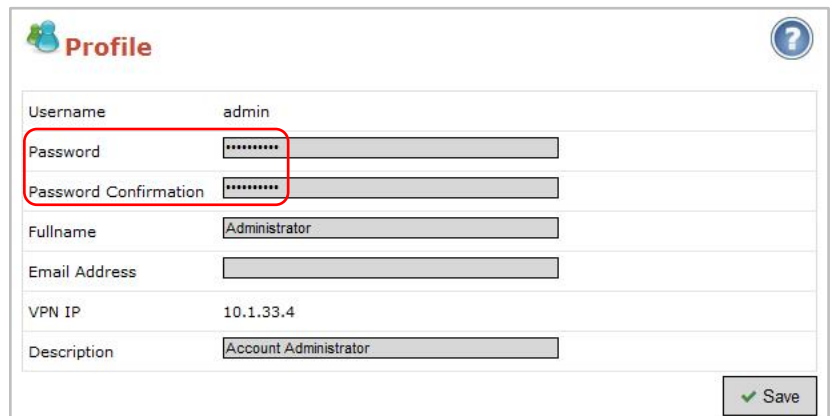
2.1 Changing your user data/password

Before you start the configuration, you must first go to **User Administration / User** and change your password. To do this, click on your username in the information bar at the top



and change your password in the **Profile** window that appears next.

i Once you have saved the changes, your new password is effective the next time you log in to the portal.



2.2 Creating a device

Go to the **Machines/Devices** menu and assign a unique designation under **Name** ①.

i You can choose any designation – although only the following numbers and/or letters are allowed:
0 to 9, A to Z, a to z

Select your device from the drop-down field **Type** ② and click on **Add** ③.

2.2.1 Description

Once you have added the new device, the actual configuration menu opens.

i Depending on the device type selected, the input/drop-down fields may vary here.

2.2.2 Network

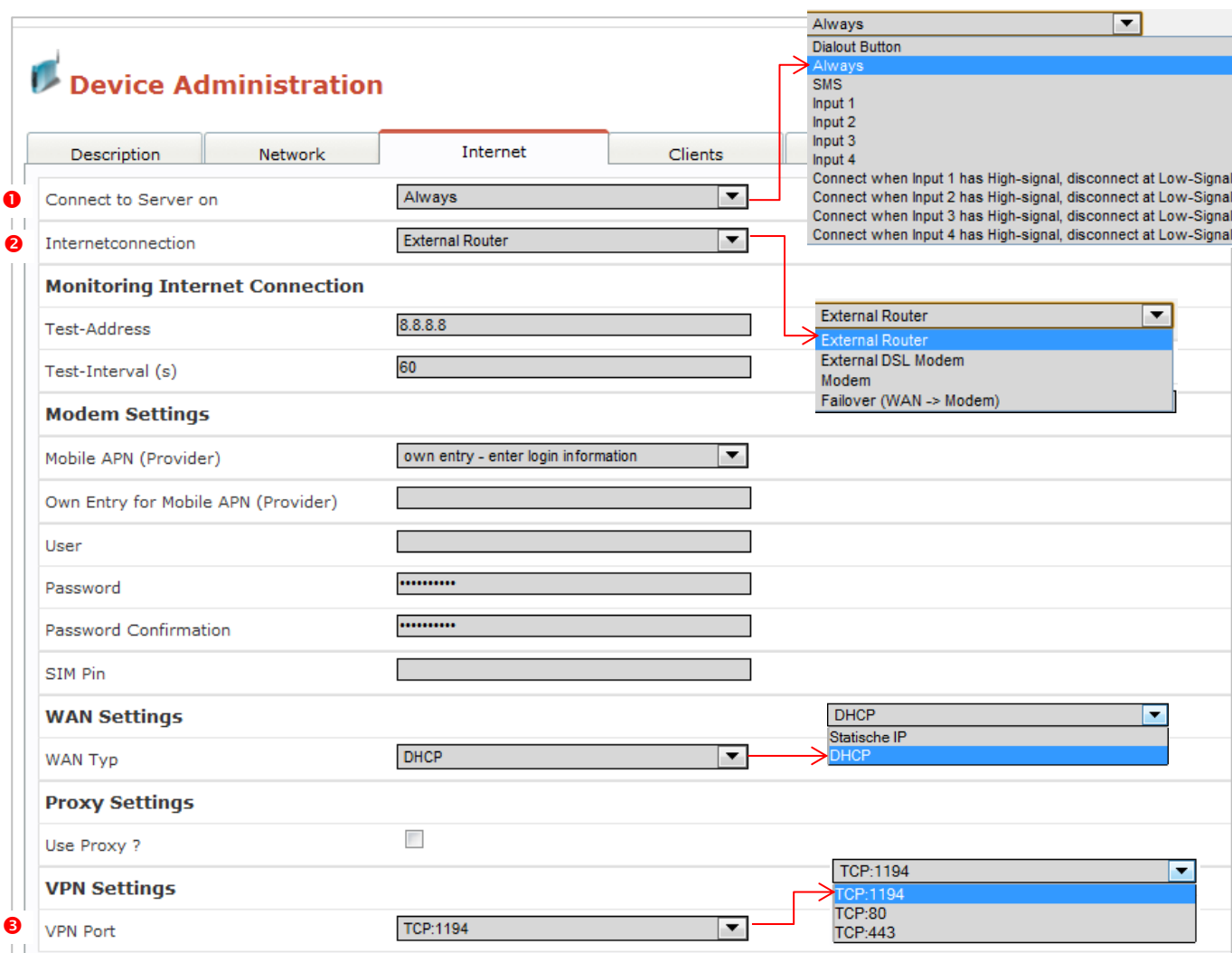
Enter a free LAN IP address and the netmask from your system or machine network.

! Make sure that the **LAN IP** and **WAN IP** are in different address ranges.

2.2.3 Internet

You will need to specify:

- ① when the device should be connected to the portal
- ② how the Internet connection should be established
- ③ which VPN port should be used (which of the three ports is free was determined by **mbCHECK**)



Device Administration

Connect to Server on: Always

Internetconnection: External Router

Monitoring Internet Connection

Test-Address: 8.8.8.8

Test-Interval (s): 60

Modem Settings

Mobile APN (Provider): own entry - enter login information

Own Entry for Mobile APN (Provider):

User:

Password:

Password Confirmation:

SIM Pin:

WAN Settings

WAN Typ: DHCP

Proxy Settings

Use Proxy ?

VPN Settings

VPN Port: TCP:1194

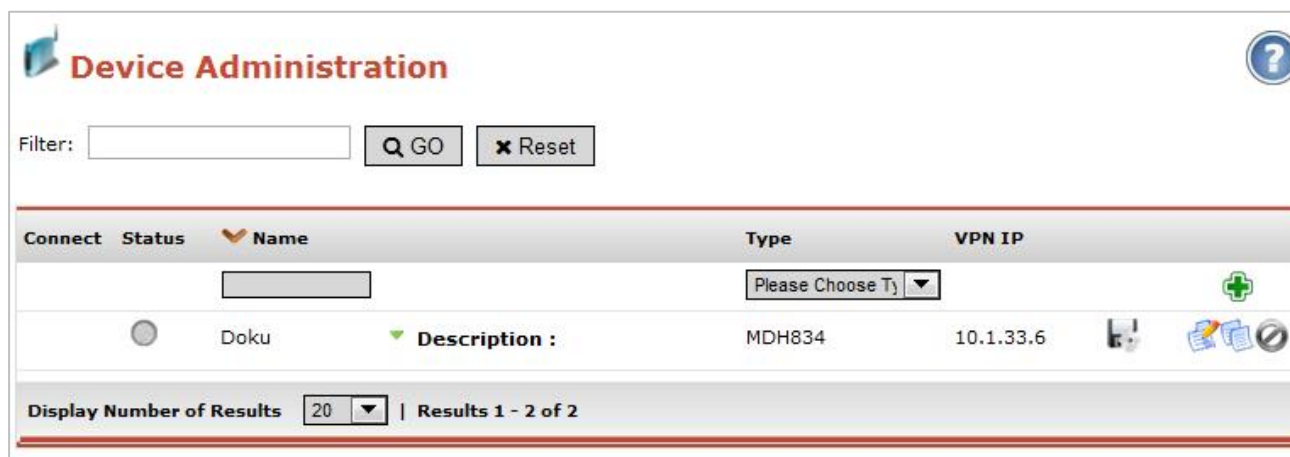
Dropdown 1 (Connect to Server on): Always, Dialout Button, Always, SMS, Input 1, Input 2, Input 3, Input 4, Connect when Input 1 has High-signal, disconnect at Low-Signal, Connect when Input 2 has High-signal, disconnect at Low-Signal, Connect when Input 3 has High-signal, disconnect at Low-Signal, Connect when Input 4 has High-signal, disconnect at Low-Signal

Dropdown 2 (Internetconnection): External Router, External Router, External DSL Modem, Modem, Failover (WAN -> Modem)

Dropdown 3 (WAN Typ): DHCP, Statische IP, DHCP

Dropdown 4 (VPN Port): TCP:1194, TCP:1194, TCP:80, TCP:443

After saving the settings, the main Device Administration window appears showing the device overview.



Device Administration

Filter:

Connect	Status	Name	Type	VPN IP
		<input type="text"/>	Please Choose Ty	
		Doku	MDH834	10.1.33.6

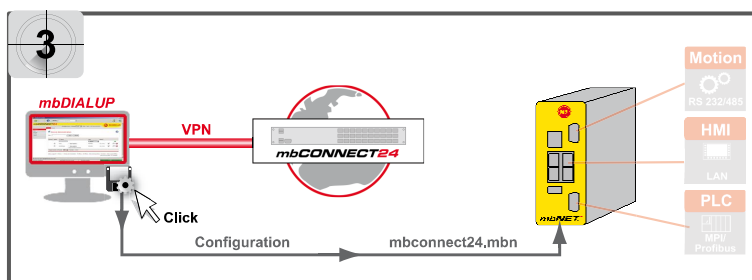
Display Number of Results: 20 | Results 1 - 2 of 2

3. Transferring the configuration to **mbNET**

The following options are available for transfer of the configuration file:

- **Download configuration to PC**
- **Submit configuration to device**
- **Prepare configuration for CTM***

*This option is not relevant for the initial configuration and is thus not described in further detail here.



Once you have created a new device, click on the disk symbol to select the transfer type.

Device Administration

Filter:

Connect	Status	Name	Type	VPN IP	
<input type="checkbox"/>		Doku	MDH834	10.1.33.6	<div> <div> </div> <div> Download to PC Submit to device Prepare for CTM </div> </div>

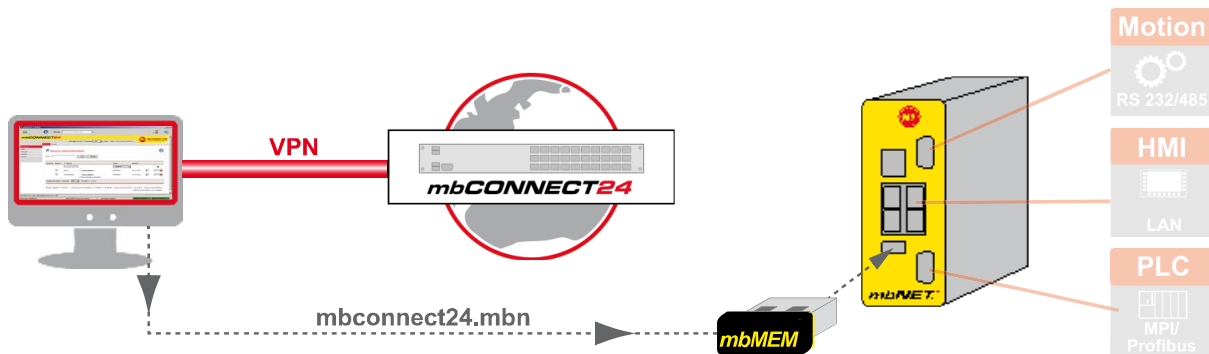
Selection of the transfer type is based on two essential criteria:

Downloading configuration to PC	Submitting configuration to device
<ul style="list-style-type: none"> • The configuration PC has a VPN connection to the portal • The mbNET has no LAN connection • The mbNET has no connection to the portal 	<ul style="list-style-type: none"> • The configuration PC has a VPN connection to the portal • The mbNET is connected to the PC network via the LAN interface • The mbNET does not have/require a connection to the portal

3.1 Downloading configuration to PC

Select this transfer type if the device is neither connected to a computer via LAN nor has a connection to the **mbCONNECT24** portal.

After clicking on "Download configuration to PC", the "mbconnect24.mbn/-mbnx" configuration file is saved on the configuration PC or directly on a USB drive connected to it.



IMPORTANT: The downloaded "mbconnect24.mbn/.mbnx" configuration file may **not** be renamed and must be stored in the top-level directory of the USB drive. The USB drive must have the file format FAT.

3.1.1 Importing the configuration into the device

If the **mbNET** is connected to the power supply and is ready for operation, insert the USB drive with the configuration file into the USB interface of the **mbNET**.

As soon as the device has recognized the configuration file, LEDs **Fc1** + **Fc2** start to **flash** synchronously.

Now press and hold down the **Dial Out** button

until LED **Fc3** flashes.

The settings from **mbCONNECT24** are now automatically copied to the **mbNET** and the device reboots.

If the **mbNET** is able to connect to the Internet (e.g. network, telephone cable, SIM card, antennae installed), the device will subsequently log in to your account. This is displayed by the flashing LED "**Con**".

If the flashing frequency of the LED **Con** is 3 Hz, the device attempts to log into the portal.

If the login is successful, the flashing frequency is reduced to 1.5 Hz.

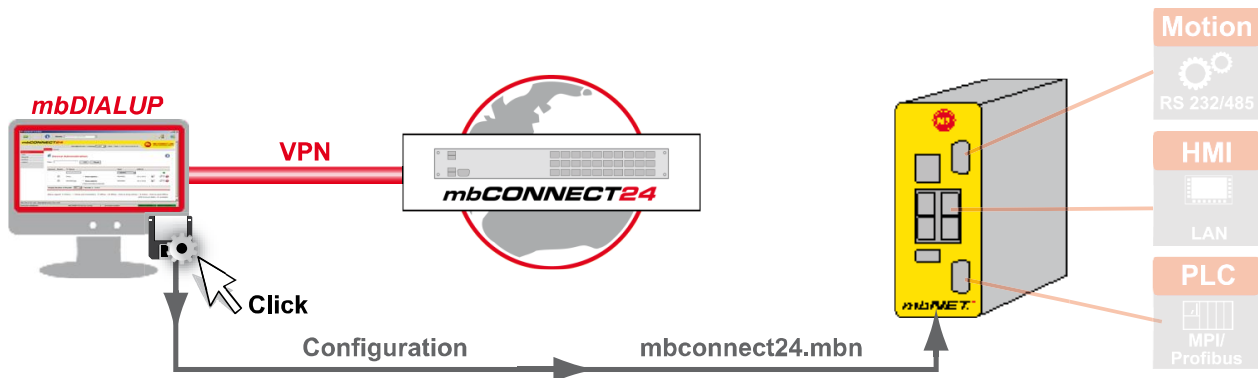


In rare instances, the design of the portable USB drive used may make it unsuitable for this procedure. In this case, please use another USB drive.

Once the "mbconnect24.mbn/-mbnx" configuration file has been imported, it is automatically renamed and is now stored on the USB drive as "**Xmbconnect24.mbn/-mbnx**".

3.2 Submit configuration to device

Select this transfer type if the device is connected to the PC via a LAN interface (it must be possible to access the **mbNET** on the LAN from the PC, irrespective of its LAN IP) and the computer has a connection to the **mbCONNECT24** portal.



After clicking "Submit configuration to device", the system performs a scan of all devices connected to the LAN interface and displays them.

If the assignment of the configuration file to the identified device is correct, click on "go >>" to confirm

select local configuration file: MDH834|211383405693|Doku

searching for device: Doku, Type = MDH834, Serialnumber = 211383405693

Serialnumber	Name	Type	IP-Address	Subnetmask	MAC
17139000002	WindPower	MDH900	213.219.3.202	255.255.255.0	00:50:C2:FE:9F:ED
211383405693	Doku	MDH834	192.168.0.111	255.255.0.0	00:50:C2:FE:9A:48
081490500000...	mbSPIDER	MDH905	172.25.13.5	255.255.0.0	00:50:C3:71:7A:90
50118109919	mbNET	MDH810	0.80.194.113	0.80.194.113	00:50:C2:71:70:12

<< back go >> CANCEL

In the following window click on "start configuration transfer"

select local configuration file: MDH834|211383405693|Doku

configure device: Doku, Type = MDH834, Serialnumber = 211383405693

- checking firmwareversion
- transfer configuration file
- activate configuration
- reboot device
- wait for device
- finished

start configuration transfer

<< back go >> CANCEL

The settings from **mbCONNECT24** are now copied to the device.

If all items have been processed, acknowledge the transfer by clicking the "Finished" button.

configure device: Doku, Type = MDH834, Serialnumber = 211383405693

- checking firmwareversion
- transfer configuration file
- activate configuration
- reboot device
- wait for device
- finished

start configuration transfer

<< back Finished

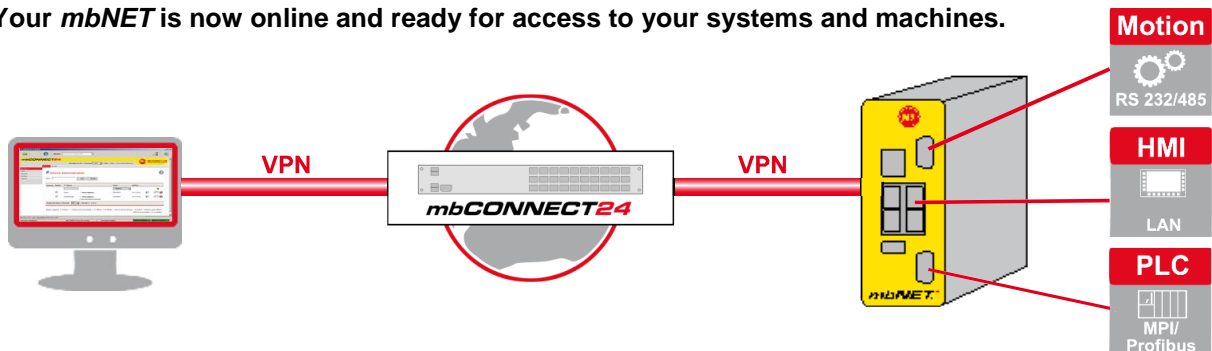
If the **mbNET** is able to connect to the Internet (e.g. network, telephone cable, SIM card, antennae installed), the device will subsequently log in to your account.



This is displayed by the flashing LED "Con".








If the flashing frequency of the LED **Con** is 3 Hz, the device attempts to log into the portal.
If the login is successful, the flashing frequency is reduced to 1.5 Hz.

Your **mbNET** is now online and ready for access to your systems and machines.




Device Administration


Filter:

Connect	Status	Name	Type	VPN IP	
		Doku	MDH834	10.1.33.6	  

Display Number of Results | Results 1 - 2 of 2

4. Access to devices and machines

If the **mbNET** has connected to the Internet and logged into your account, the selection menu **1** for the available devices is displayed on the left in the account window of the Administration area.

You can connect to the relevant machine using the button **2** or the icon **2** "Connect".

mbDIALUP V3.0 R0.0

Server: mbconnect24.net(EUROPE)

admin@msd-extra | Language: English | Start | Help | www.mbconnectline.de

mbCONNECT24 MB CONNECT LINE remote maintenance solutions

Device Administration

Filter:

Connect	Status	Name	Type	VPN IP
2		Doku	MDH834	10.1.33.6

Display Number of Results: 20 | Results 1 - 1 of 1

Status Legend: Online | Online and Connected | Offline | Offline - Click to bring Online | Online - Click to send Offline

SMS Account State: 10 available

mbCONNECT24 - V1.5.0

Time: 00.03.07, User: admin@msd-extra, Port:1194

Connection established mbCONNECT24 Service running 1

Once the connection has been established, the status LED changes **3** from green to yellow and you can now access the machine.

You can end the connection using the button **4** or icon **4** "Disconnect".

mbDIALUP V3.0 R0.0

Server: mbconnect24.net(EUROPE)

admin@msd-extra | Language: English | Start | Help | www.mbconnectline.de

mbCONNECT24 MB CONNECT LINE remote maintenance solutions

Device Administration

Filter:

Connect	Status	Name	Type	VPN IP
4	3	Doku	MDH834	10.1.33.6

Display Number of Results: 20 | Results 1 - 1 of 1

Status Legend: Online | Online and Connected | Offline | Offline - Click to bring Online | Online - Click to send Offline

SMS Account State: 10 available

No more Connection Licences available.

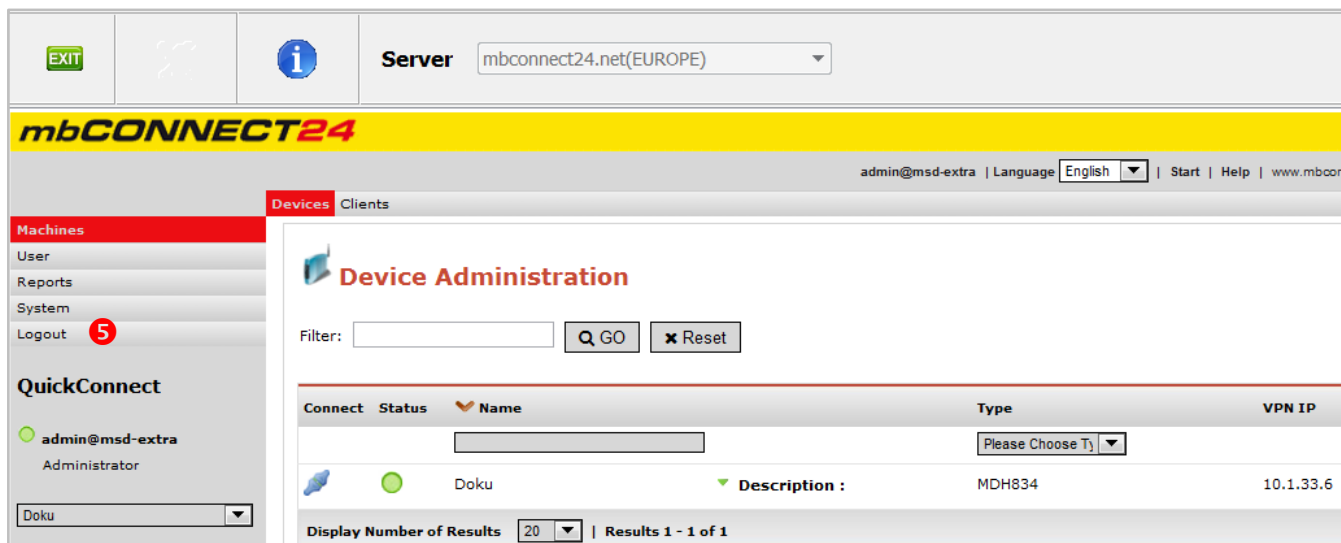
mbCONNECT24 - V1.5.0

Time: 00.04.13, User: admin@msd-extra, Port:1194, 10.1.33.6 / 172.25.0.0/16


Connection established mbCONNECT24 Service running 1

5. Quit the mbCONNECT24 session

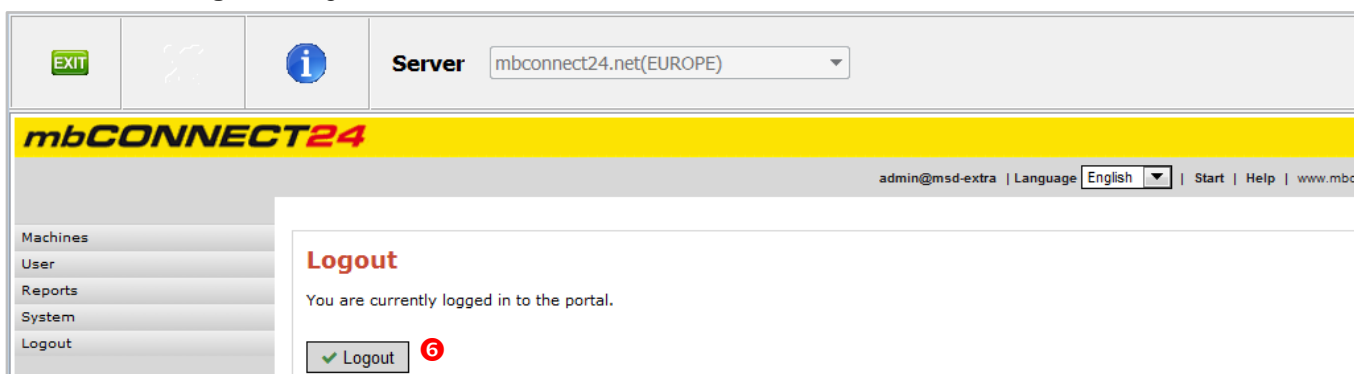
To end your **mbCONNECT24** session properly, click on the "Logout" **5** button.



The screenshot shows the mbCONNECT24 web interface. The top navigation bar includes an EXIT button, a server dropdown menu set to 'mbconnect24.net(EUROPE)', and user information. The left sidebar contains a 'Logout' button with a red circle and the number 5. The main content area is titled 'Device Administration' and displays a table of connected devices. The table has columns for Connect, Status, Name, Type, and VPN IP. One device named 'Doku' is listed with status 'Online' and IP '10.1.33.6'. The 'Logout' button is highlighted with a red circle and the number 5.

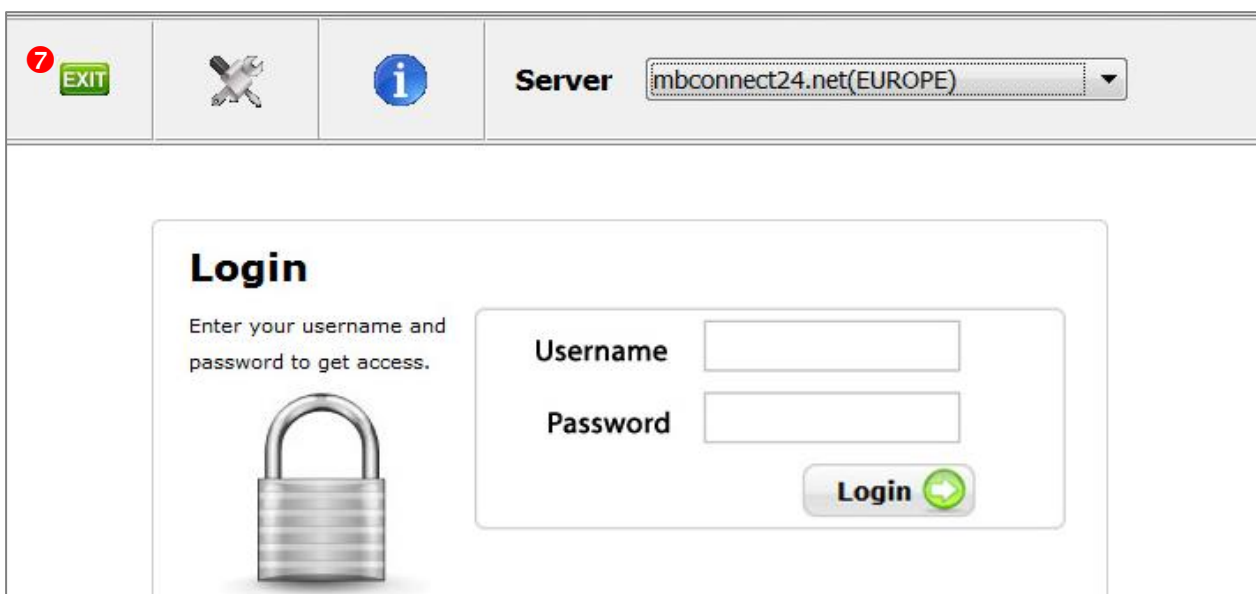
Connect	Status	Name	Type	VPN IP
	Online	Doku	MDH834	10.1.33.6

Then click on "Logout" **6** again to confirm.



The screenshot shows the mbCONNECT24 web interface after clicking the Logout button. The main content area displays a 'Logout' confirmation message: 'You are currently logged in to the portal.' Below the message is a 'Logout' button with a green checkmark and a red circle and the number 6.

Click on "EXIT" **7** to end the **mbDIALUP** client software.



The screenshot shows the mbDIALUP client software interface. The top navigation bar includes an EXIT button with a red circle and the number 7, a server dropdown menu set to 'mbconnect24.net(EUROPE)', and user information. The main content area is titled 'Login' and displays a login form with fields for Username and Password, and a Login button with a green arrow. A padlock icon is shown next to the login instructions.



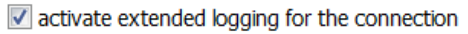
You can find more detailed information at www.mbconnectline.com



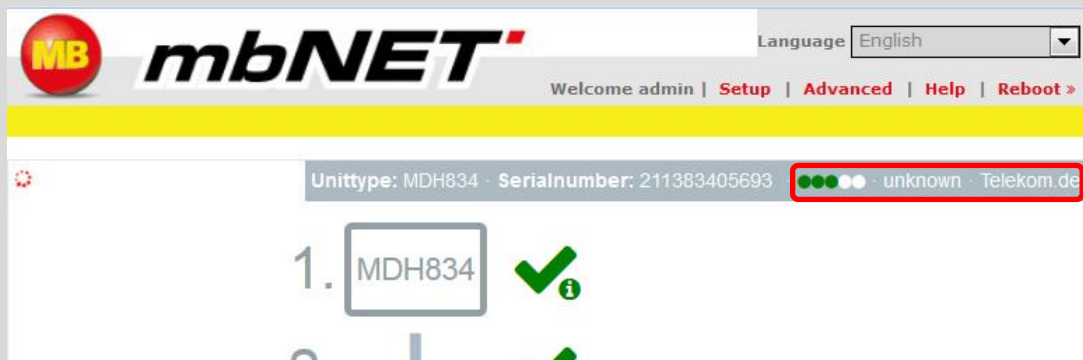
6. FAQ

Q	What is the difference between the two configuration files mbconnect24.mbn and mbconnect24.mbnx ?								
A	<p>Unlike mbconnect24.mbn, the mbconnect24.mbnx configuration file is an encrypted file and can only be processed/decoded using firmware from version V 3.2.0.</p> <p>An mbconnect24.mbn file can be transferred to any mbNET of the same type, as long as the device type is identical to the type in the configuration file and the configuration file does not contain a serial number.</p> <p>Example: If the device configuration was set up for an MDH818-type mbNET, the mbconnect24.mbn can be transferred to any MDH818-type device.</p> <p>An mbconnect24.mbnx file can only be transferred to an mbNET of the same type and with an identical serial number, as specified/contained in the configuration file.</p>								
Q	How do I create an encrypted configuration file?								
A	Provided that the serial number of the device is entered in the device configuration in the portal and the device – with current firmware - has already connected at least once to the portal, an encrypted configuration file is automatically created.								
Q	Can I rename the configuration file?								
A	NO , the configuration file may not be renamed, as this will result in it not being recognized by the device.								
Q	What is an Xmbconnect24.mbn/.-mbnx file?								
A	Once the mbconnect24.mbn configuration file has been properly copied to the mbNET , the file is automatically renamed to Xmbconnect24.mbn/.-mbnx . This ensures that the configuration file is not recognized for a second time by the device and prevents endless importing of the configuration file.								
Q	What do the different flashing codes for the LED Con mean?								
A	<p>LED Con flashes rapidly (approx. 3 Hz) = the device is attempting</p> <ul style="list-style-type: none">a) to connect to the Internetb) to establish a VPN connection to the portal <p>LED Con lights up solid = the device has its own, active Internet connection</p> <p>LED Con flashes slowly (approx. 1.5 Hz) = the VPN connection to the portal is established</p>								
Q	How do I contact the web interface of my mbNET ?								
A	<p>To reach the mbNET web interface, it must be possible to contact the device from your computer via LAN.</p> <p>This means that your computer must be in the same address range as the mbNET. This applies to both the IP address and your computer's subnet mask.</p> <p>Once you have entered the mbNET IP address - in each common web browser - you will be taken to the login page of the web interface.</p> <p>mbNET default settings:</p> <table><tr><td>IP address</td><td>192.168.0.100</td></tr><tr><td>Subnet mask</td><td>255.255.255.0</td></tr><tr><td>Login</td><td>admin</td></tr><tr><td>Password</td><td>no password</td></tr></table>	IP address	192.168.0.100	Subnet mask	255.255.255.0	Login	admin	Password	no password
IP address	192.168.0.100								
Subnet mask	255.255.255.0								
Login	admin								
Password	no password								
Q	What information does MB CONNECT LINE need in the event of support?								
A	<p>Device type, serial number, firmware version</p> <p>The support logs (mbNET web interface: <i>expert mode / status / system</i>)</p> <p>The configuration file from mbCONNECT24</p> <p>The mbDIALUP support logs</p>								

7. Troubleshooting

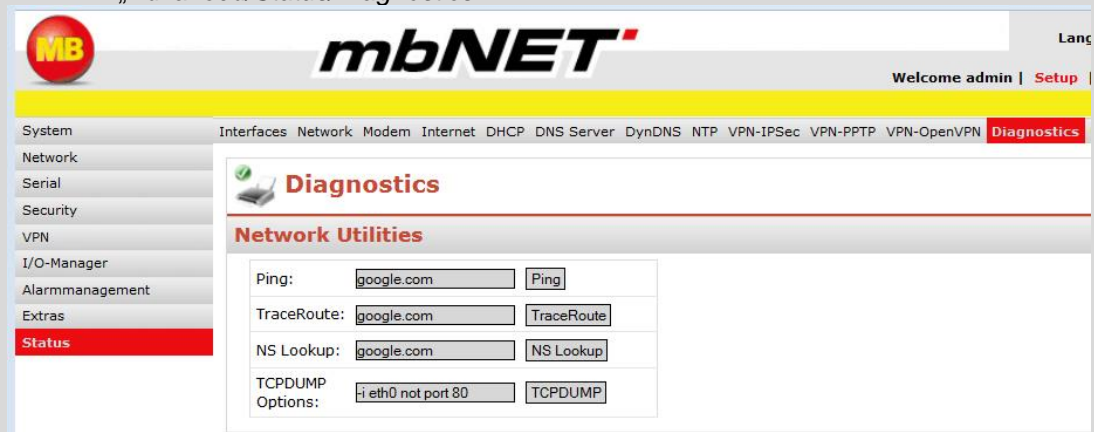
Problem:	mbCHECK cannot find a free VPN port
Solution:	Make sure that at least one of the three ports (80TCP, 443TCP or 1194TCP) is not blocked in the network firewall.
Problem:	No connection to the portal, login failed 
Solution:	<ul style="list-style-type: none"> The access data were not entered correctly or are invalid When selecting the server, a server different to that chosen when you requested your mbCONNECT24 access was selected.  <ul style="list-style-type: none"> The network adapter for mbDIALUP is missing or disabled. (Check the network adapter in your system settings (<i>Control Panel \ Network and Internet \ Network and Sharing Center \ Network Connections</i>). If the adapter is disabled, enable it again. If the adapter is missing, re-install mbDIALUP). <p>To set a detailed error diagnosis, you can activate extended logging in the mbDIALUP from the "Settings/Options" menu.</p>  <p>In the event of support, these log files are required by us in order to deal with your problem. You will find the log files on your computer under:</p> <ul style="list-style-type: none"> OpenVPN Log Windows XP: C:\Documents and Settings\All Users\User Data\MB Connect Line GmbH\mbDIALUP\ovpn\log System Log Windows XP: C:\Program Files (x86)\MB Connect Line GmbH\mbDIALUP\vpnservicelog.txt <hr/> <ul style="list-style-type: none"> OpenVPN Log Windows 7: C:\ProgramData\MB Connect Line GmbH\mbDIALUP\ovpn\log System Log Windows 7: C:\Program Files (x86)\MB Connect Line GmbH\mbDIALUP\vpnservicelog.txt
Problem:	No connection from the device to the portal
Solution:	<p>Check the required peripheral components, depending on the device type.</p> <ul style="list-style-type: none"> Are the network cables and network connections correct? <ul style="list-style-type: none"> Is the telephone cable inserted? Is a SIM card inserted? <ul style="list-style-type: none"> Is the card used for data transfer enabled? Is it necessary to enter a PIN? Is an antenna installed? <ul style="list-style-type: none"> Is the signal strength sufficient?

(The signal strength can be requested via the **mbNET** web interface)



Check your network settings.

- WAN and LAN IP must **not** be in the same address range.
- The **mbNET** must be connected on the WAN.
- Can the **mbNET** connect to the Internet?
 - This can be ascertained via the device interface: „Advanced/Status/Diagnostics”.



You can test the reachability of individual instances here:

- Domain (e.g. google.com)
- Public IP (e.g. 8.8.8.8)
- Gateway/DNS of the network used

If in doubt, please contact your system administrator.

- Check
 - that one of the VPN ports (80TCP, 443TCP or 1194TCP) - see **mbCheck** - is enabled in the firewall
 - that one of the enabled ports is also entered in the **Internet settings**
 - that NTP port 123 is enabled in the firewall



If one of the ports (TCP:1194, TCP:80, TCP:443) for the device is blocked in the network firewall, despite a positive message from **mbCHECK**, (IP/MAC address filter), please contact your system administrator.

This and other information from the transferred configuration file can be viewed on the **mbNET** web interface.

