1. Introduction

The VPRouter is the hardware component which enables you to remotely access your PLC's, VPVision and other TCP enabled devices. This article shows you how to set up your VPRouter as stand alone or in combination with VPVision. After your VPRouter is set up you will be able to access and manage your VPRouter on the VPInstruments Cloud (cloud.vpinstruments.com).

Pre-requisites:
- VPInstruments Cloud account (view the getting started guide)
- VPRouter
- USB flash drive (format: FAT/FAT32)

The steps to follow in order to set up your VPRouter are:
1. Create a configuration file
2. Register your VPRouter
3. Activate your VPRouter

Scan this QR code to download this quick start guide and have all active referral links for further information.

2. Create a configuration file

First step is to create a configuration file on the IXON Cloud that will tell the VPRouter to **what company** it belongs and **how it's connected**. Most input fields will be pre-filled, based on standard use cases, so for most users all the fields can be left untouched. The next steps show you how to create a configuration file.

Go to **[Tools]** ① in the main menu and press **[Start configuration]** ② .
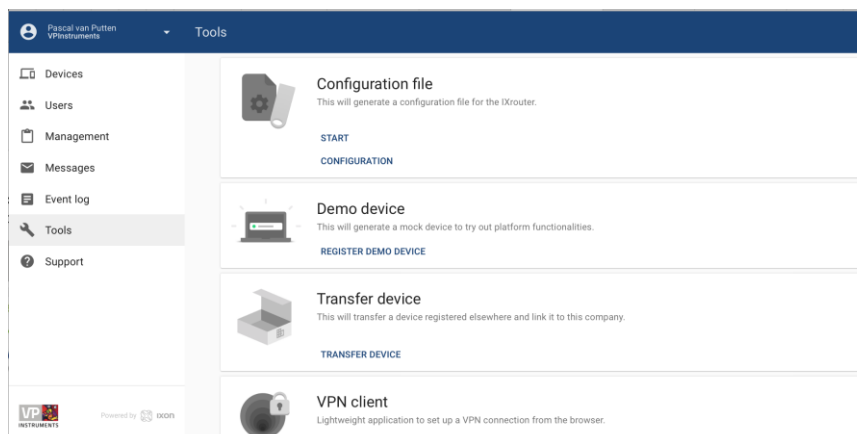
Confirm your company name, press **[Next]**, and select your **connection type**.

Connection types:

- **Wired network** using Ethernet cable.

- **Wireless network** using a Wi-Fi signal.
  Required info: **network name** (SSID)
  and **password**.

- **Cellular network** using a 3G/4G enabled
  standard SIM card (size 2FF).
  Required info: provider's **APN** (access point
  name) and SIM card's **PIN** code.
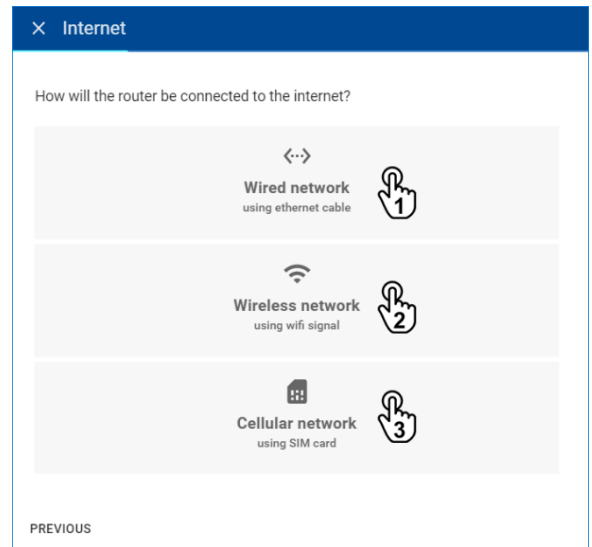
After choosing the connection type, you can generally leave the default **DHCP** settings and press **[Next]**. If you need to set a static IP address, you can do so by pressing **[Show more]** .

Next you'll enter a **unique IP address** for your VPRouter and press **[Next]** .

This needs to share the **subnet** of your PLC/HMI but cannot match their IP address! The subnet in the example below is "192.168.140", where the last figure ".1" can vary anywhere from 1 to 254 as long as it's different from the PLC/HMI.
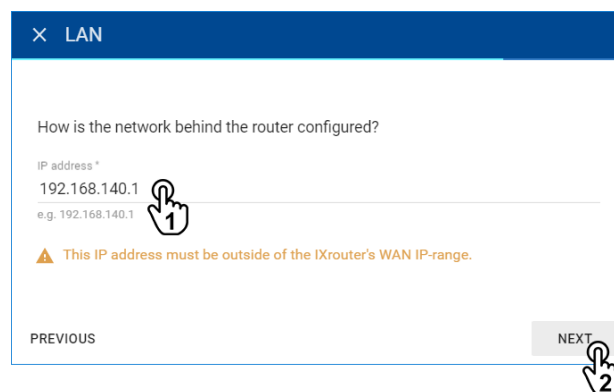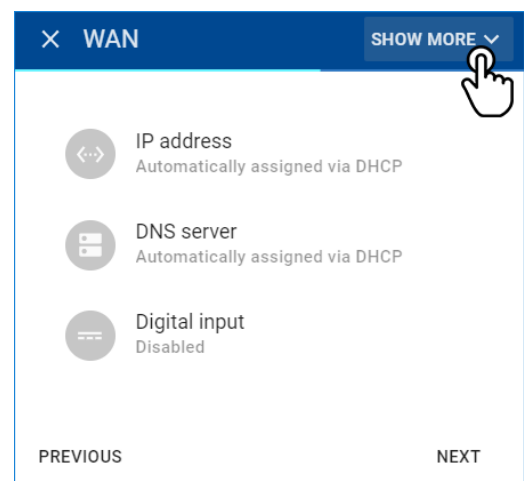
LAN/WAN conflict

The LAN subnet (machine network, i.e. 192.168.140) needs to differ from the WAN subnet (company network). More information can be found <u>here</u>.

- Press **[Next]** to finish your configuration file.
- Press **[Download]** and place the file in the root directory of the USB flash drive, not in a folder.

File name: It is essential that the file is named "**ixrouter.conf**", without any added characters or numbers.

Once the configuration file is placed on a USB flash drive, you can start registering your VPRouter.

3. Register your VPRouter

The next steps show how to register your VPRouter.

Connect your VPRouter **to the internet.**
- **Wired connection:** Connect the "internet" port on the VPRouter to your company network.
- **Wireless connection:** Make sure to be **in range** of the Wi-Fi's access point.
- **Cellular network:** Make sure the SIM card has **sufficient internet credit**, make sure that it **is activated** (contact your provider if necessary), and insert the 3G/4G standard SIM card (2FF) **before** you power on the VPRouter.
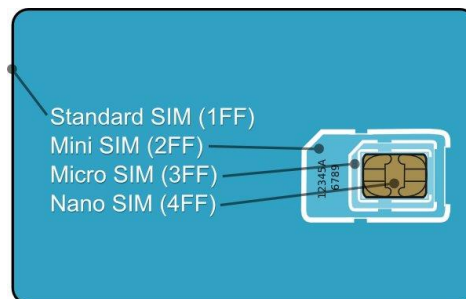
Antenna connector

The 4G models have 2 SMA connectors for your cellular antenna. The one closest to the power connector is the **MAIN** and the other connector is the **DIV**. Always connect an antenna to the MAIN. Connecting an antenna to the DIV is optional.

- **Insert** the **USB flash drive** containing the configuration file into the VPRouter's USB port.
- **Power on** your VPRouter using a **12-24 VDC** power supply.
- Wait around **2 minutes** for the VPRouter to configure and register itself.

ACT LED status
The VPRouter's ACT LED should **blink blue quickly** shortly after inserting the USB flash drive, indicating that the VPRouter is (re)configuring itself.
If this hasn't happened after 1 minute, please check that the file is located in the **root directory** of the USB flash drive and that the file name is exactly "**ixrouter.conf**". Try a **different USB flash** drive if the problem persists.
View the LED Status article for details on the other ACT LED status messages.

Once your VPRouter shows a constant blue light it's registered on the IXON Cloud.

Closest IXON server
The VPRouter connects to the **closest IXON server**, based on its location. The location is determined based on its IP address this is called **GeoIP**. You can overrule this by **manually** entering a location and then turning its VPN connection off and back on.

**Remove the USB drive once the VPRouter is registered!**
When you make changes in the configuration after the initial configuration and the USB drive with the "ixrouter.conf" file is still in the VPRouter, the VPRouter will reboot itself to the old configuration after a temporary power disconnect.
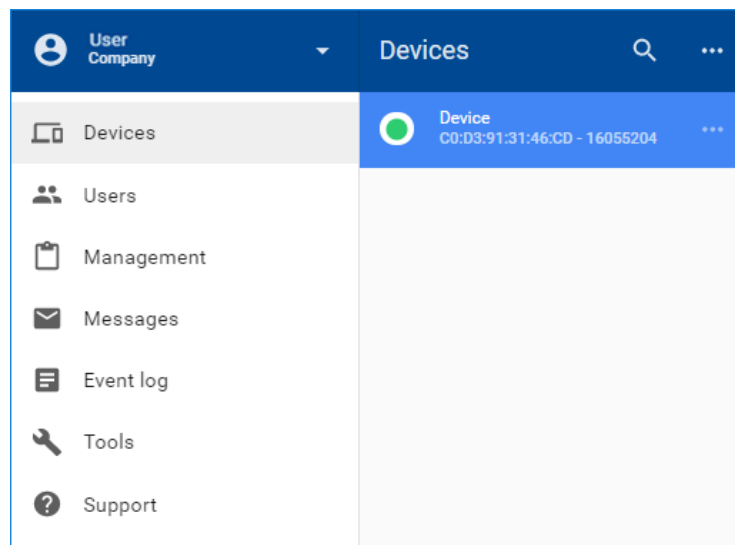
4. Activate your VPRouter

After a successful registration of your VPRouter a yellow bar will pop up in the [Devices]page. The next steps show how to activate your VPRouter.

Go to **[Devices]** in the main menu. You will find a yellow bar at the top in your device list stating "New device".

Press the yellow bar , select **[Activate]** , and **name** your device as you see fit.
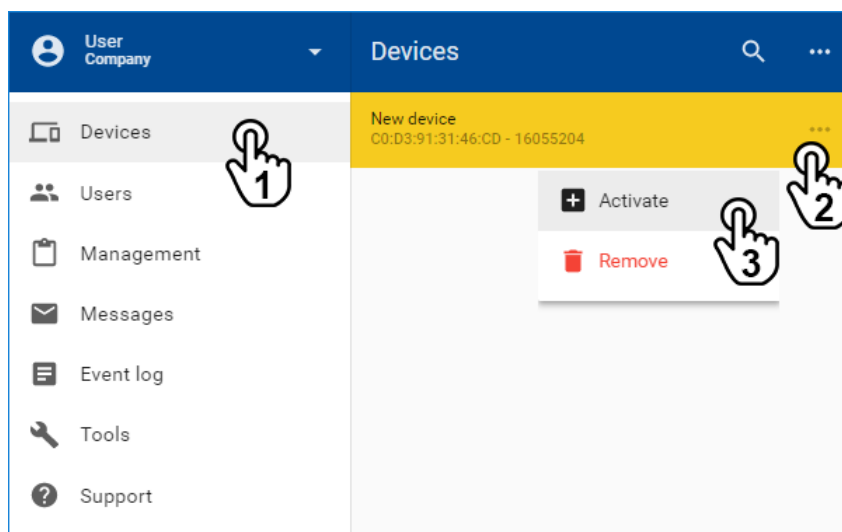
Information
The first number and figure combination "C0:D3:91:31:46:41" is the MAC address of your VPRouter.
The second number "16055202" is the serial number of the VPRouter.

Next step
The VPRouter is now set up and activated. You can now <u>connect to your machine</u>.

5. VPVision specific configuration

- Connect the 24V power supply of the VPRouter via the 24V power supply connection of the Moxa converter
- Connect VPVision **LAN 2** to the VPRouter **LAN 2**
- Connect VPRouter **LAN 3** to Moxa converter **Port 1**
- Connect VPVision PC **LAN 1** port to company network.
- VPRouter IP: 10.0.0.254
- VPVision will be approached via the VPRouter by default.

NOTE: Preferably use the VPN connection in the VPRouter cloud environment for the best connection to your VPVision system.

VPRouter   Moxa analog input converter   VPVision PC

IP address: IP address: IP address:
10.0.0.254   10.0.0.2   10.0.0.1