BLRAT

User Manual V1.1

1. Overview

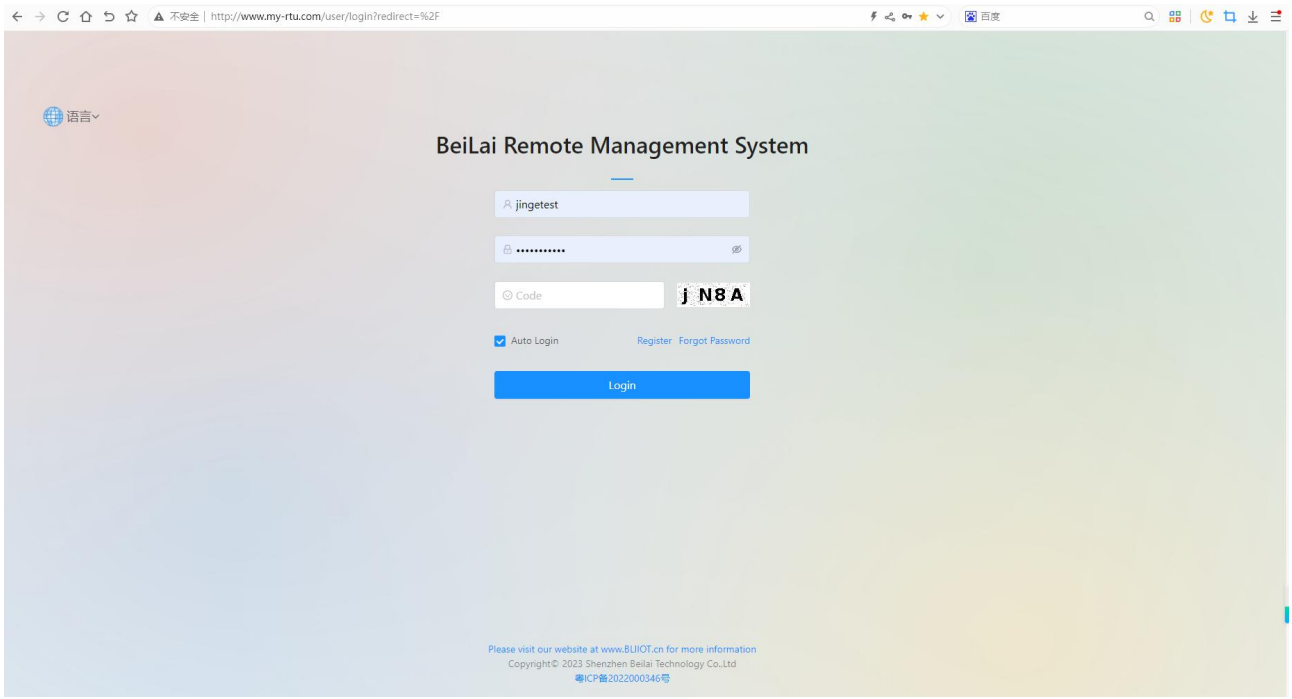
BLRAT (Beilai Remote Access Tool) is a tool independently developed by Beilai Technology specifically for remote access. It is a sub-service under Beilai Technology's BLRMS remote platform. BLRMS Remote Management System is an IoT device smart management and control platform developed by Beilai Technology.

2. Operating Instructions

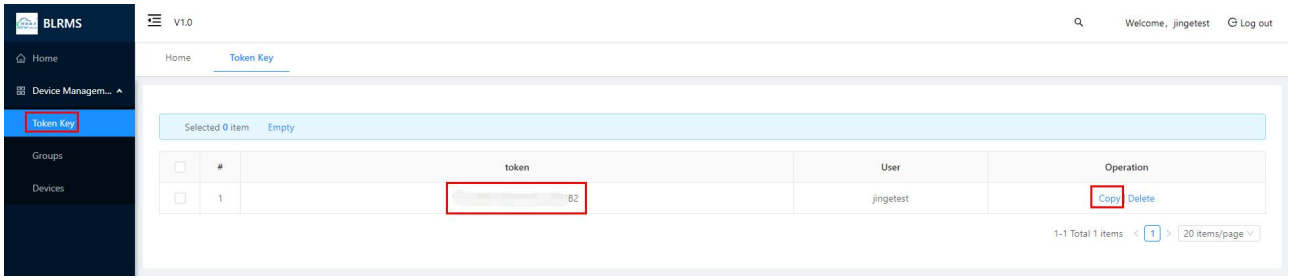
For example, using the IOy series BL190 multi-functional programmable remote I/O module with BLRAT.

2.1 Obtain a token from the BLRMS remote platform.

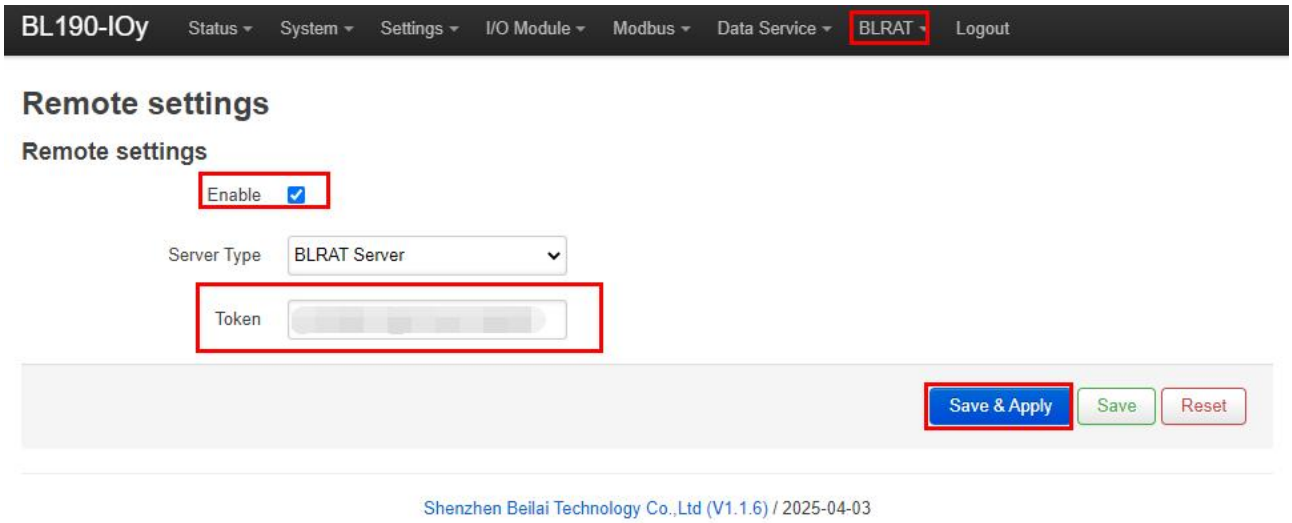
Use a browser to log in to www.my-rtu.com. If you don't have an account, register one first. The following image shows the login system interface, where you can either register or log in to your account.



After logging in, go to "Device Management" and copy the token code from "Token Key." The token code is a unique identifier assigned to each account by the BLRMS platform.



2.2 Enable and Set Up BLRAT on the BL190 Module

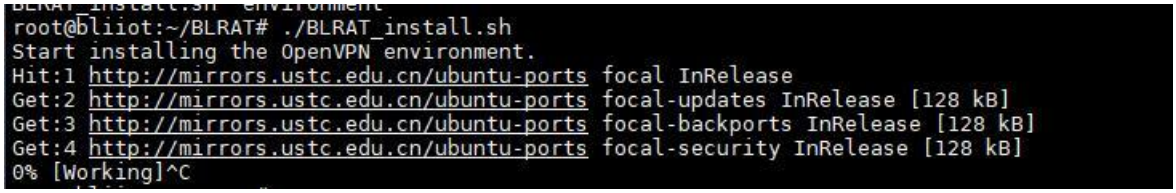


Log in to the BL190 for configuration. The BL190 is set up via a web page, and the default IP is 192.168.3.2. Click on "BLRAT," select "BLRAT Server" for the "Server Type," paste the token code copied from the BLRMS platform into the "Device Key" field, click "Enable," and then click "Save and Apply."

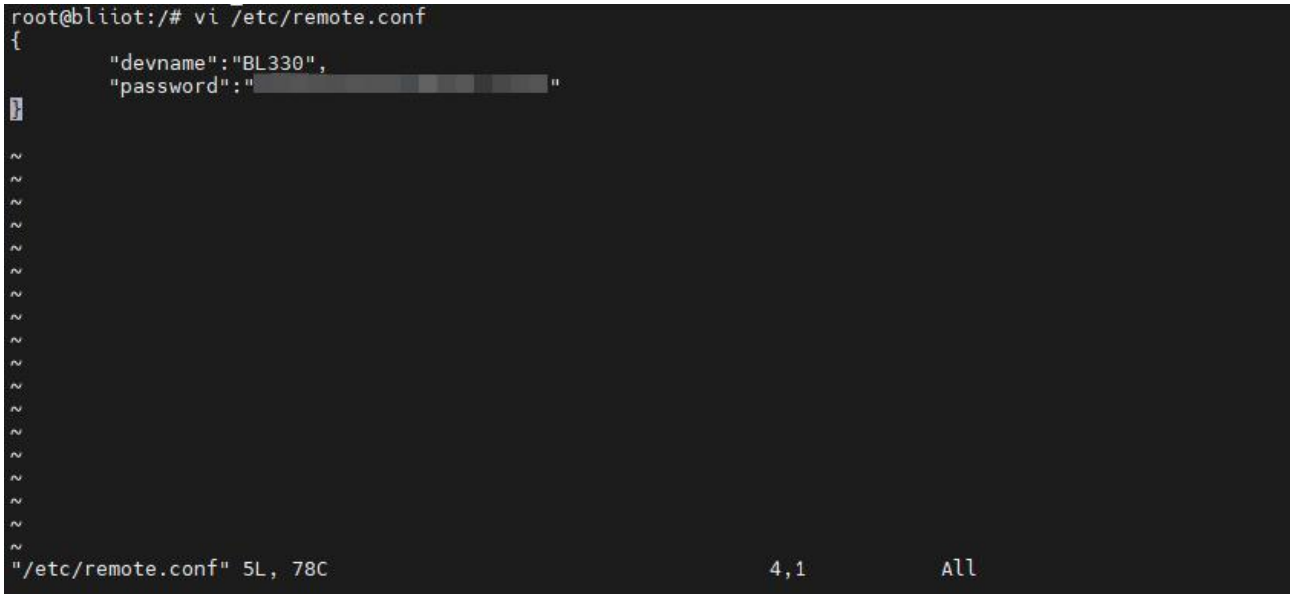
Note: The BL190 needs to be connected to the network. If it cannot connect, check if the "Gateway Address" and "DNS" fields under the "Settings" section are filled incorrectly. If multiple BL190 devices need to use BLRAT, you should change the device name to easily distinguish each device. To modify the device name, go to "System" → "General Settings" → "Hostname."

2.3 Configuring and Enabling BLRAT on ARMxy

Upload the compressed file BLRAT.tar.xz to the root directory and extract it.



Enter the BLRAT folder and run ./BLRAT_install.sh to install BLRAT. The installation process requires an internet connection.



Open the configuration file remote.conf in the BL330 system's /etc folder by running vi /etc/remote.conf. Paste the token copied from the BLRMS platform into the "password" field.

Then, start the remote connection by running the command: /etc/init.d/remote start.

To stop the remote connection, simply run the command /etc/init.d/remote stop. This will terminate all processes related to the remote connection.

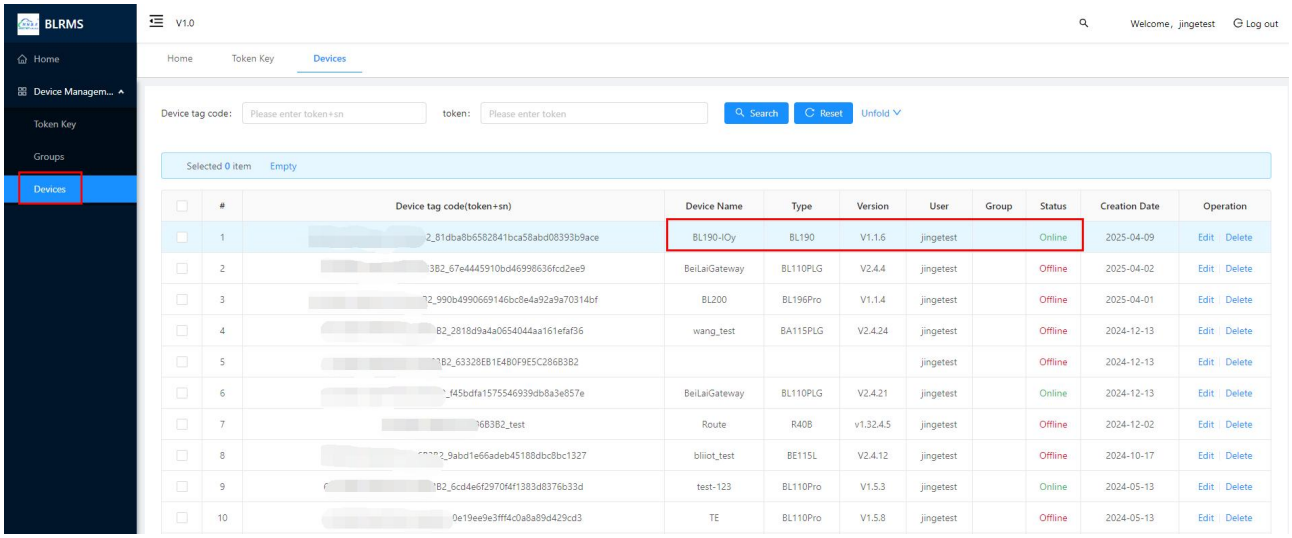
To enable remote connection to start automatically at boot, run:

/etc/init.d/remote start autostart

To disable remote connection autostart, run:

/etc/init.d/remote stop autostart

2.4 View Device Status on BLRMS Platform

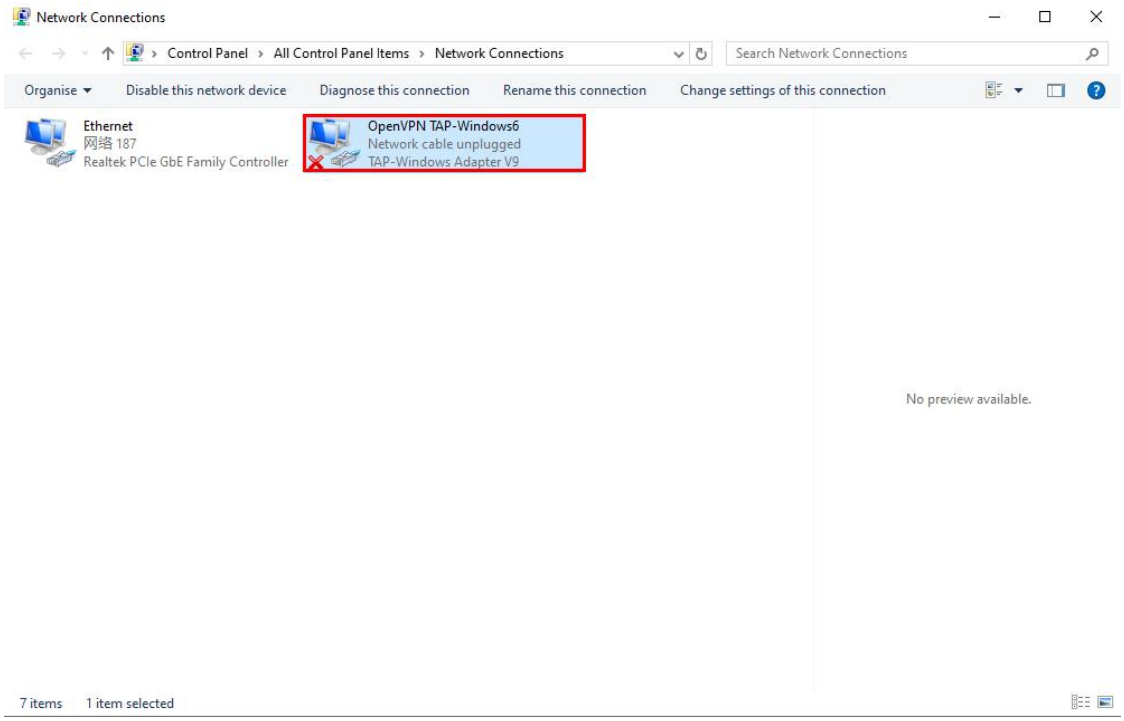


On the BLRMS platform, you can view the status of all devices logged into the platform in the "Device Management" section under the "Devices" tab. The devices can be distinguished by their device name, model, and version number.

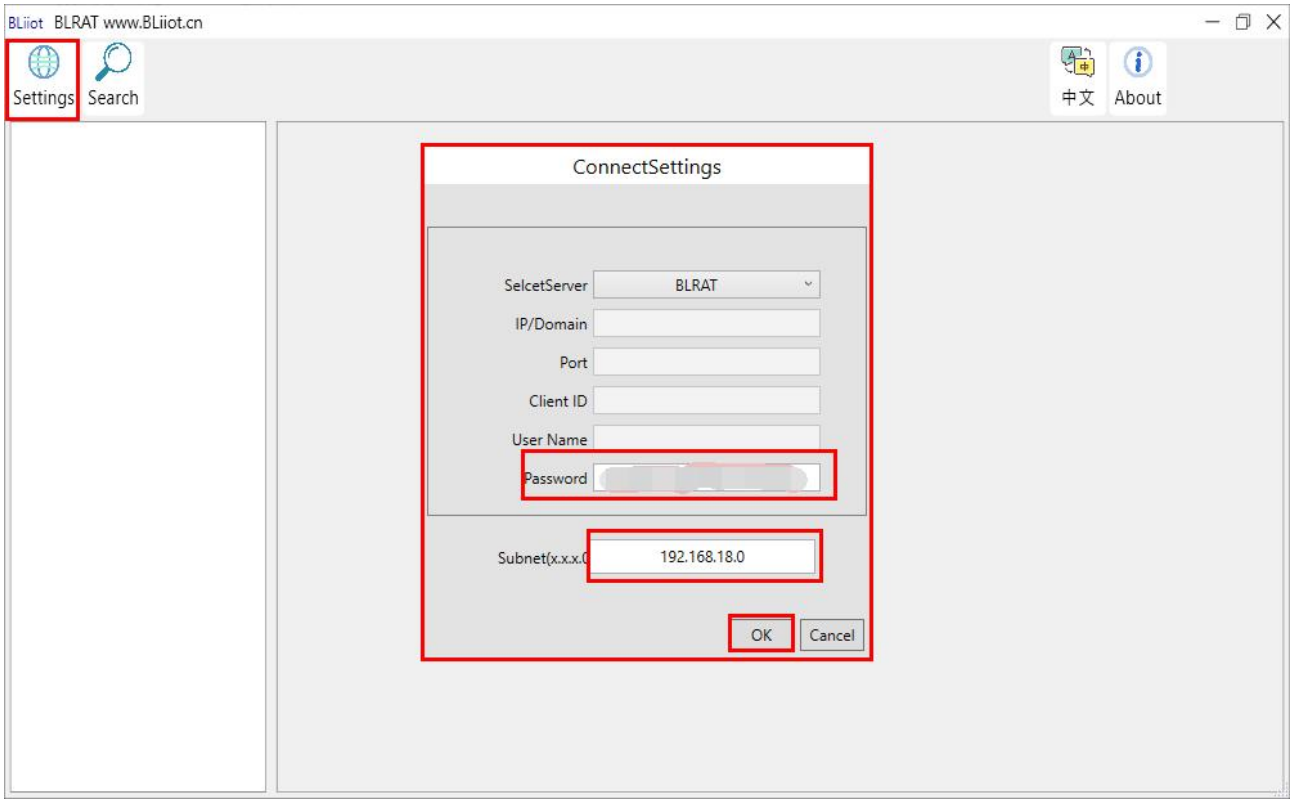
If a device is shown as offline, please check whether the device has successfully connected to the network.

2.5 Install tap-windows-9.21.2.exe

Install the "tap-windows-9.21.2.exe" provided by Shenzhen Beilai Technology Co., Ltd. Keep the default installation directory during the installation. After the installation is successful, you can find a virtual network adapter named "OpenVPN TAP-Windows6" in your computer's Network Connections.



2.6 Log in to BLRAT Connection Configuration Software

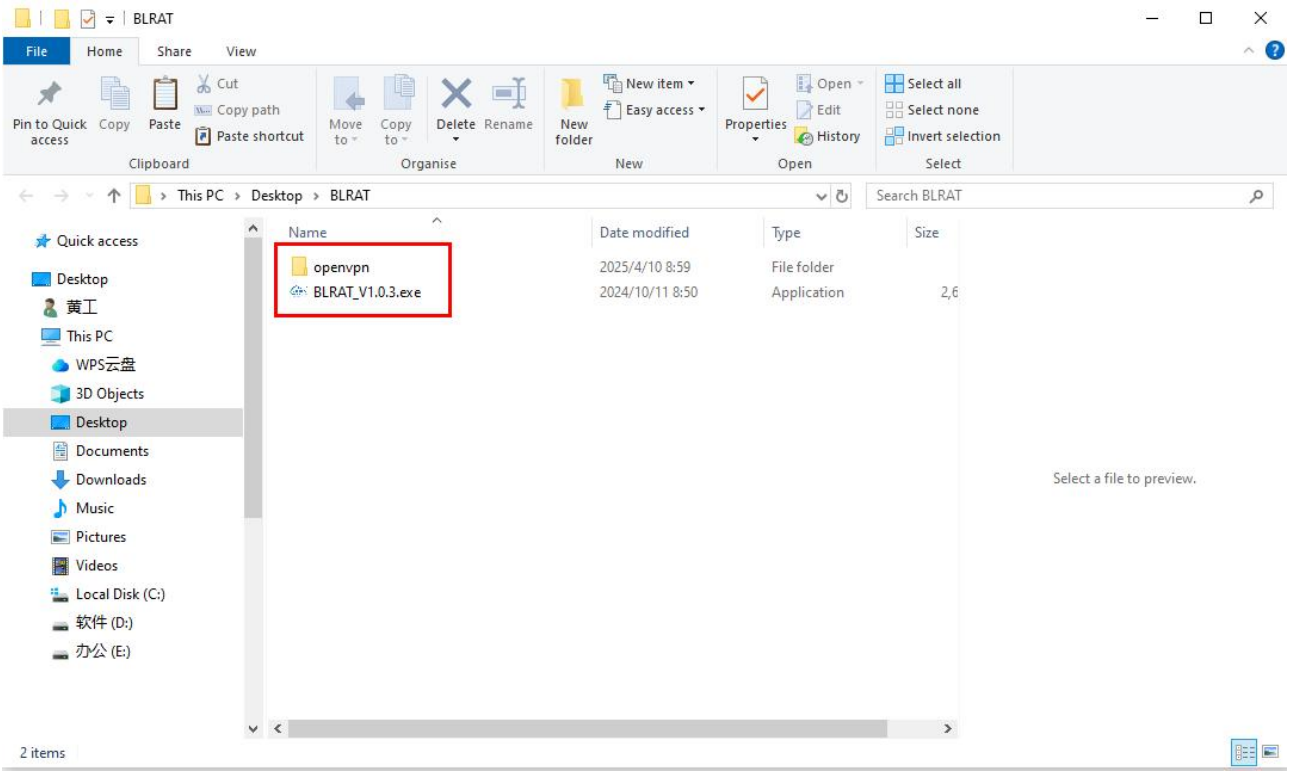


Double-click on the "BLRAT" to open the configuration software. Click on "Connection Settings," and a connection settings window will pop up. In the password field, enter the token code obtained from the BLRMS platform. The subnet should not conflict with your computer's existing network, and the fourth part of the subnet must be set to "0," for example: 192.168.18.0. Click "OK" to log in to BLRAT.

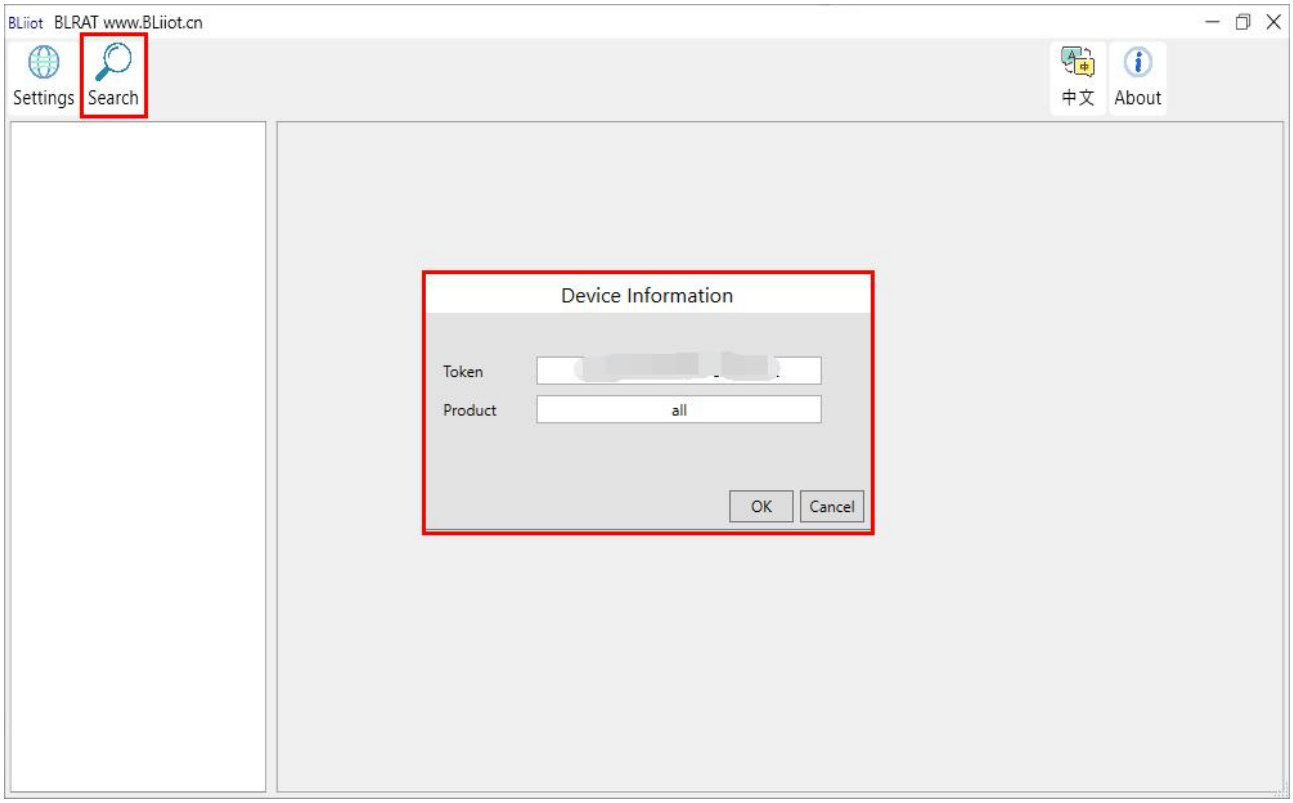
Note: 1. "IP/Domain," "Port," "Client ID," and "Username" do not need to be filled in. These fields are reserved for future custom remote server connections.

2. Only one person can use the BLRAT remote connection configuration software to log in at the same time. Otherwise, multiple successful connection pop-ups will appear, indicating that someone else has already logged into your BLRAT service.

3. The BLRAT remote connection configuration software needs to be in the same directory as the OpenVPN folder provided by Shenzhen Beilai Technology Co., Ltd. as shown in the image below.

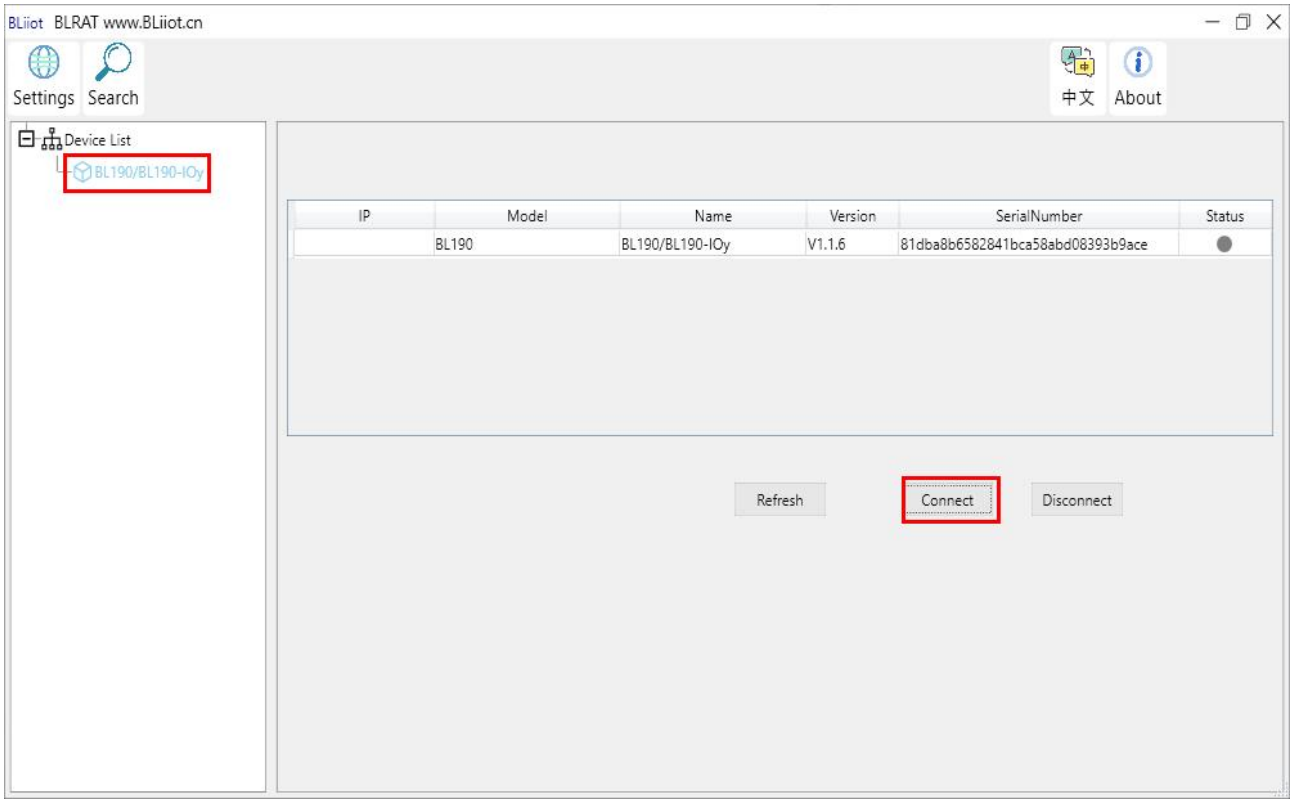


2.7 Search Device



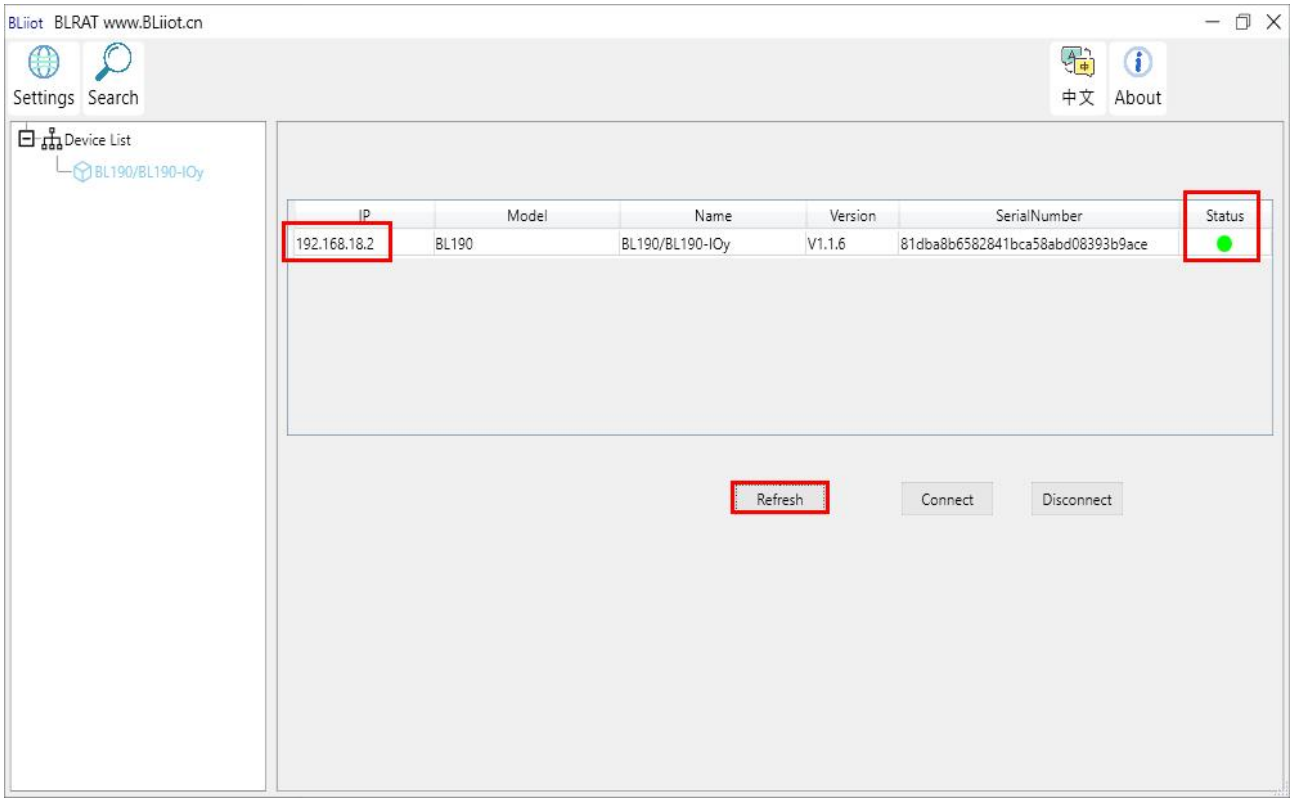
Click "Device Search," and a search box will pop up. In the token field, enter the token code. For the product type, you can enter "all" or the device model to search.

2.8 Start Remote Connection

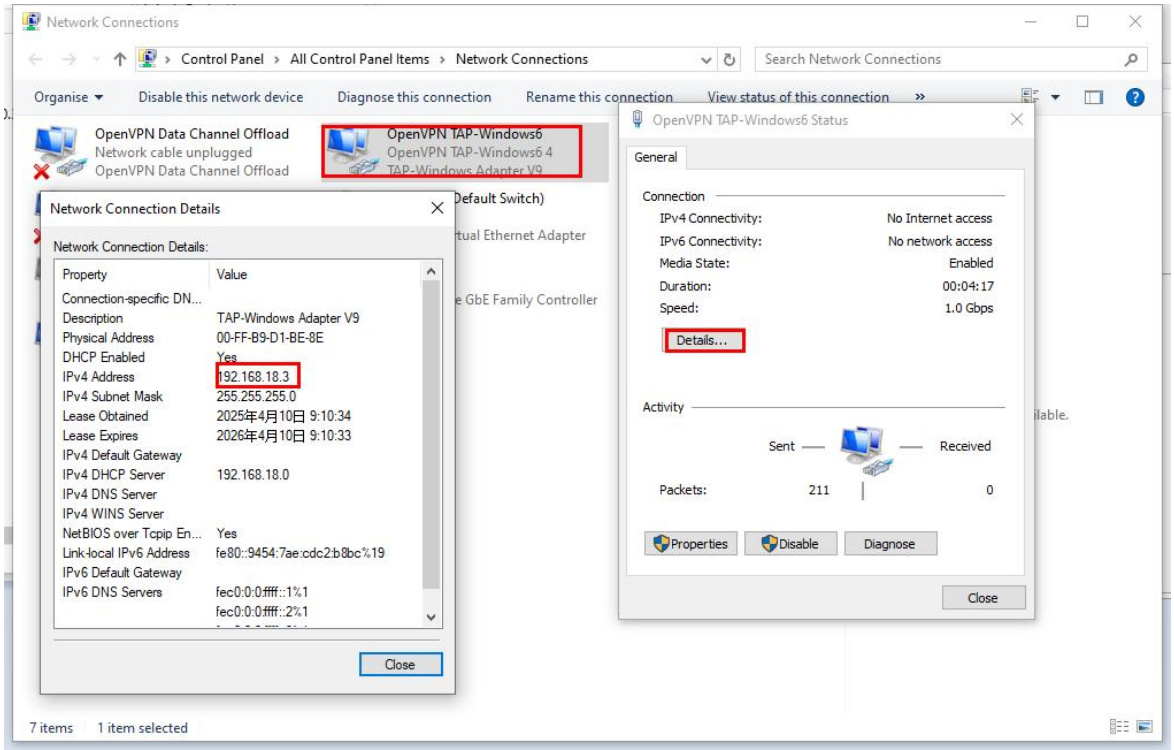


From the list of devices found in the search, click on the device you wish to connect to remotely, and then click "Connect". Only click once to initiate the connection; do not click multiple times.

Click "Refresh" to see the successful connection. The IP address assigned by BLRAT will appear, and the online status will be shown in green, indicating a successful connection, as shown in the image below:

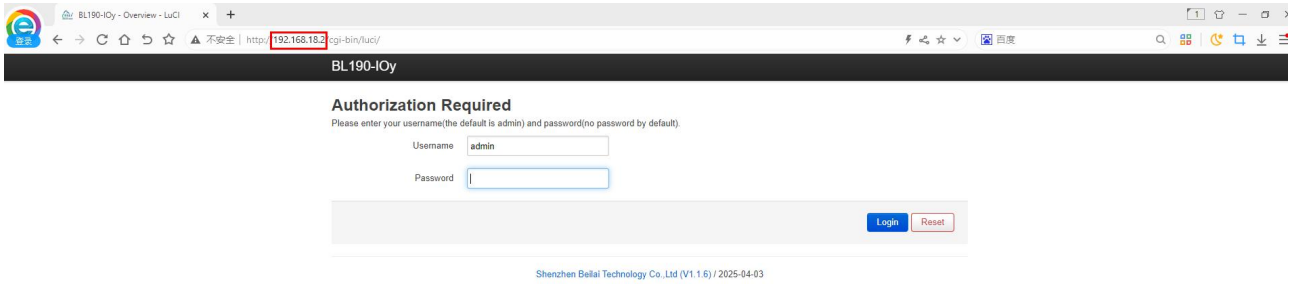


The online status feedback may be a bit slow, so please be patient and wait. You can refresh again, but do not click "Connect" multiple times. You can also check if there are any connection issues by looking at the virtual network card on your computer. When the connection is successful, the virtual network card will also be assigned an IP. This IP will be in the same subnet as the IP assigned to the device, as shown in the image below:

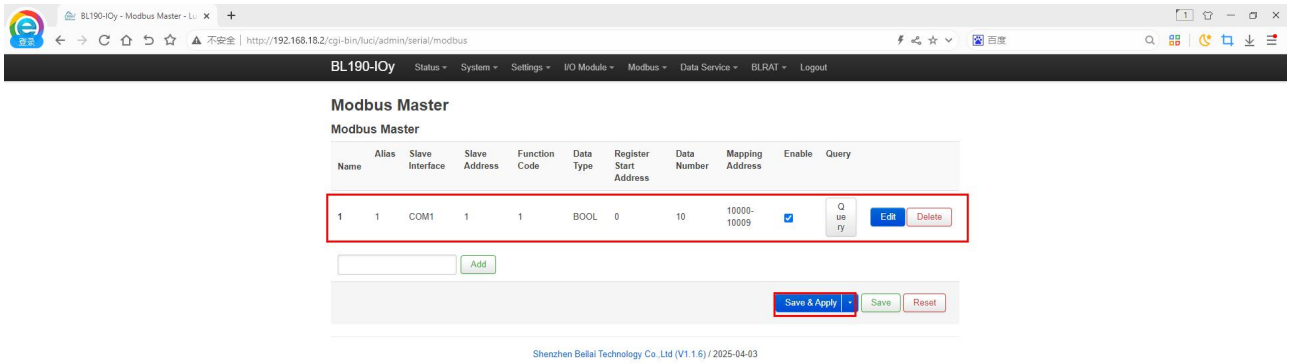


2.9 BL190 Remote Operation

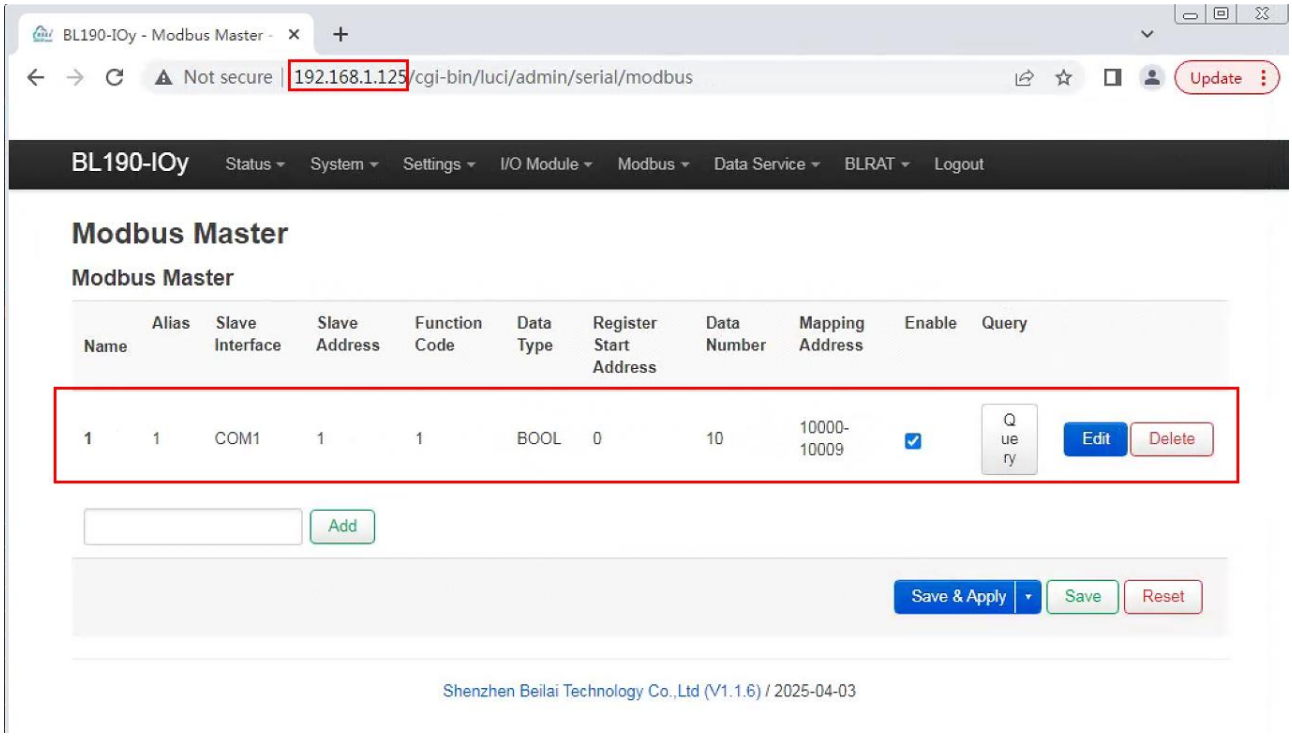
Access the device remotely through the IP assigned by BLRAT. After logging into the device remotely, the interface is identical to the local login interface, and the configuration parameters and upgrade procedures are the same as those for local operation.



To remotely configure and add Modbus collection commands



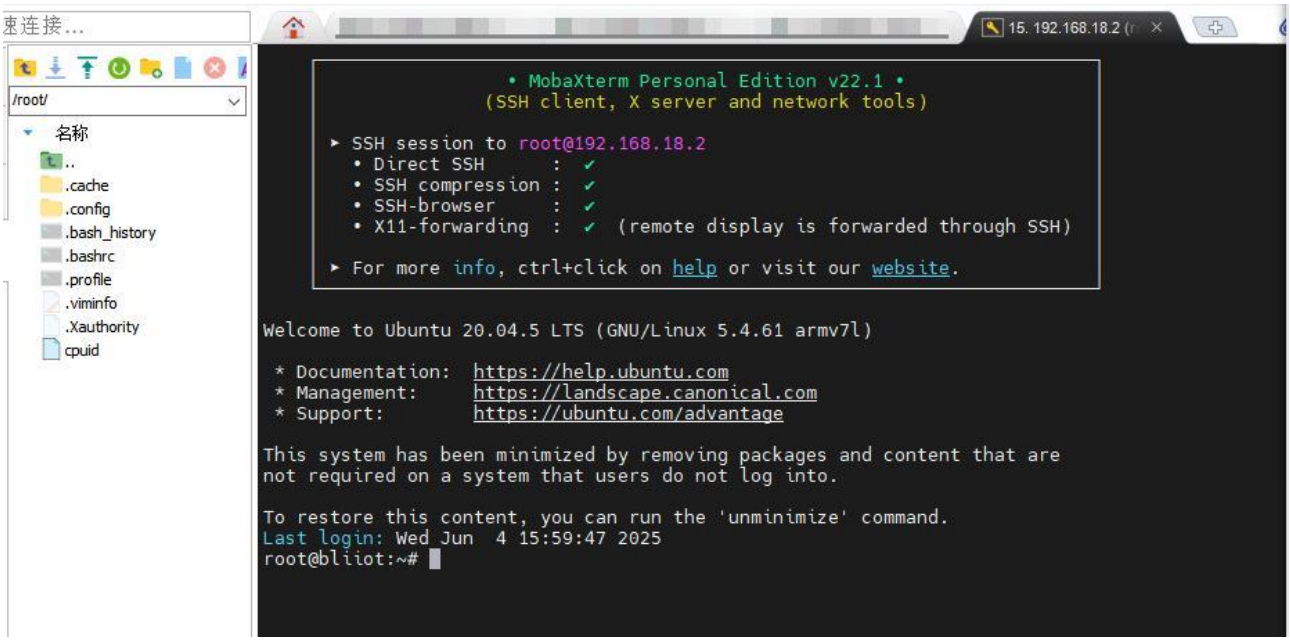
Local login to verify that the Modbus collection command was successfully added



2.10 ARMxy Remote Operation

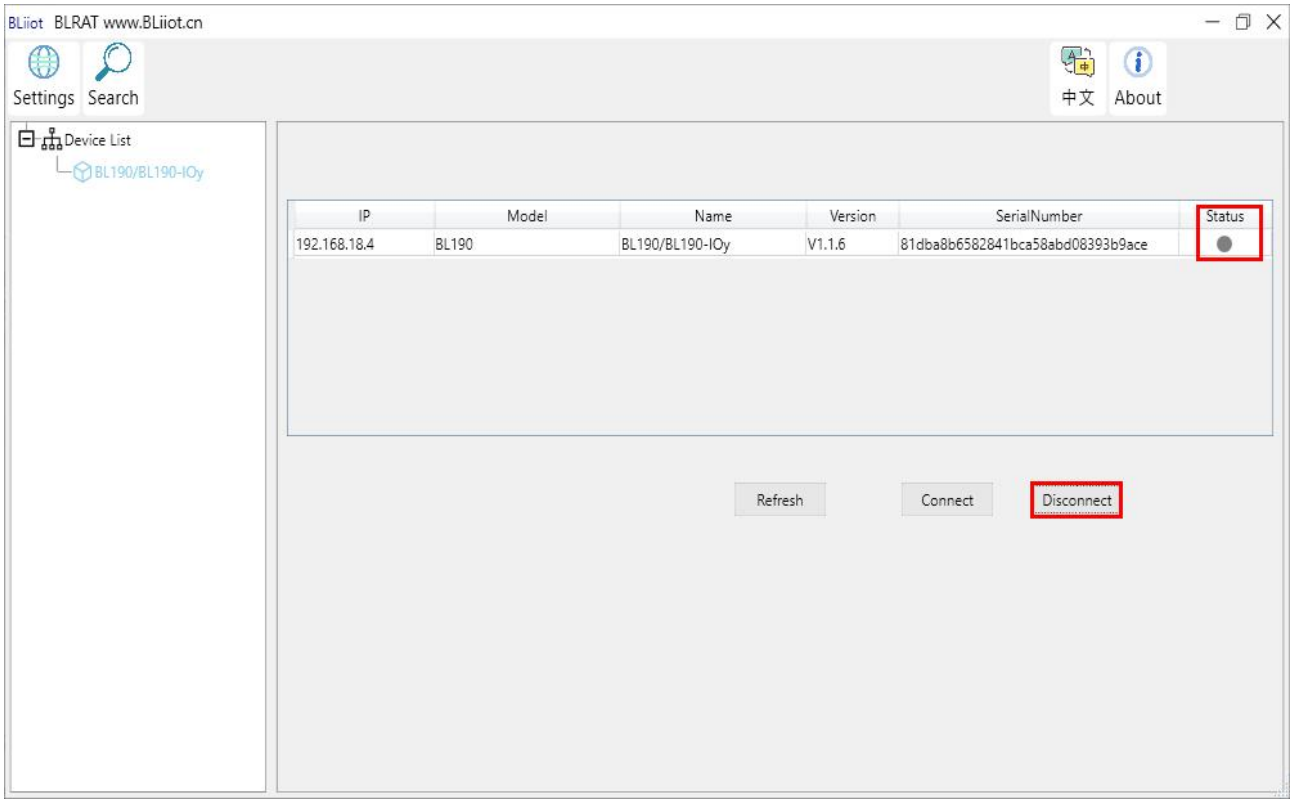
Open the serial tool, click “New Session,” then select “SSH Login.”

Enter the IP address assigned by BLRAT and the specified username root to remotely access the device via SSH.



If the display appears as shown in the image, it means the connection is successful and you can proceed with device operations.

2.11 Disconnect Remote



Click "Disconnect" to disconnect the remote function. You can also see that the virtual network card "OpenVPN TAP-Windows6" in the computer's "Network Connections" shows "Network cable unplugged."