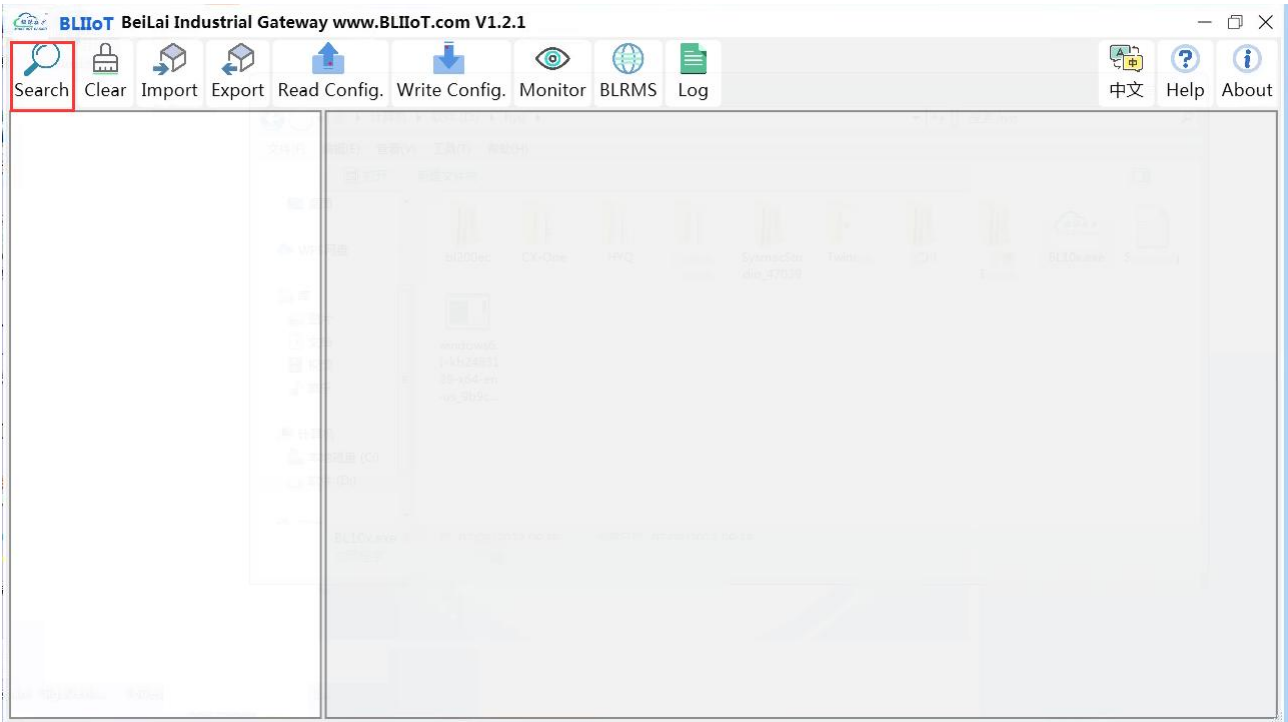


## Industrial Gateway

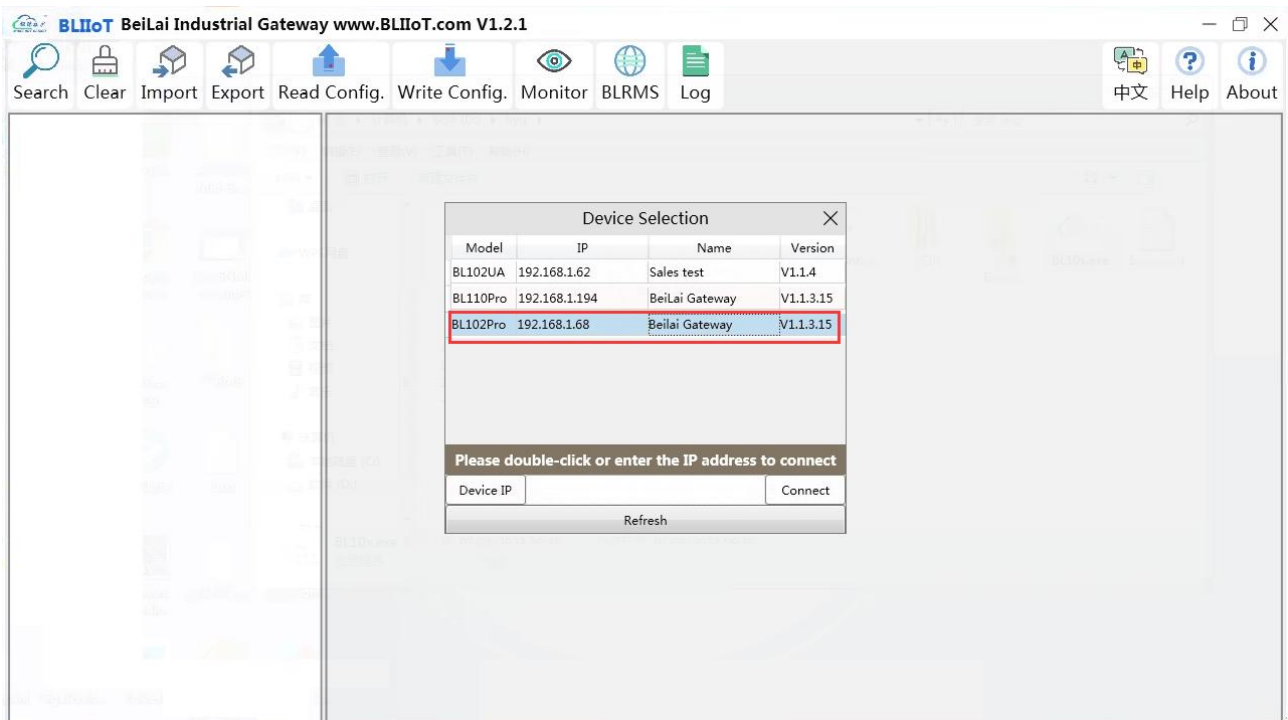
### Remotely Download PLC Program

#### 1. Remotely download PLC program via LAN port

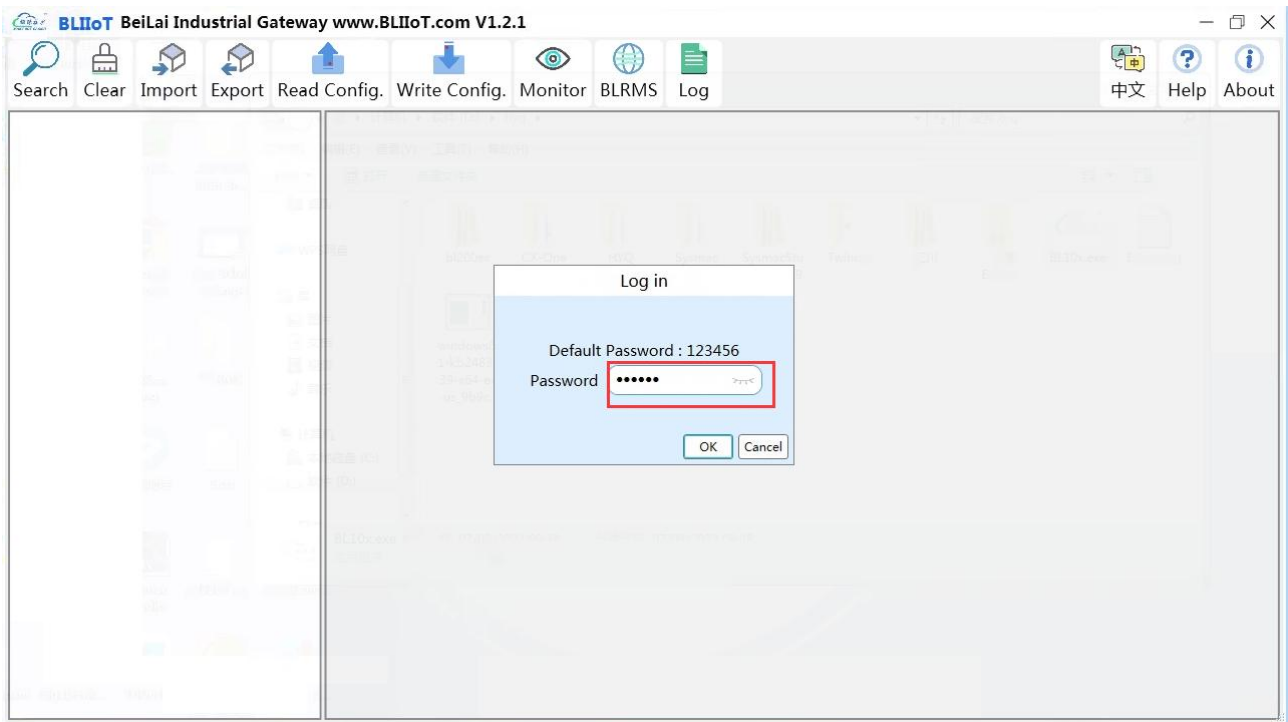
##### 1.1 Open BLIIoT IoT gateway configuration software, click "Search", search for BL102



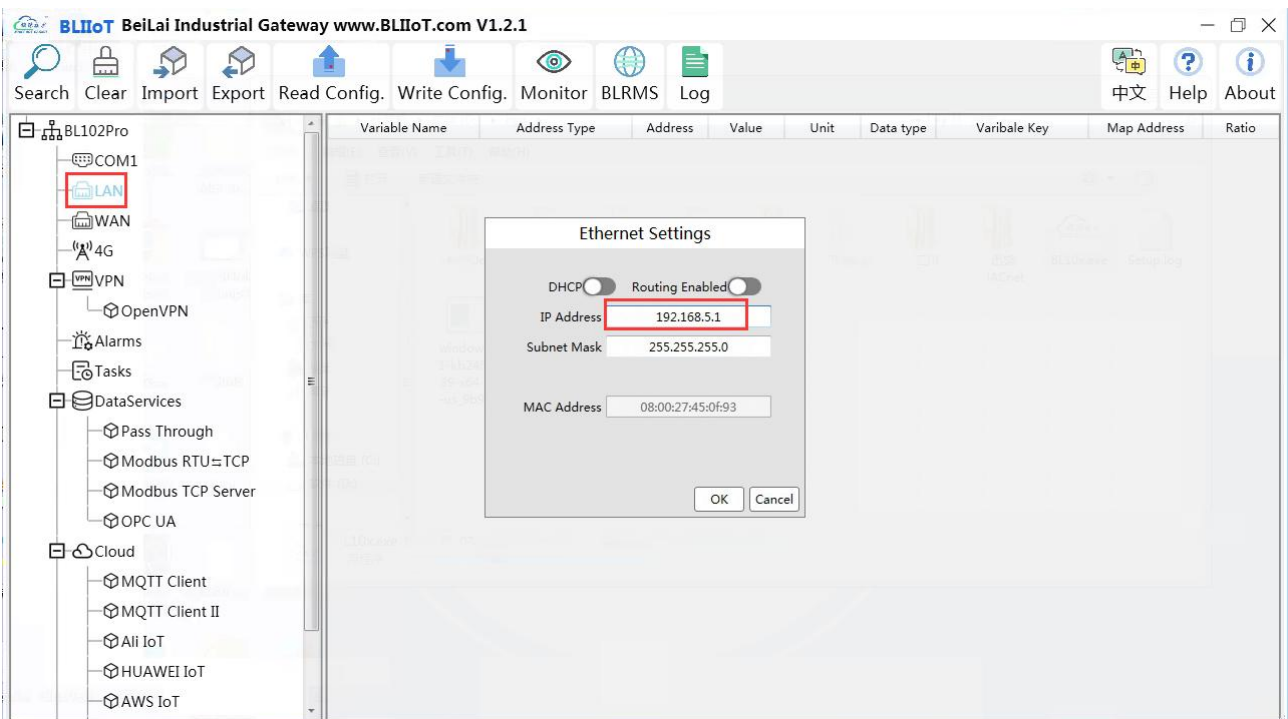
##### 1.2 Select the device to be configured and double-click to log in



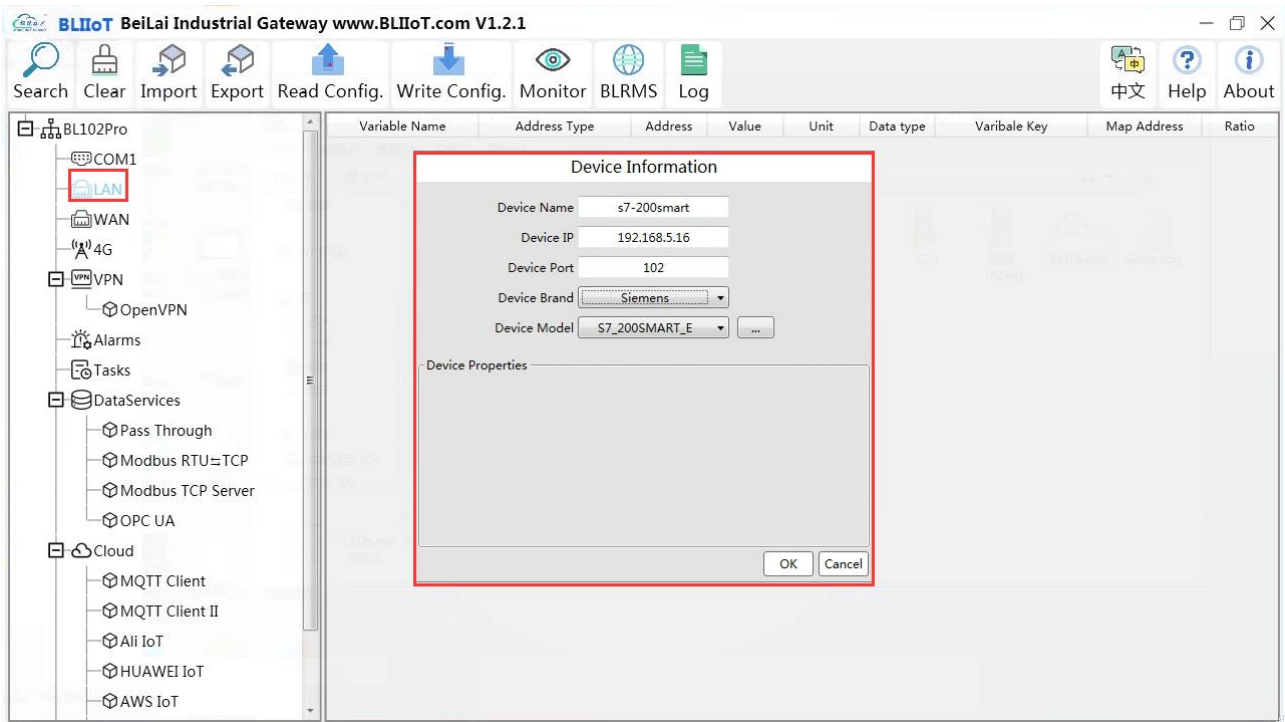
### 1.3 The default login password is 123456



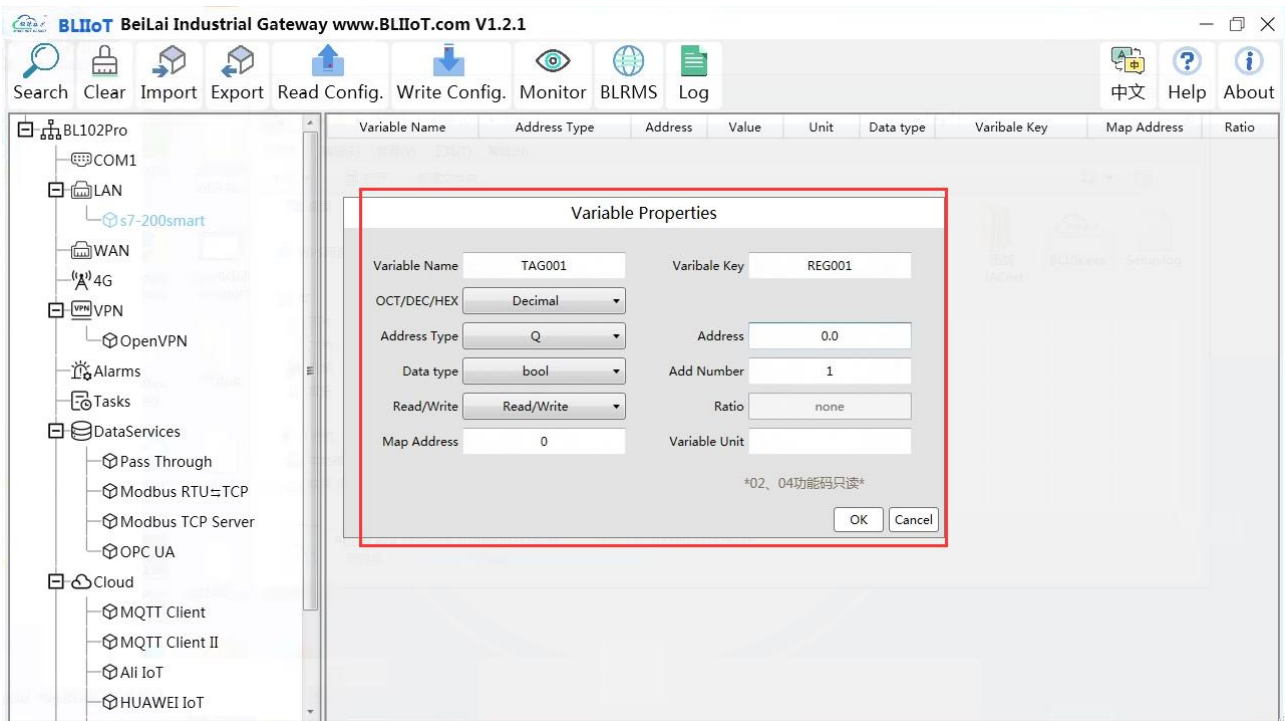
1.4 Configure the gateway network port to collect PLC, remote download only supports PLC under LAN port. The IP address of the example S7-200SMART is 192.168.5.16, so click LAN to change the IP address to 192.168.5.1 and click OK.



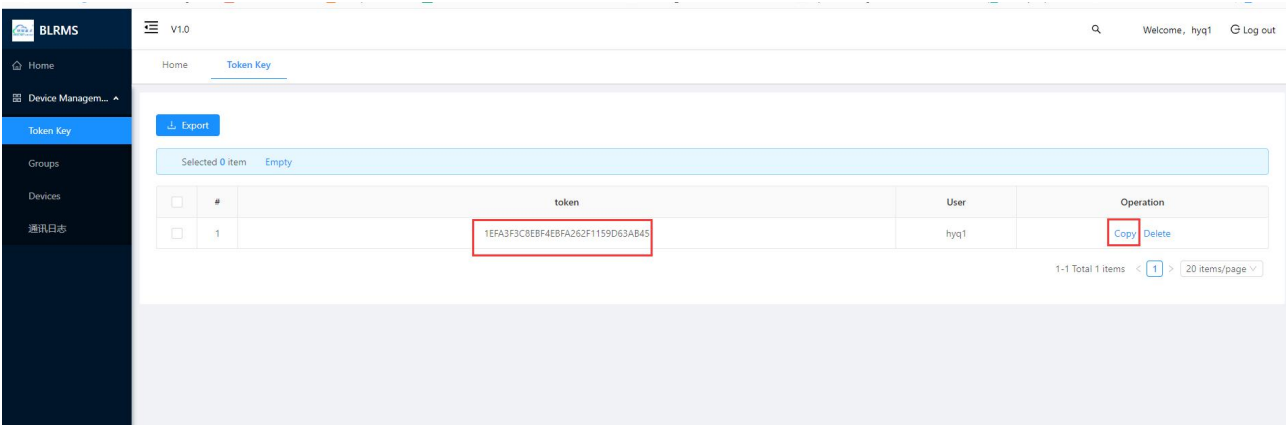
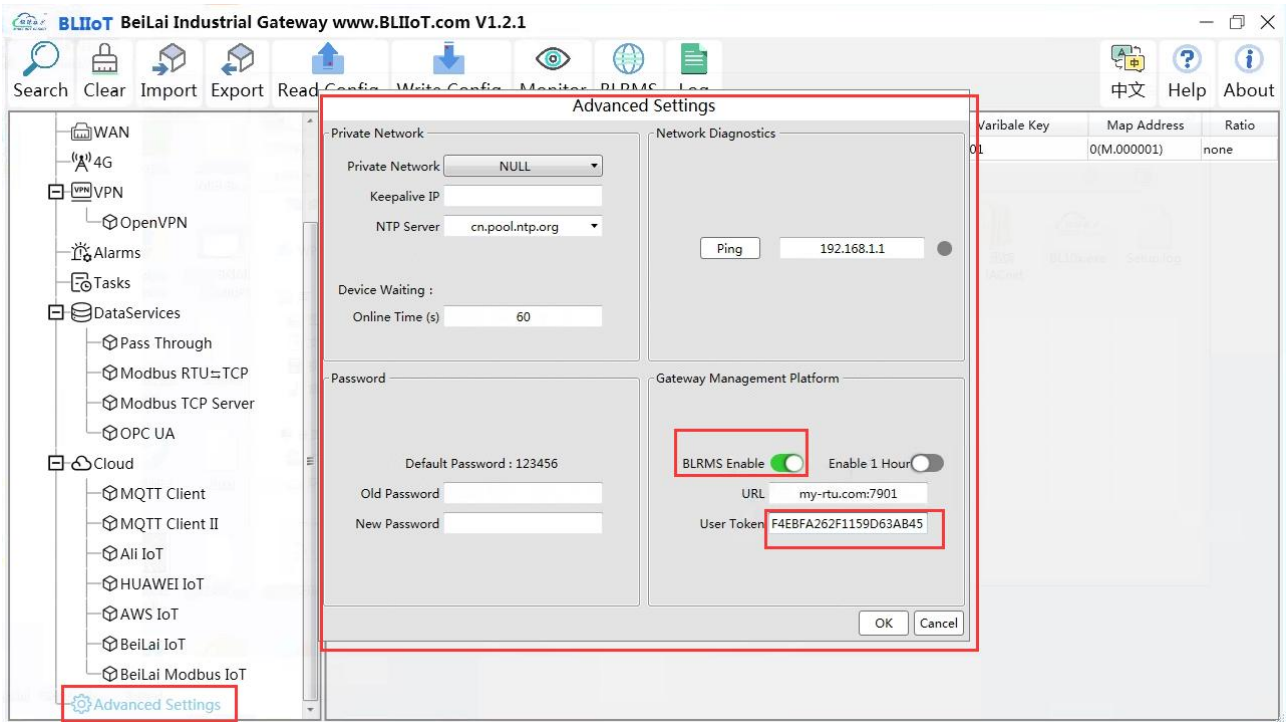
1.5 Click LAN, right click to add device, device name user-defined, IP is the IP address of S7-200SMART PLC, port fixed to 102, select S7\_200SMART\_E. Click OK.



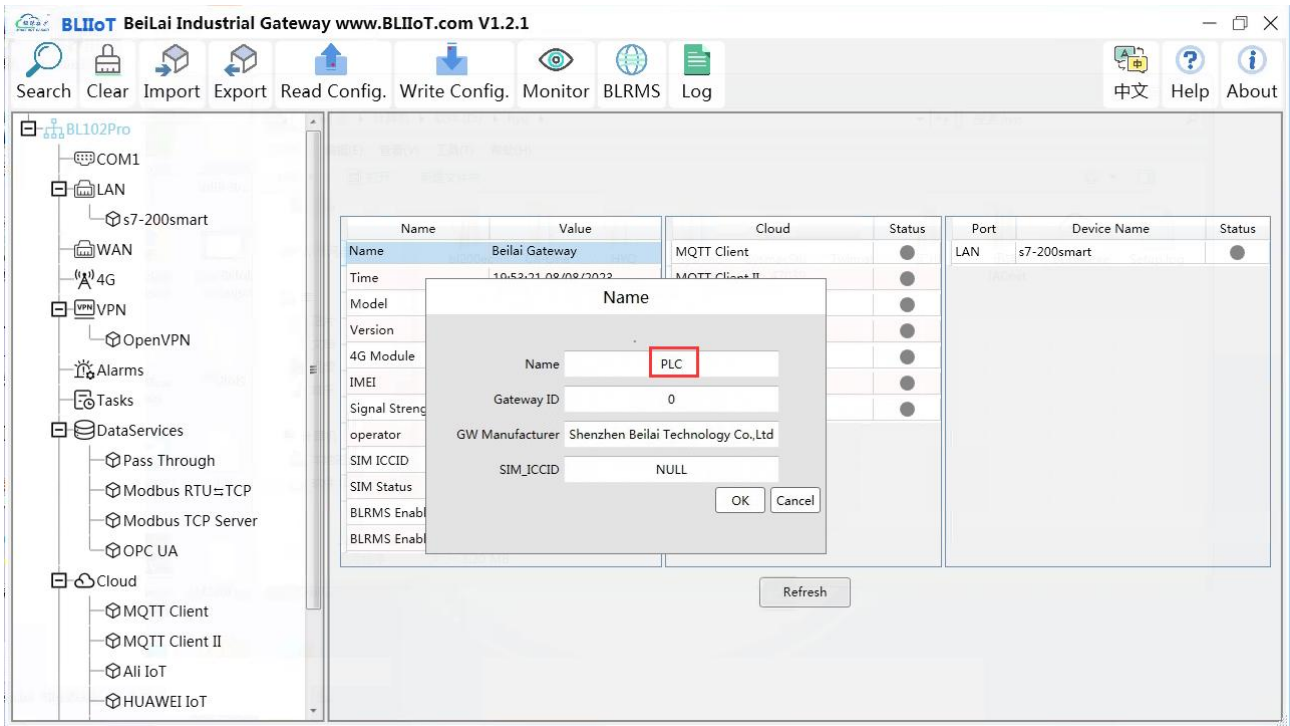
1.6 Data points must be added, in the blank box on the right, right click to add the data to be collected. For example, add the Q0.0 data point.



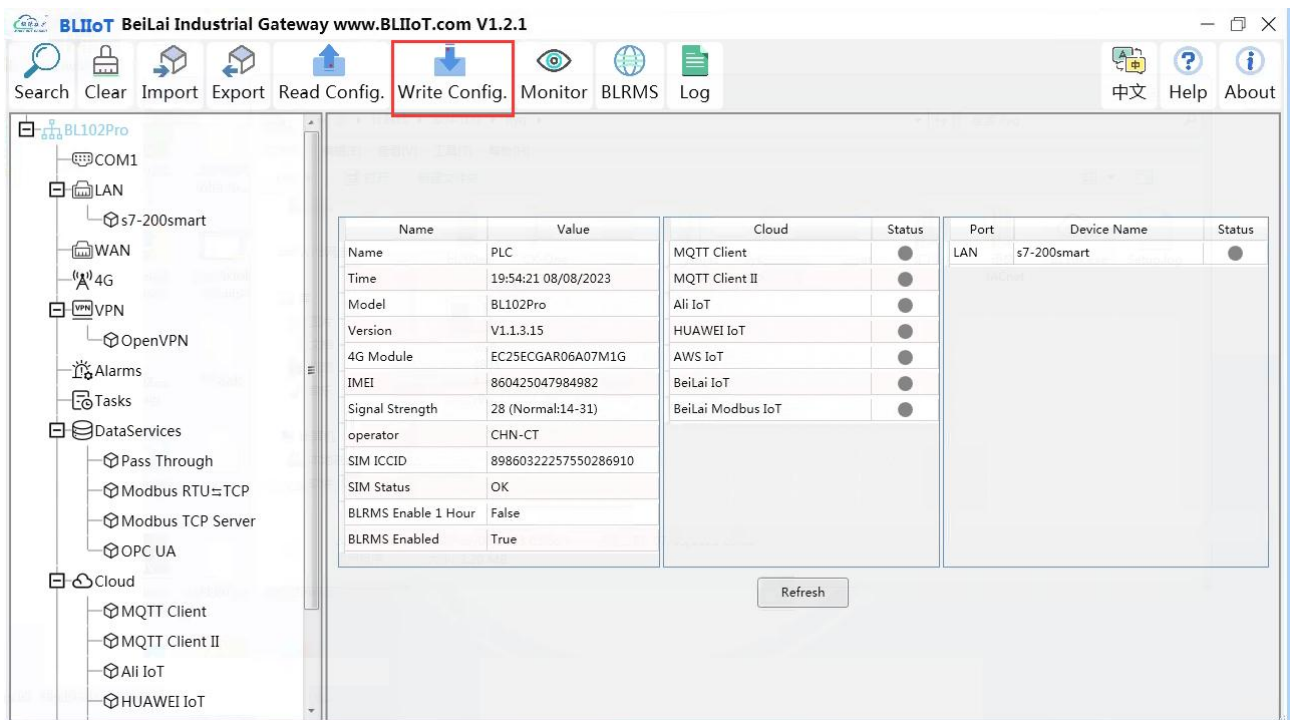
1.7 Click Advances Settings, enable the BLRMS function. Copy the Token generated in the BLRMS system to the user token input box.



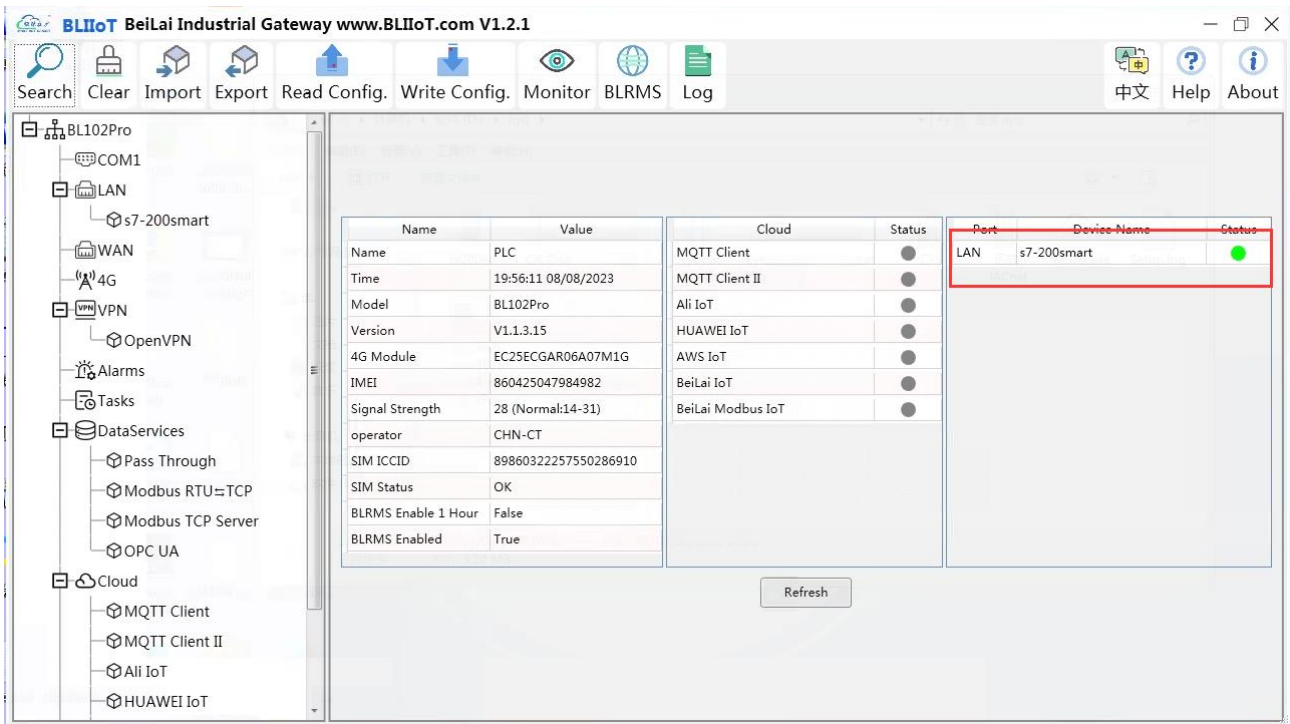
1.8 Since multiple devices are allowed under one account, so please change the device name to distinguish it from others.



1.9 The gateway configuration changes take effect after you click Write Configuration.

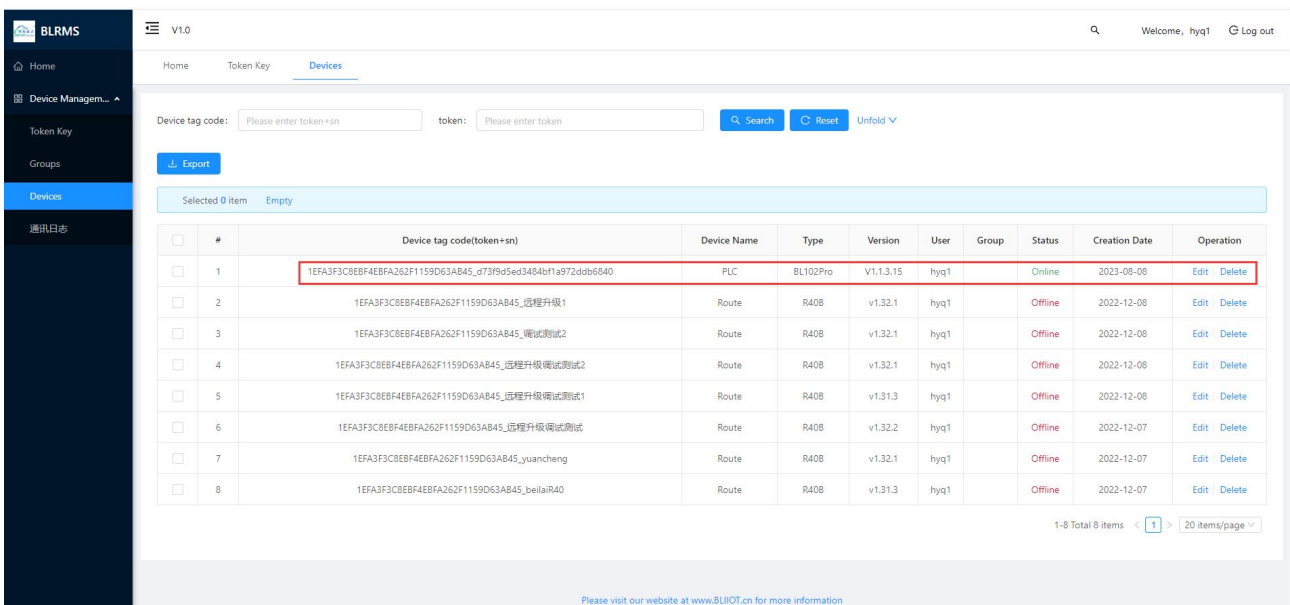



1.10 Re-login the configuration software to see if the acquisition of the S7-200SMART is successful, the status will change to green if successful.

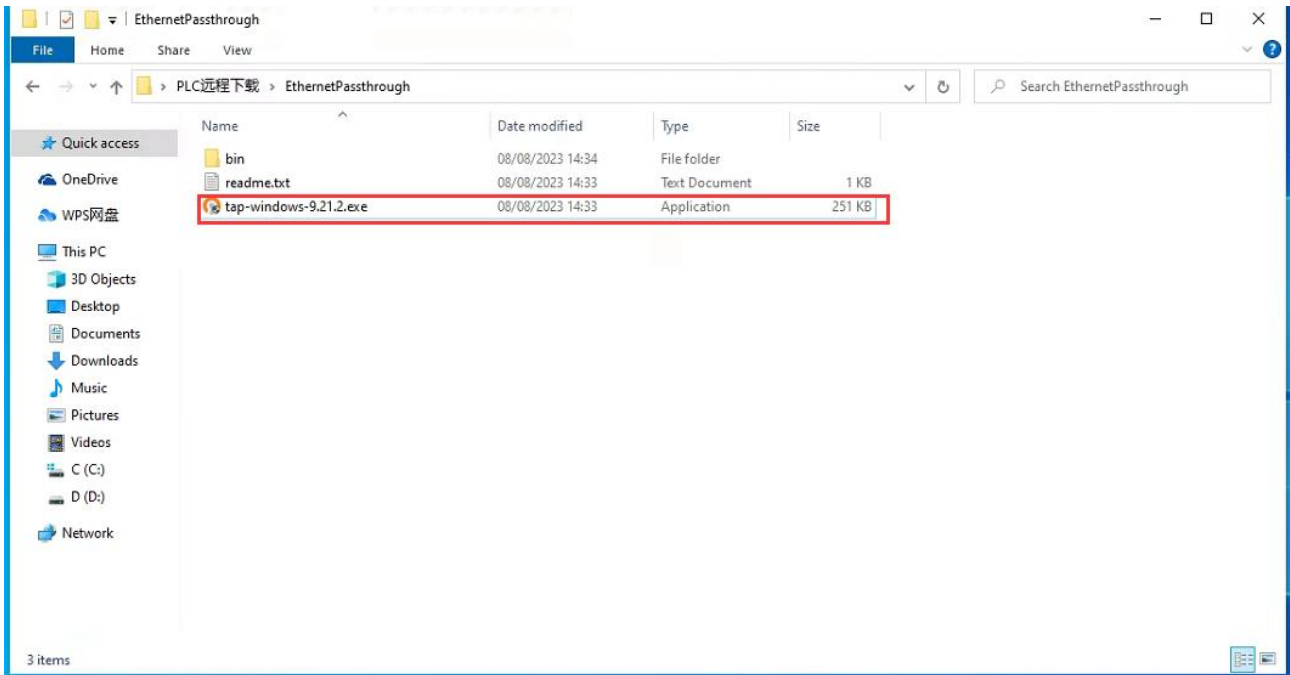


Note: The steps 1-10 above are all based on the gateway and computer being on the same LAN, or the computer being directly connected to the gateway for configuration.

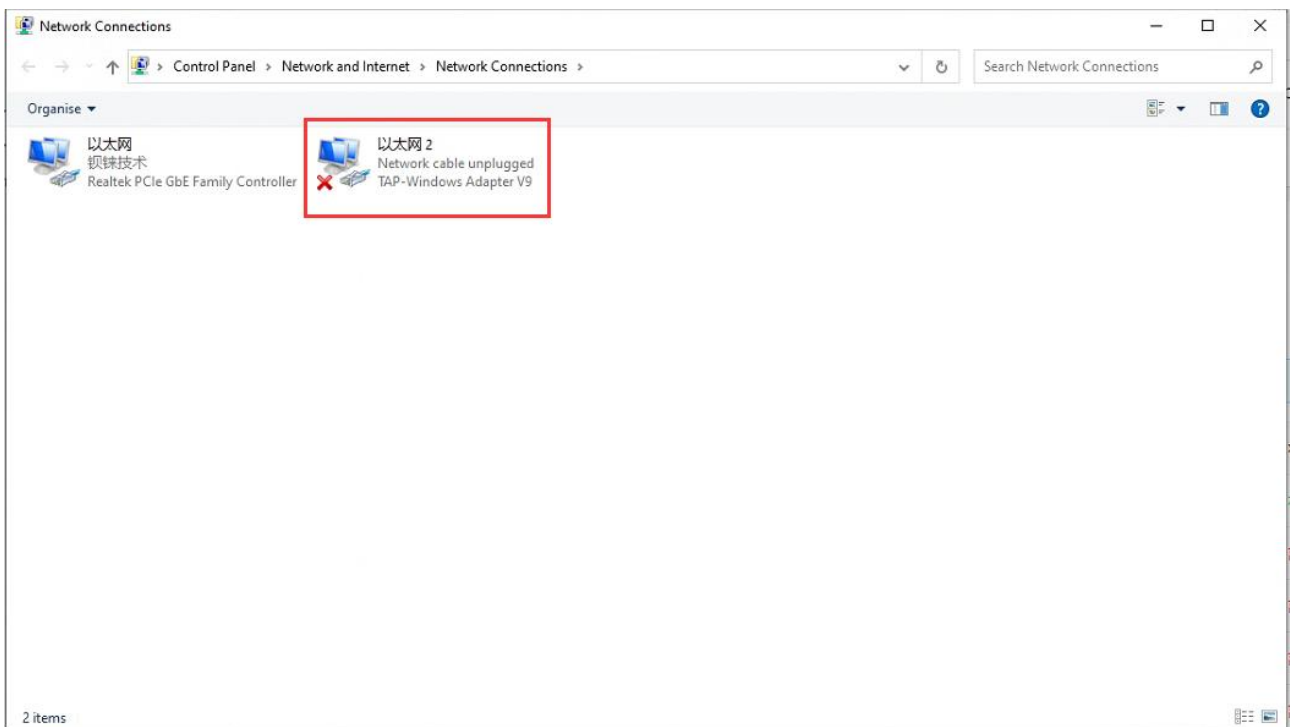
1.11 Log in to BLRMS to see if a new gateway device has been added and is online.



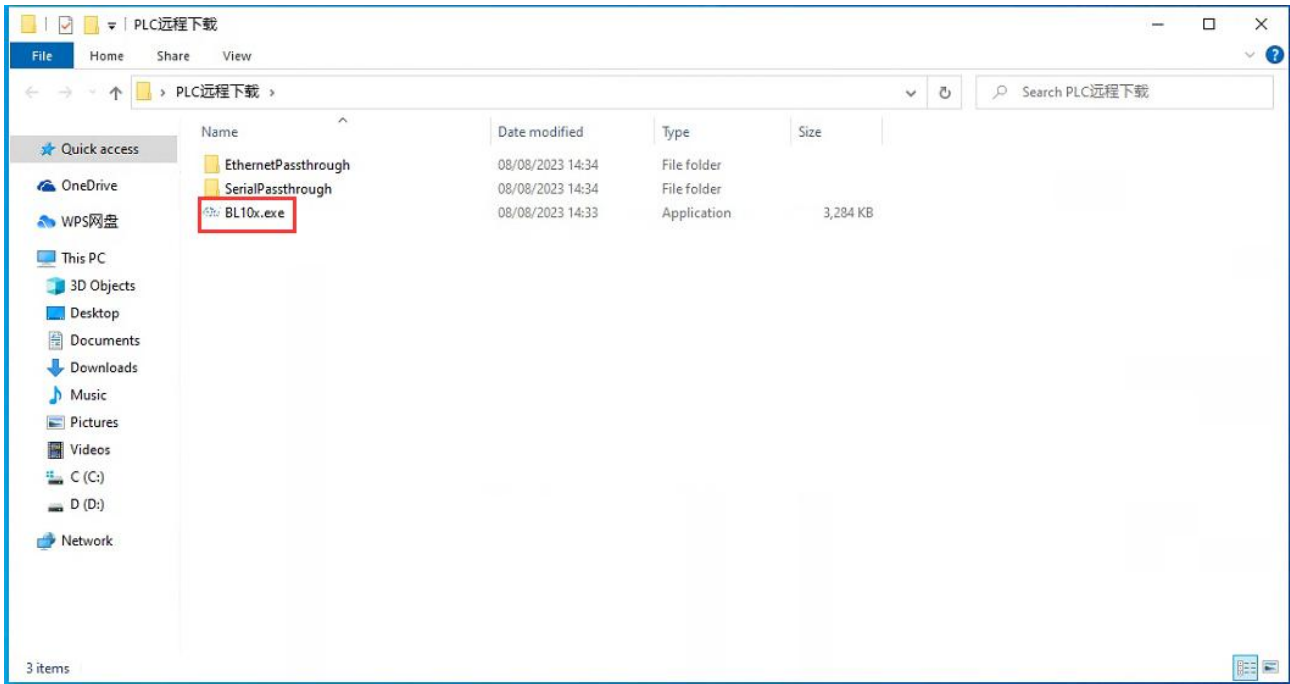
1.12 Open the EthernetPassthrough folder provided by BLIIoT, click  tap-windows-9.21.2 to install the virtual NIC, the installation path should be default.



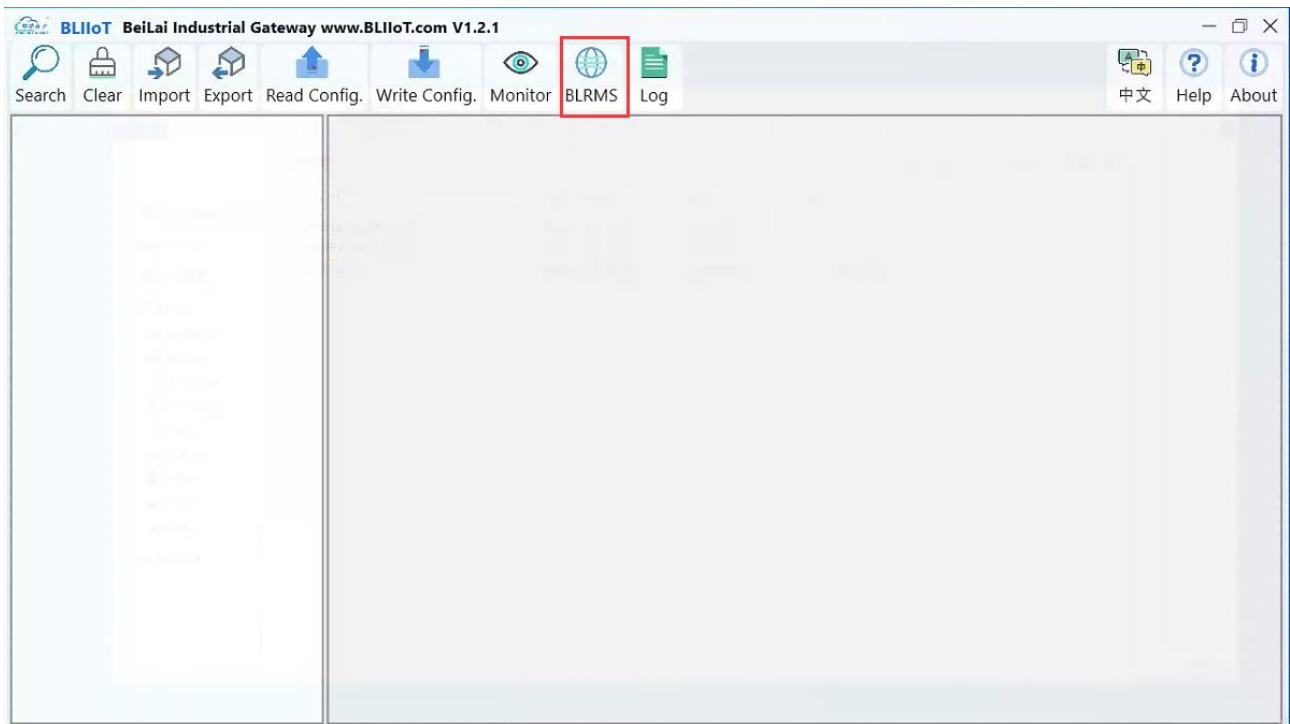
1.13 Once installed, you can view the addition of a new network device inside Network Connections.



1.14 Open the BLIIoT Gateway Configuration Software. The Gateway Configuration Software should be in the same folder as the EthernetPassthrough folder.



1.15 Click BLRMS

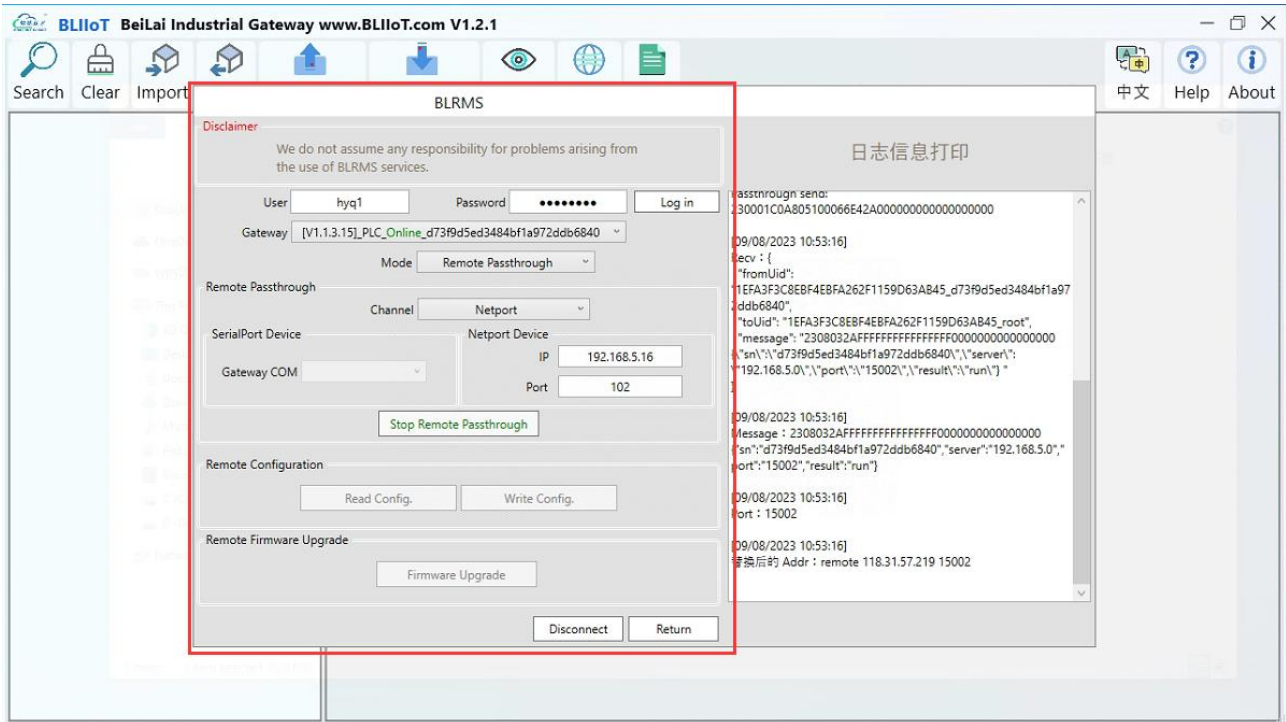




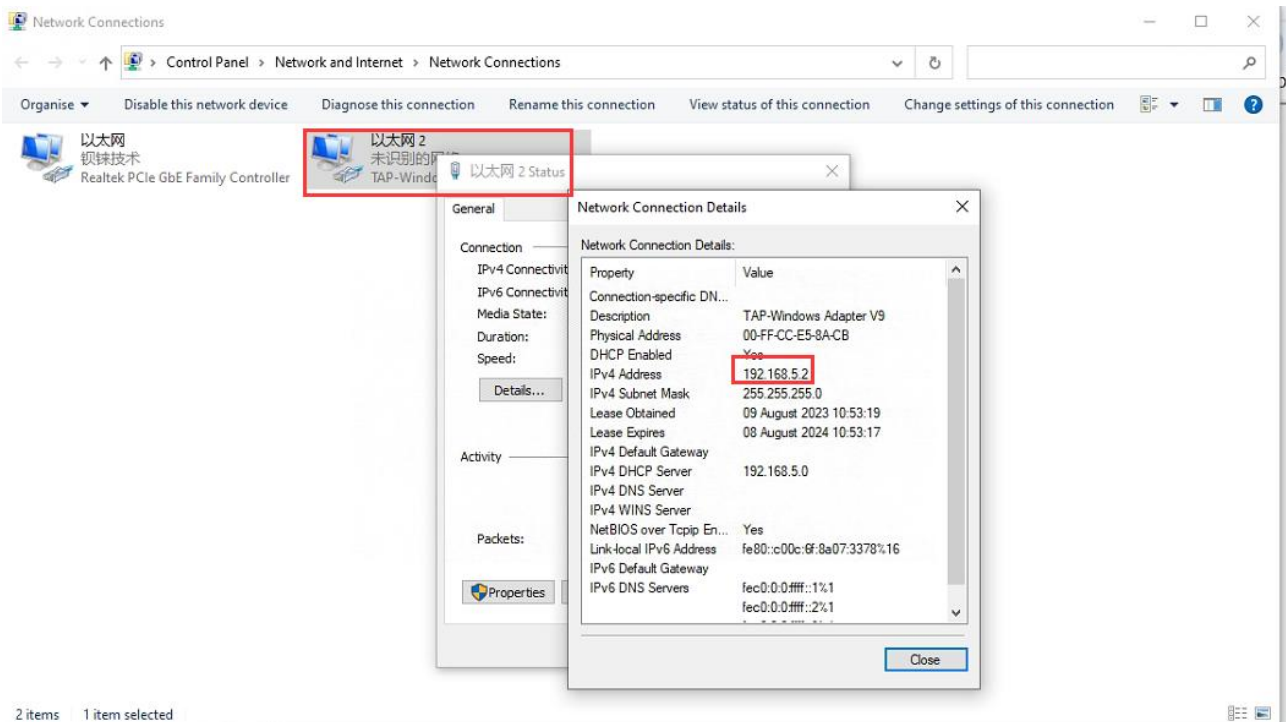
1.16 Enter the user name and password for logging into the BLRMS system. Select the gateway you want to operate, the gateway must be online. If it is not online, please check the network of the gateway or contact BLIIoT after-sales service.

Select Remote Passthrough mode, Netport channel. IP and port is the PLC IP and port, that is, the PLC parameter configuration items filled in the gateway configuration software.

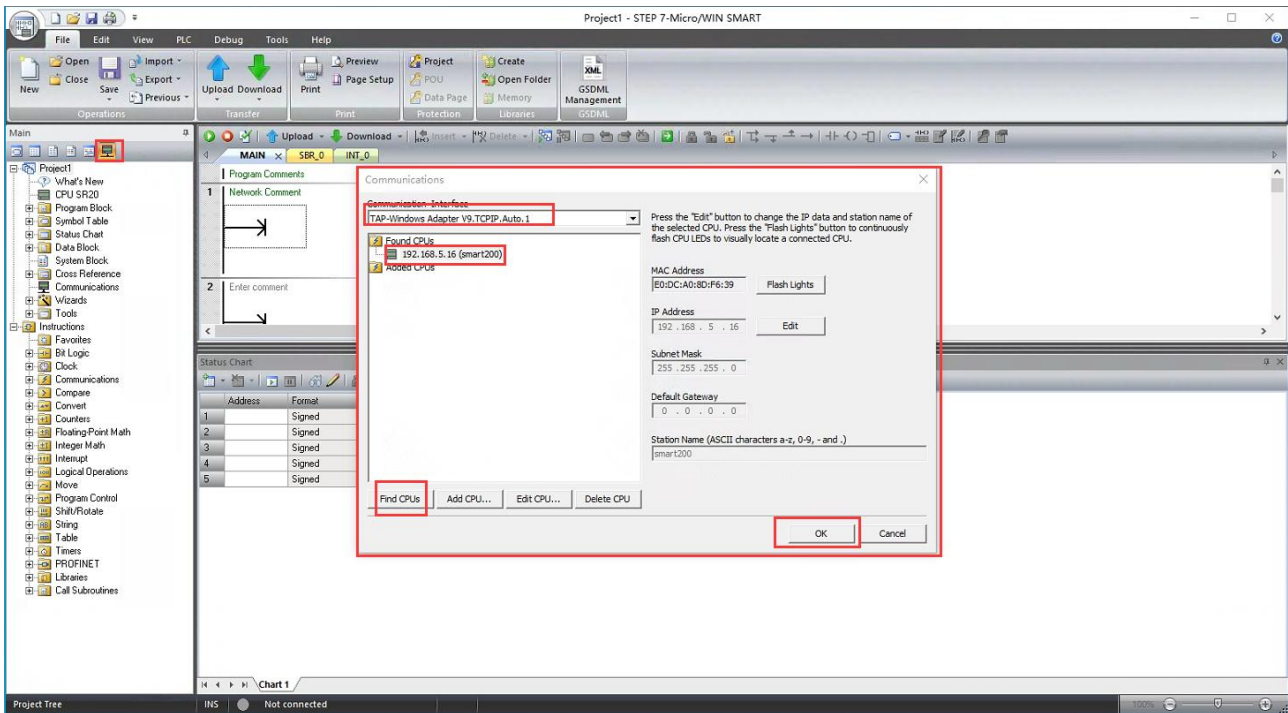
Click Start Remote Passthrough, the gateway will stop collecting data from PLC.



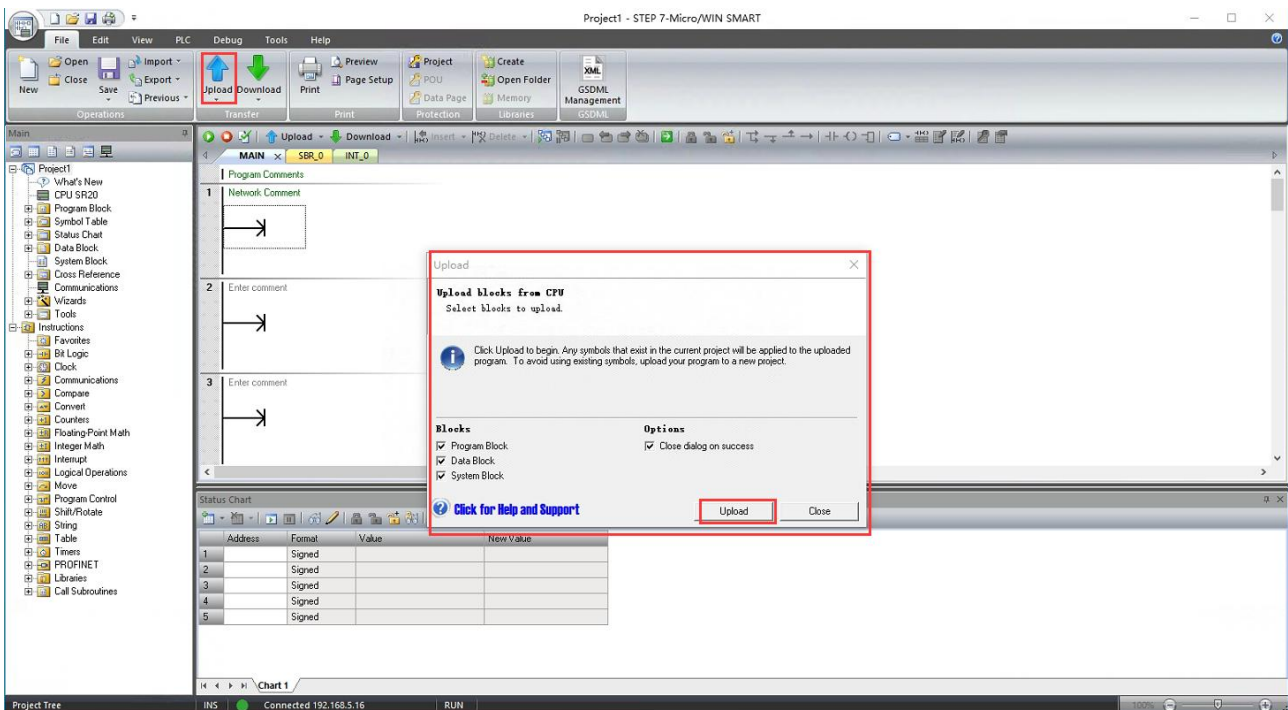
1.17 To determine whether the remote PLC download function has been used successfully, you can check whether the previously installed network device has been assigned an IP address in the same network segment as the PLC.



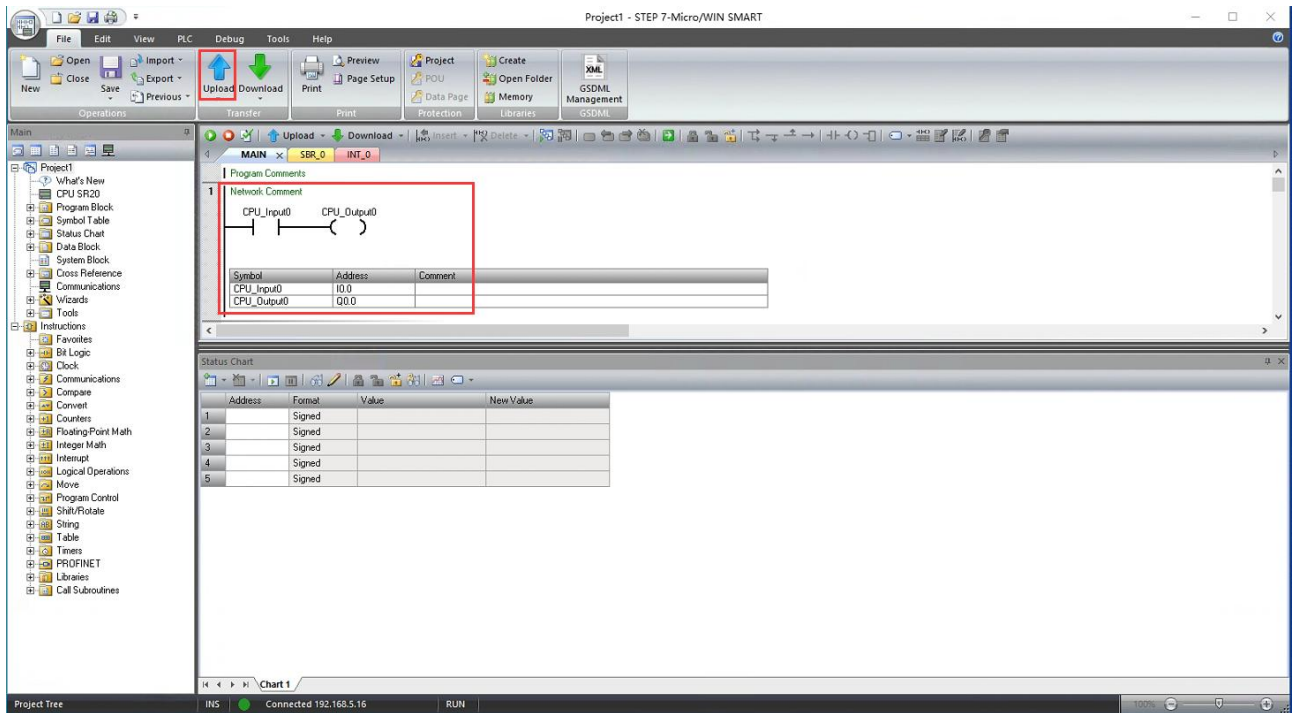
1.18 Open Siemens STEP7 software, click Communications, select the installed network card TAP-Windows Adapter V9.TCPIP.Auto.1, search for PLC, find the PLC you want to download remotely and click OK.



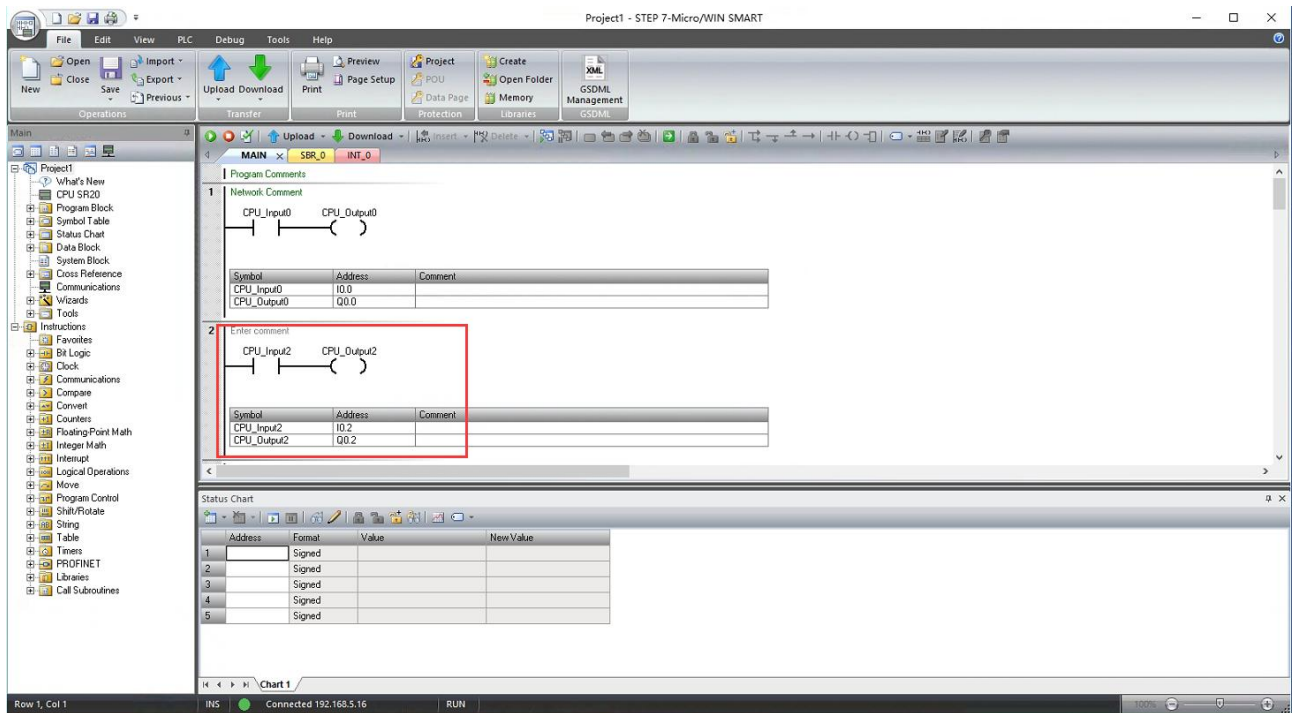
1.19 After successful communication, it supports all operations of direct connection between PC and PLC, such as reading the program of PLC and clicking upload.



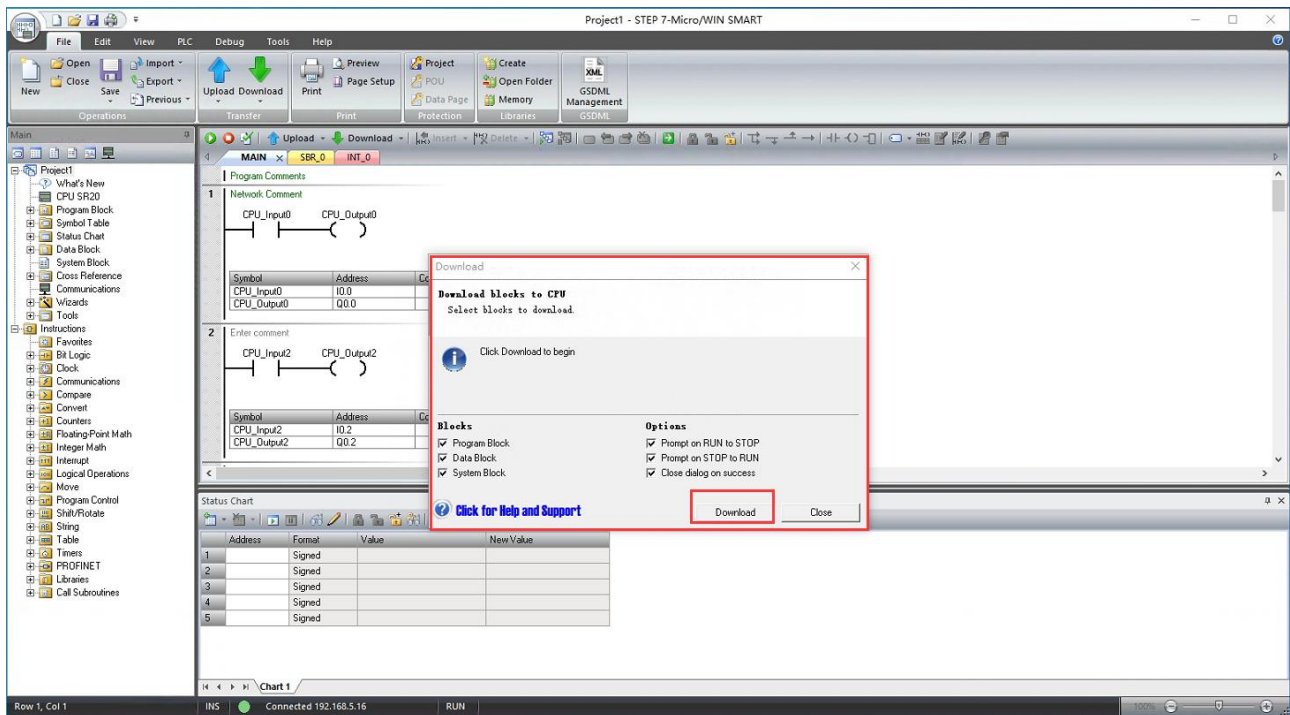
1.20 The program read to the PLC is shown below



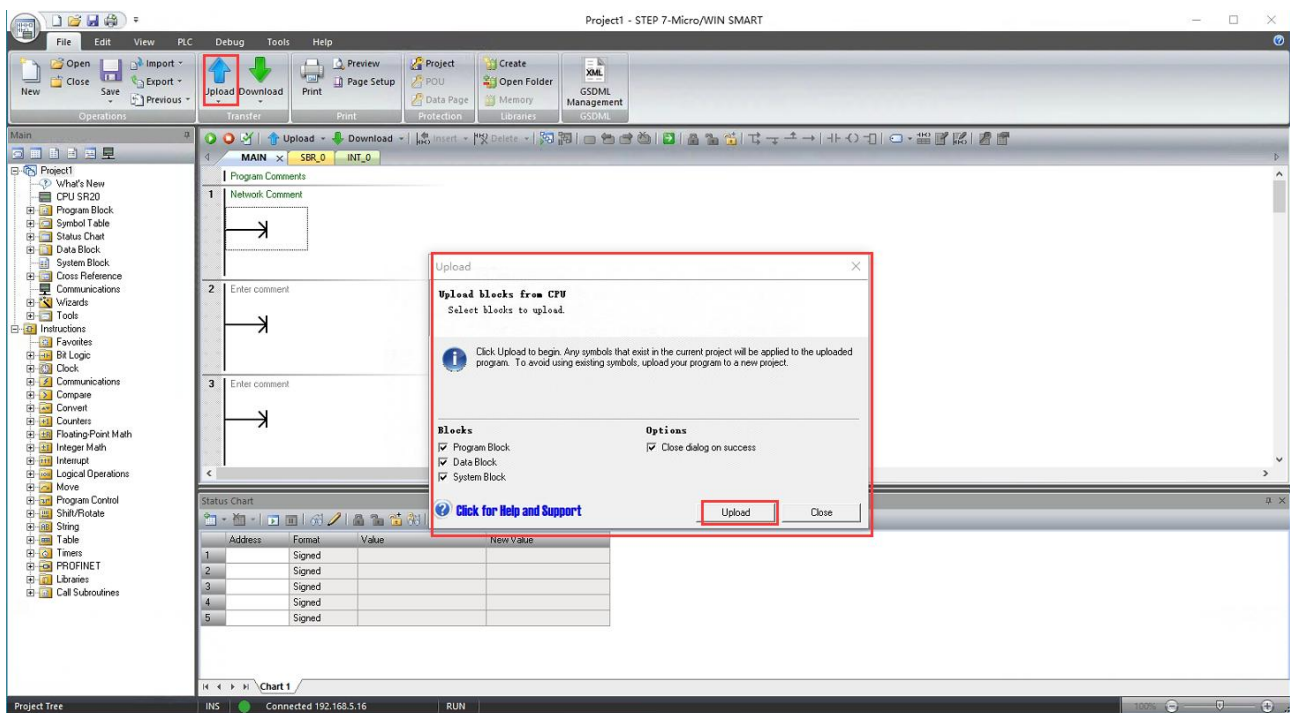
1.21 Make changes to the PLC program, such as adding I0.2 closure to control Q0.2 closure.



1.22 Click Download to download the program to the PLC.



1.23 Check if the PLC program was downloaded successfully, create a new project, re-communicate, and click upload to see if the program is the one you just downloaded.

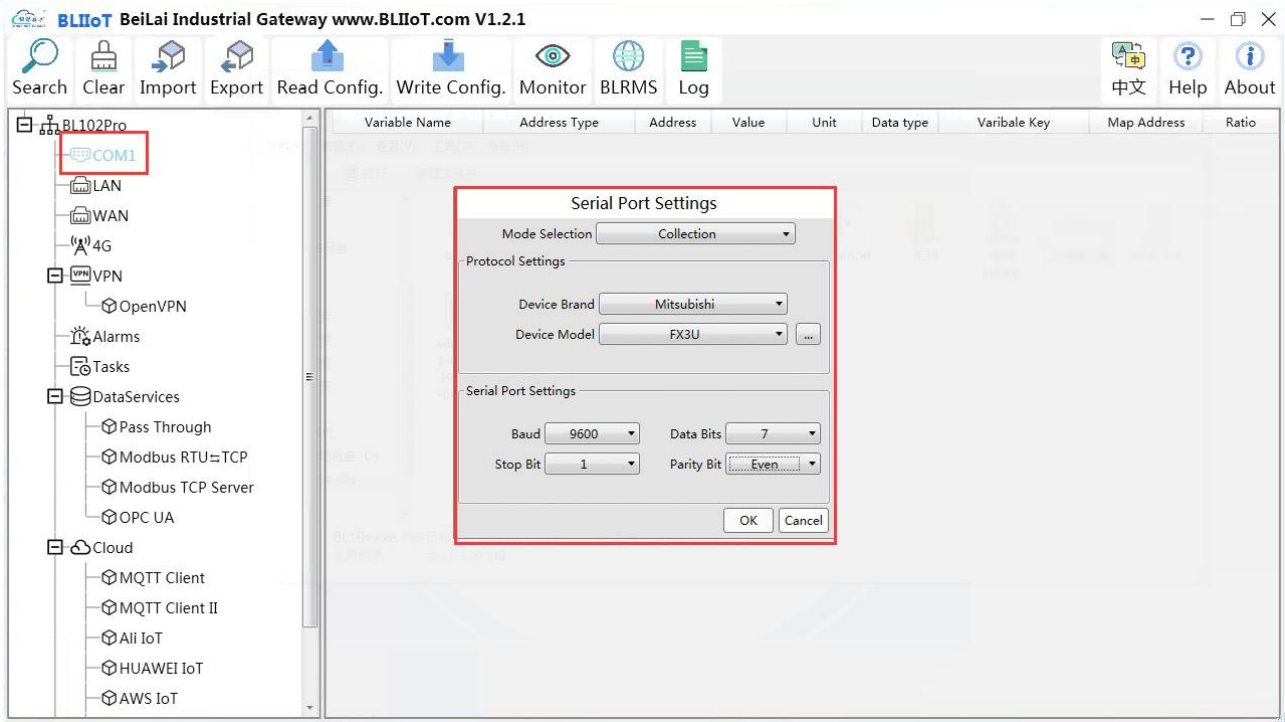




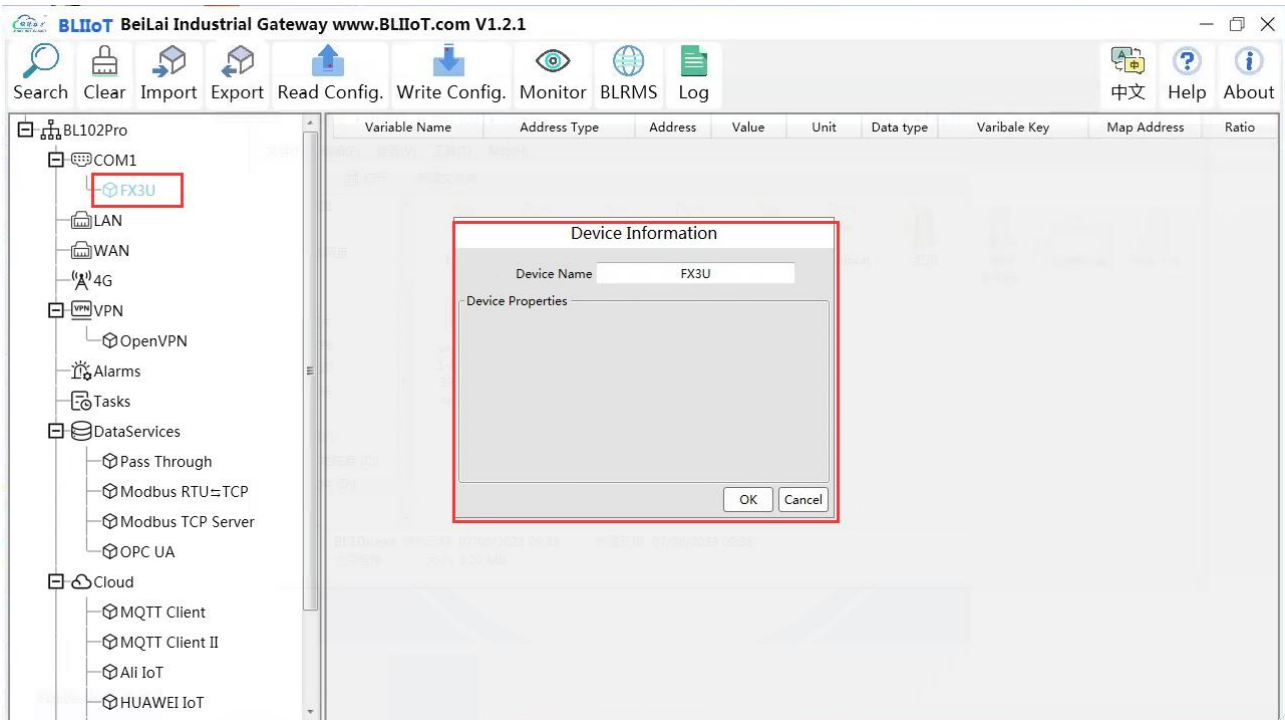
## 2 Remotely download PLC program via serial port

Search for gateway and login configuration software refer to 1.1 and 1.2

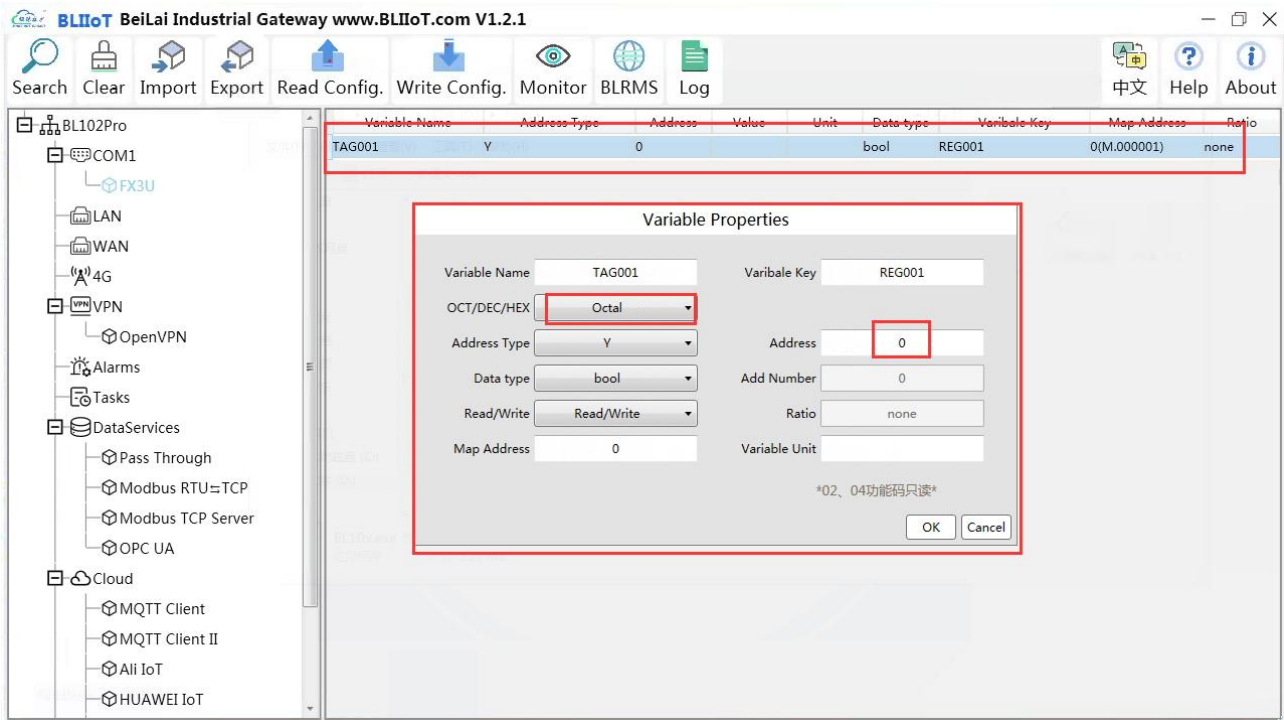
2.1 Click COM1 to configure the parameters of PLC COM, such as Mitsubishi FX3U, select Mitsubishi FX3U, and the default COM parameters are 9600, 7, 1, Even.



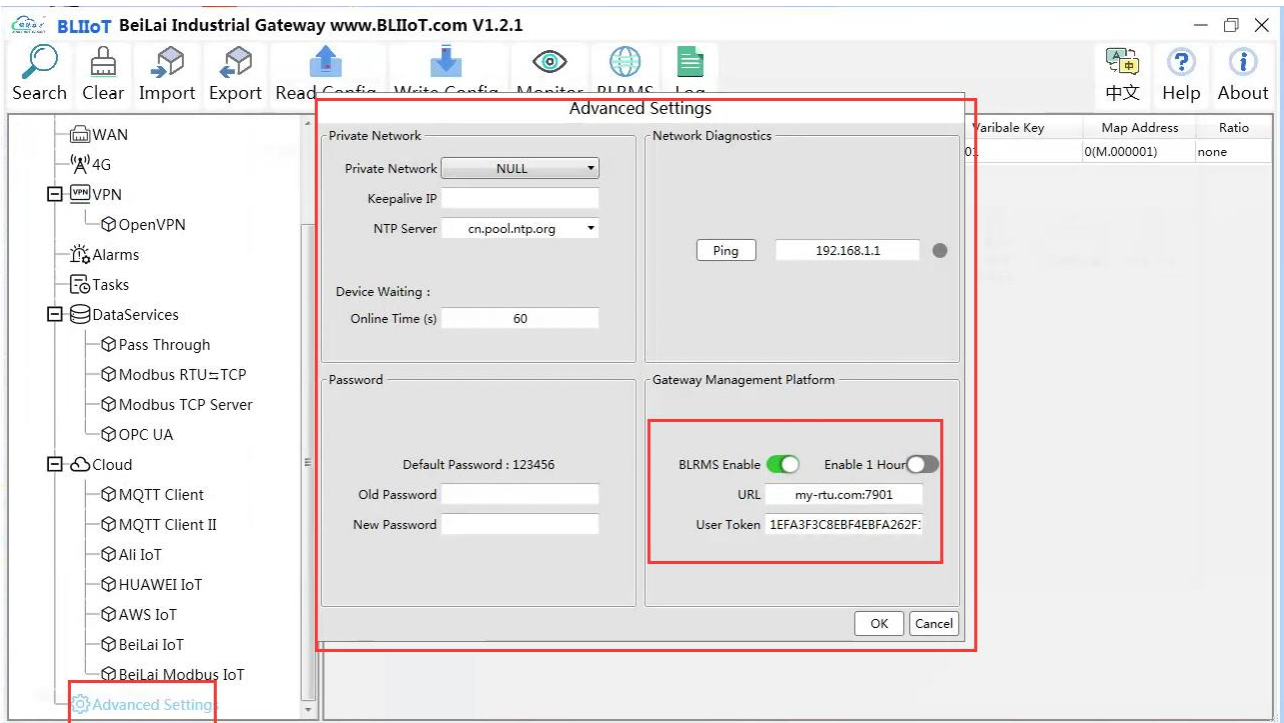
2.2 Click COM1, right click to add device.



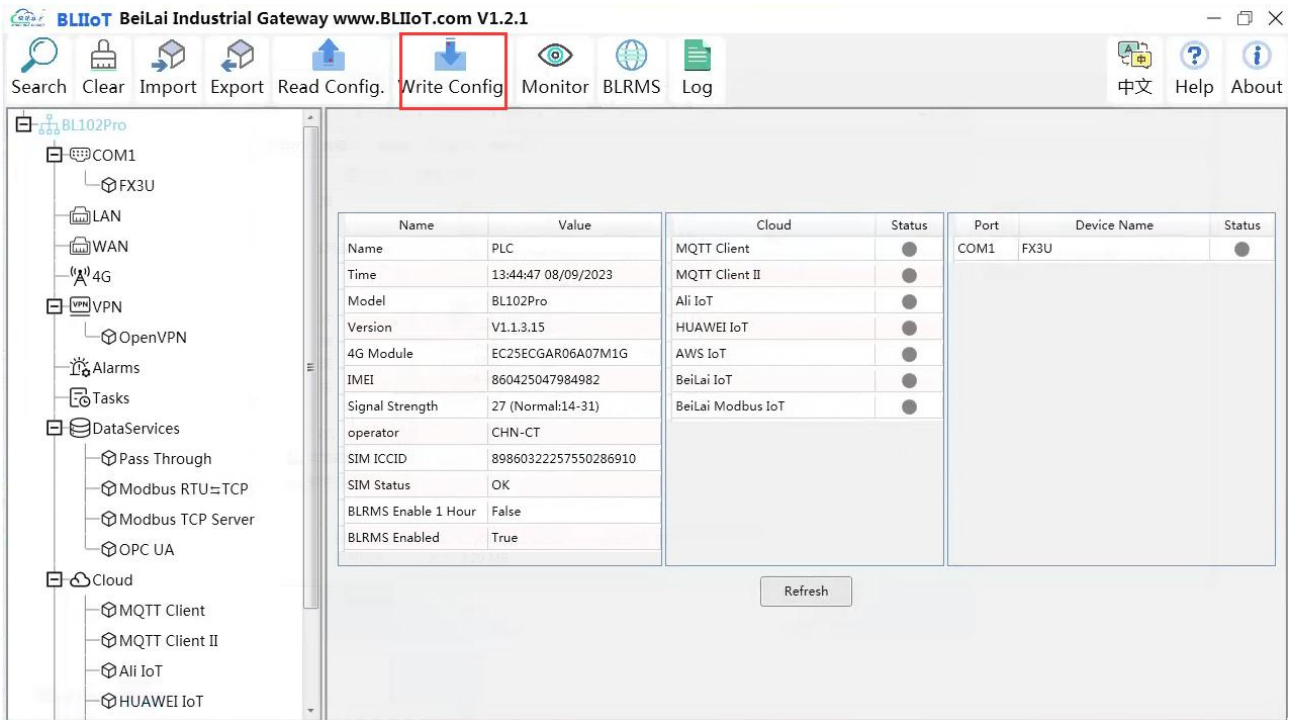
2.3 Add the data points to be collected from the Mitsubishi FX3U PLC, for example, add the Y0 data point, Y0 is octal, so select octal.



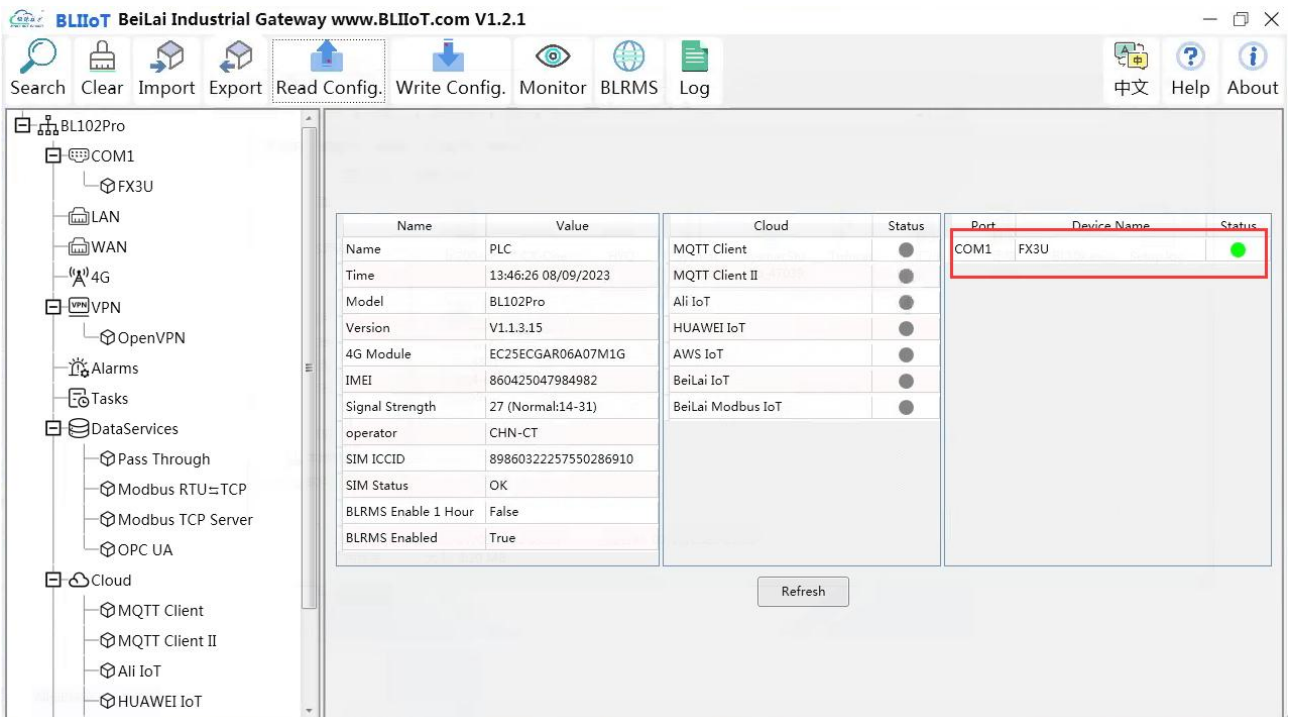
2.4 Click Advances Settings, enable the BLRMS function. Copy the Token generated in the BLRMS system to the user token input box.



## 2.5 The gateway configuration changes take effect after you click Write Configuration.



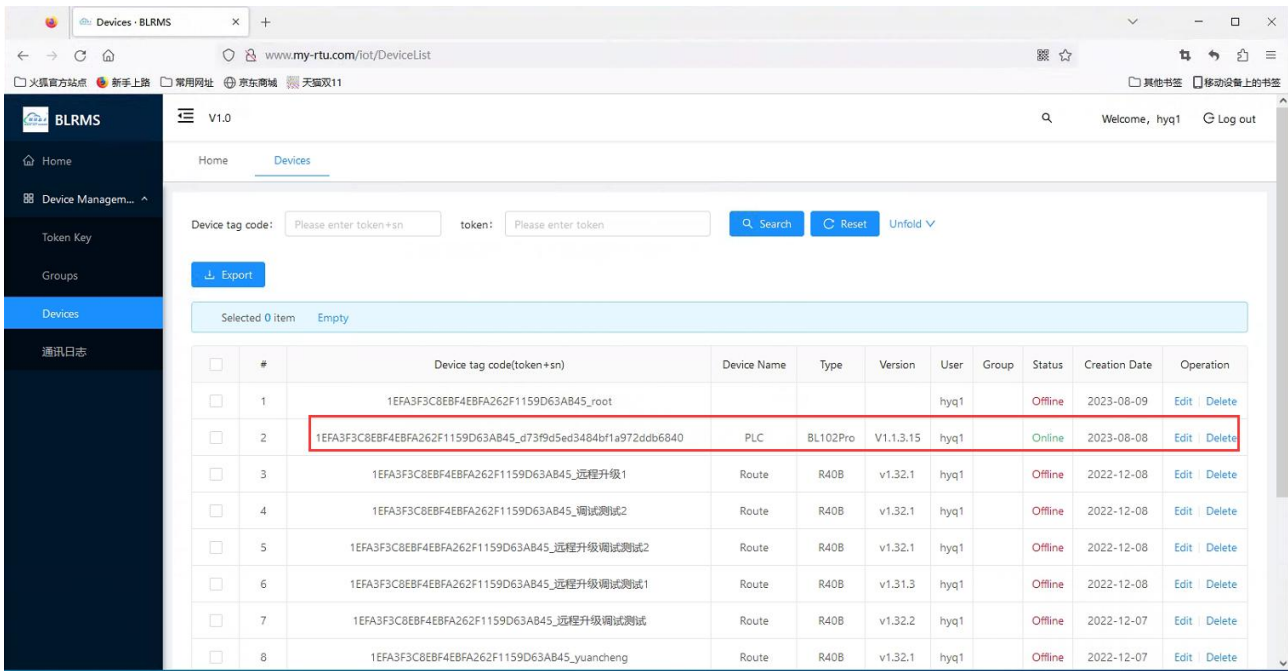
## 2.6 Re-login the configuration software to see if the acquisition of the FX3U is successful, the status will change to green if successful.



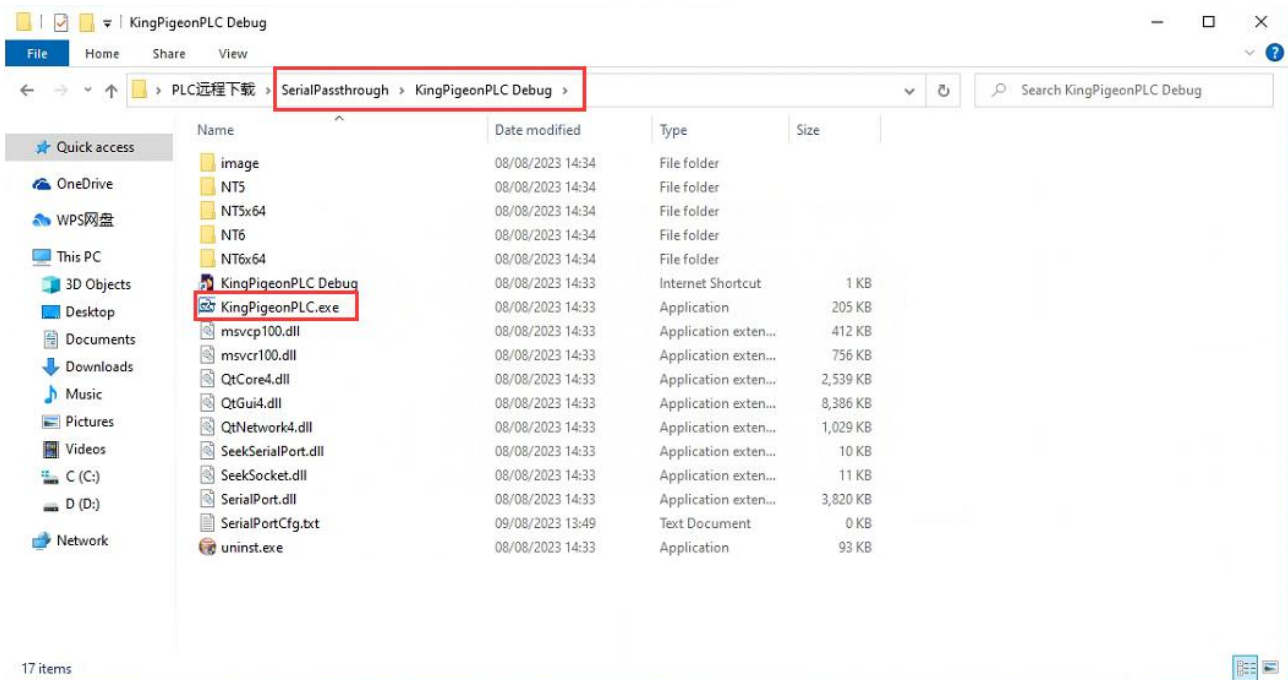
Note: The steps 1-6 above are all based on the gateway and computer being on the same LAN, or the computer being directly connected to the gateway for configuration.



## 2.7 Log in to BLRMS to see if the gateway is online.

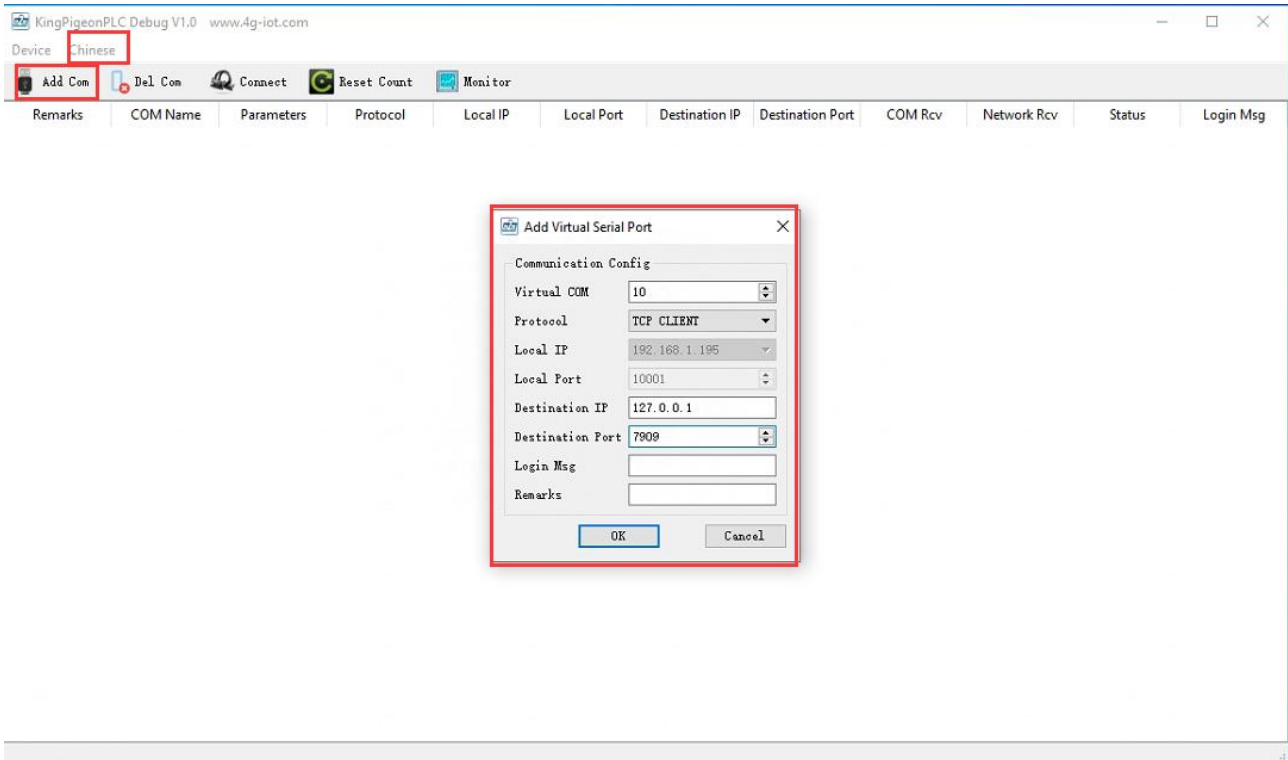


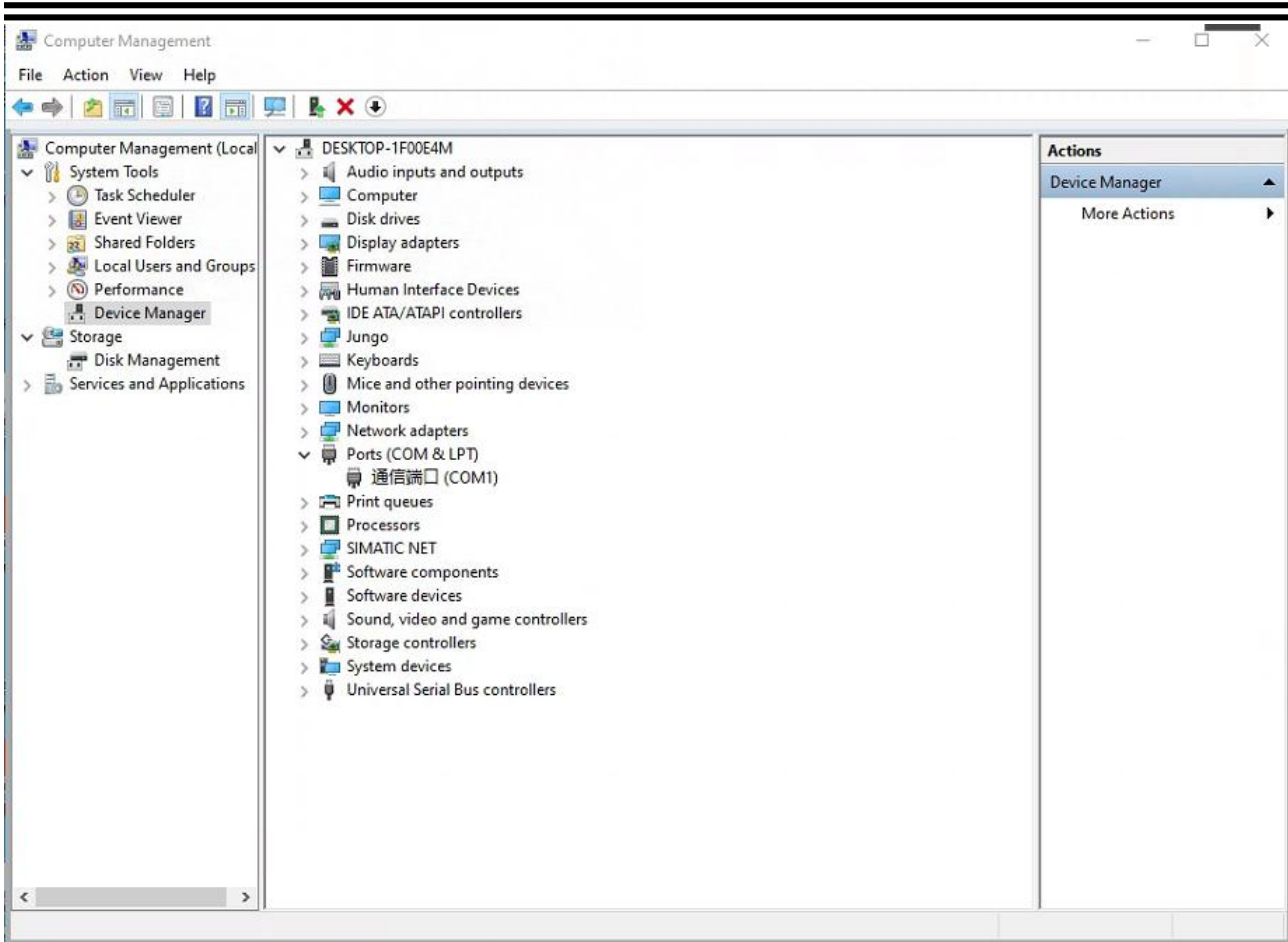
## 2.8 Open the KingPigeonPLC Debug folder in SerialPassthrough folder provided by BLIIoT, click KingPigeonPLC.exe.



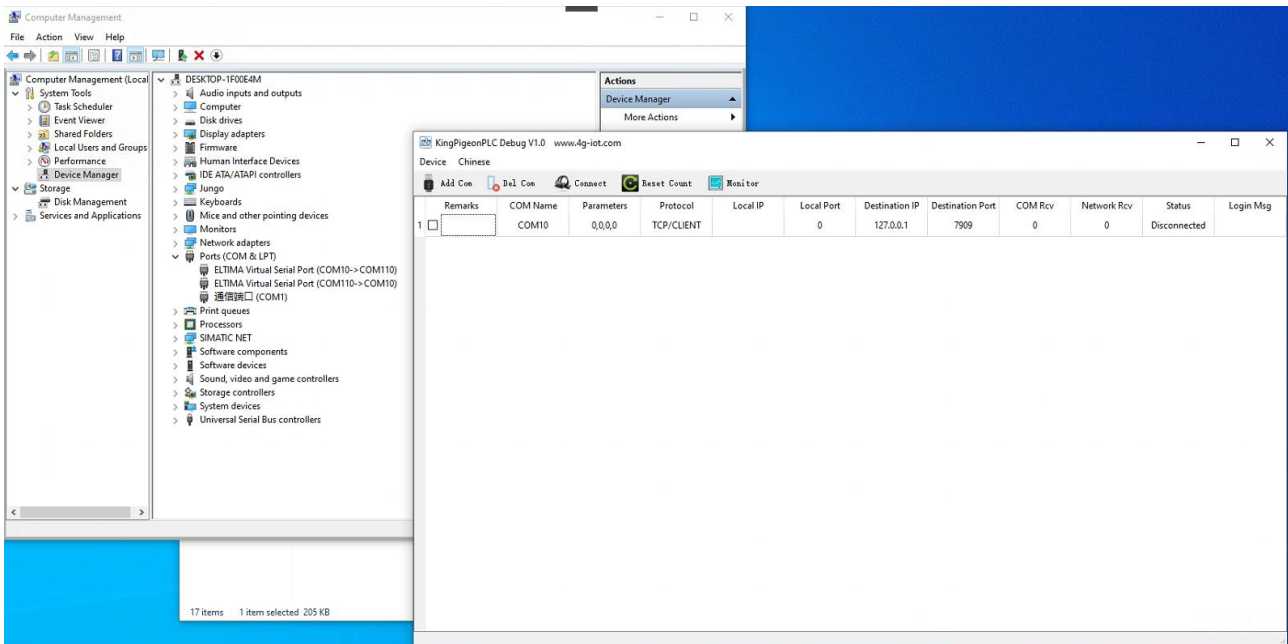
2.9 Choose language, select English, click Add, the configuration box will pop up. Fill in the COM ports that are not in use on your computer (Check whether COM is used in the computer device management interface), select TCP CLIENT, IP: 127.0.0.1, Port: 7909, the IP and port is fixed.

Note: Port 7909 of your computer should not be occupied by other software. Click OK.

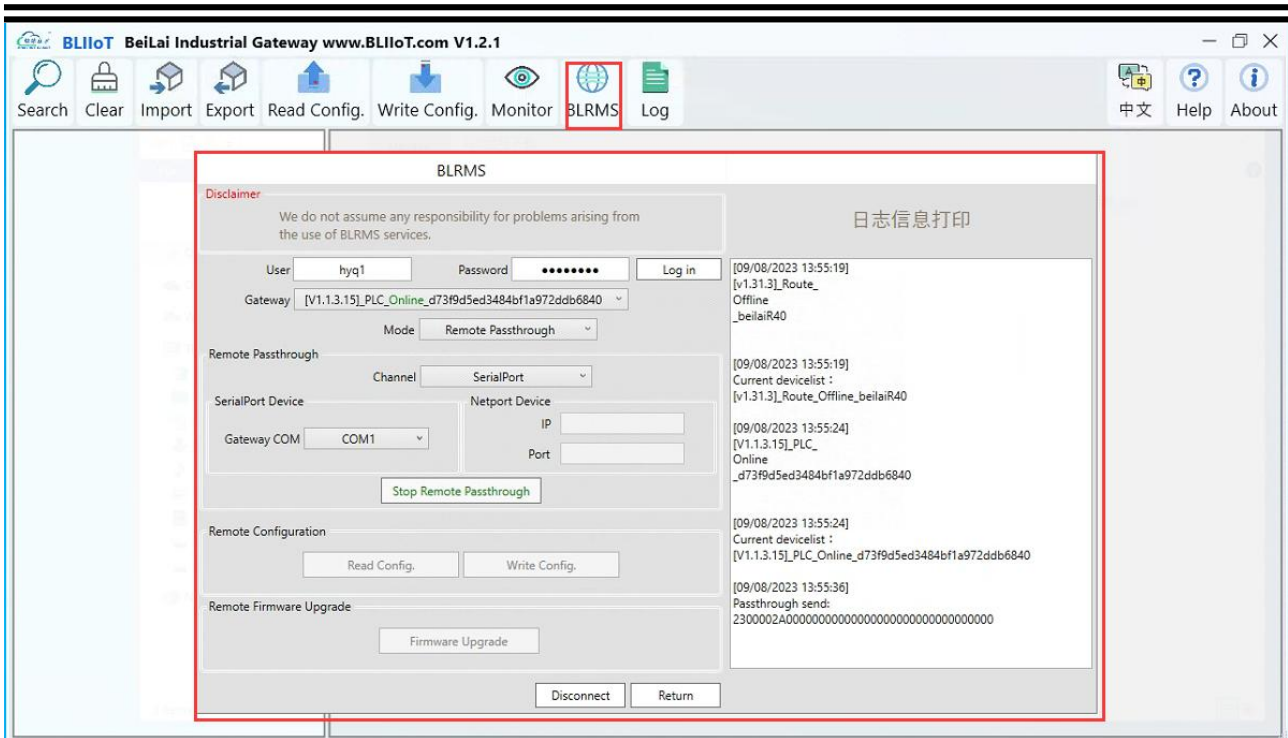




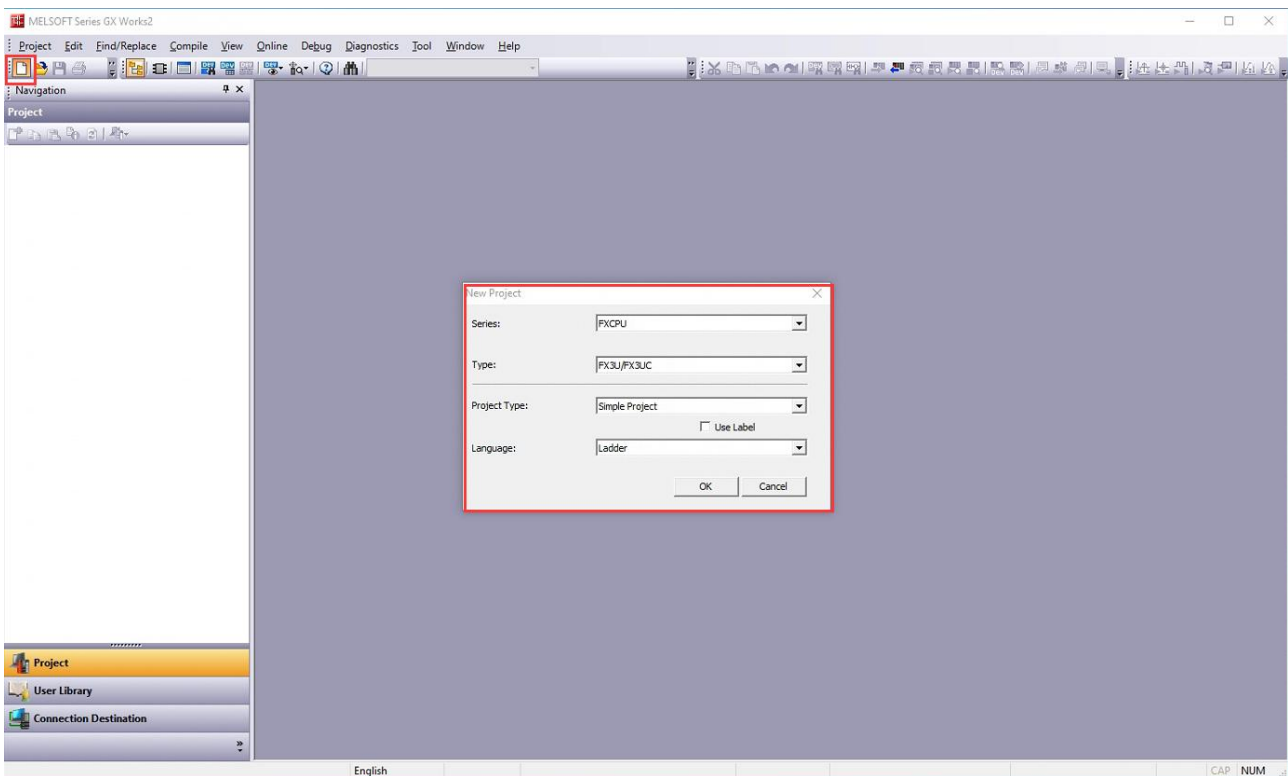
2.10 Add the virtual serial port COM10, and view the virtual COM10 has been added successfully in the computer device management interface.



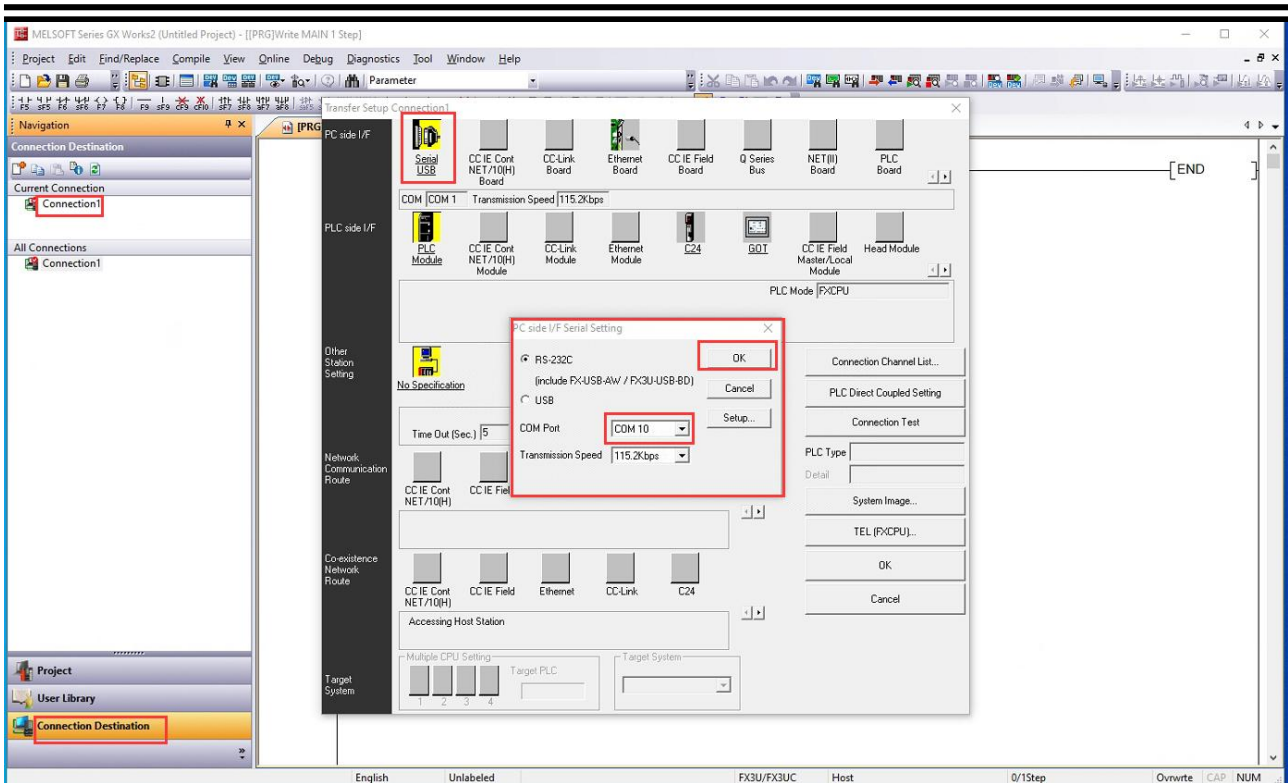
2.11 Open the configuration software, click BLRMS, enter the BLRMS system login user name and password to login, select the gateway to be operated, the gateway should be online, select remote passthrough mode, select serial port channel. Select the COM port to which the remote PLC is connected, BL102 only has one COM. click to start the remote passthrough.



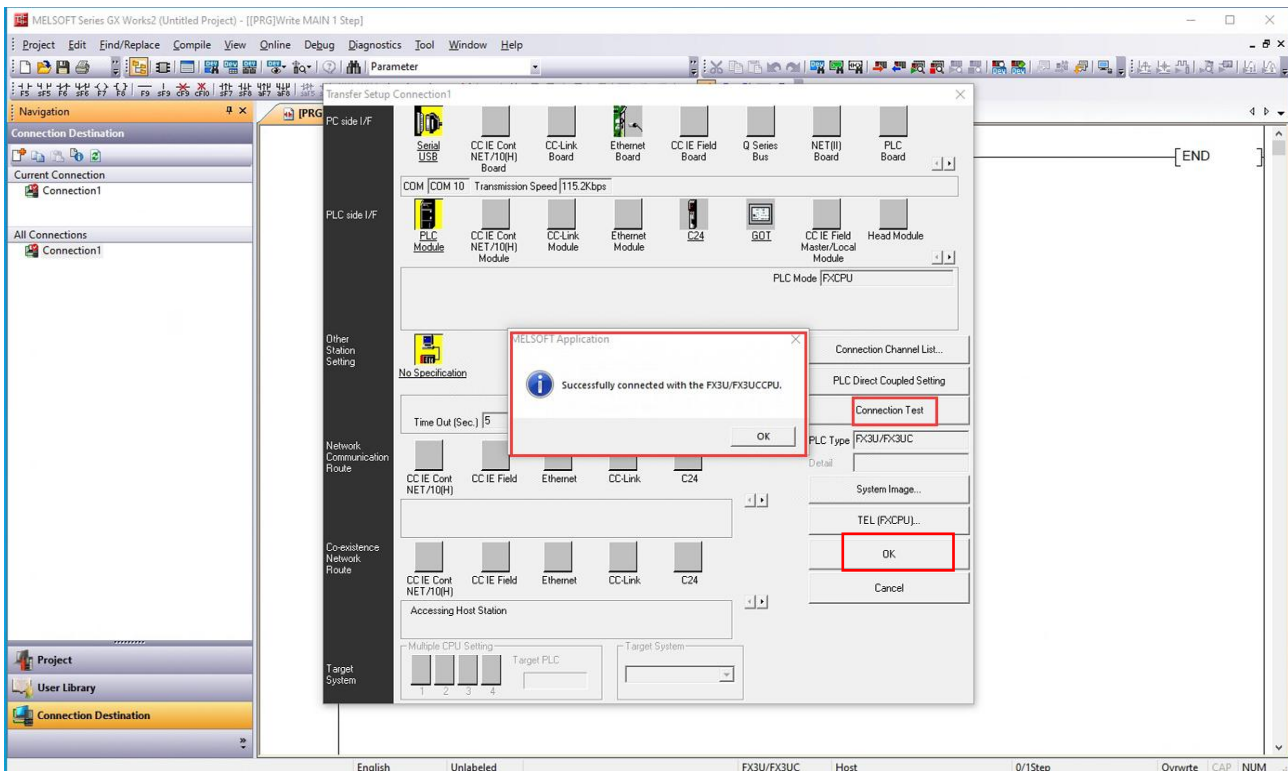
2.12 Open Mitsubishi GX Works2, create a project , select FX3U.



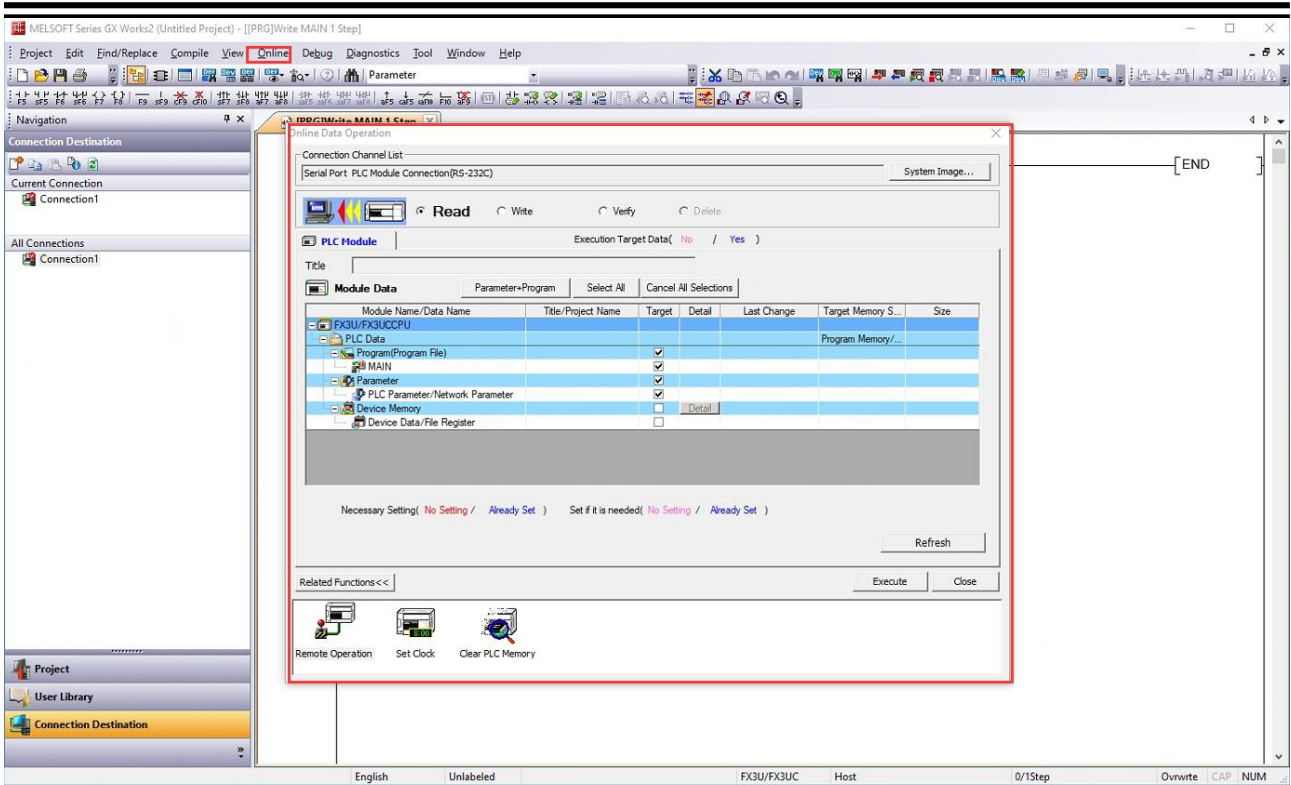
2.13 Click Connection, click Serial USB, select the virtual serial port COM10 and click OK.



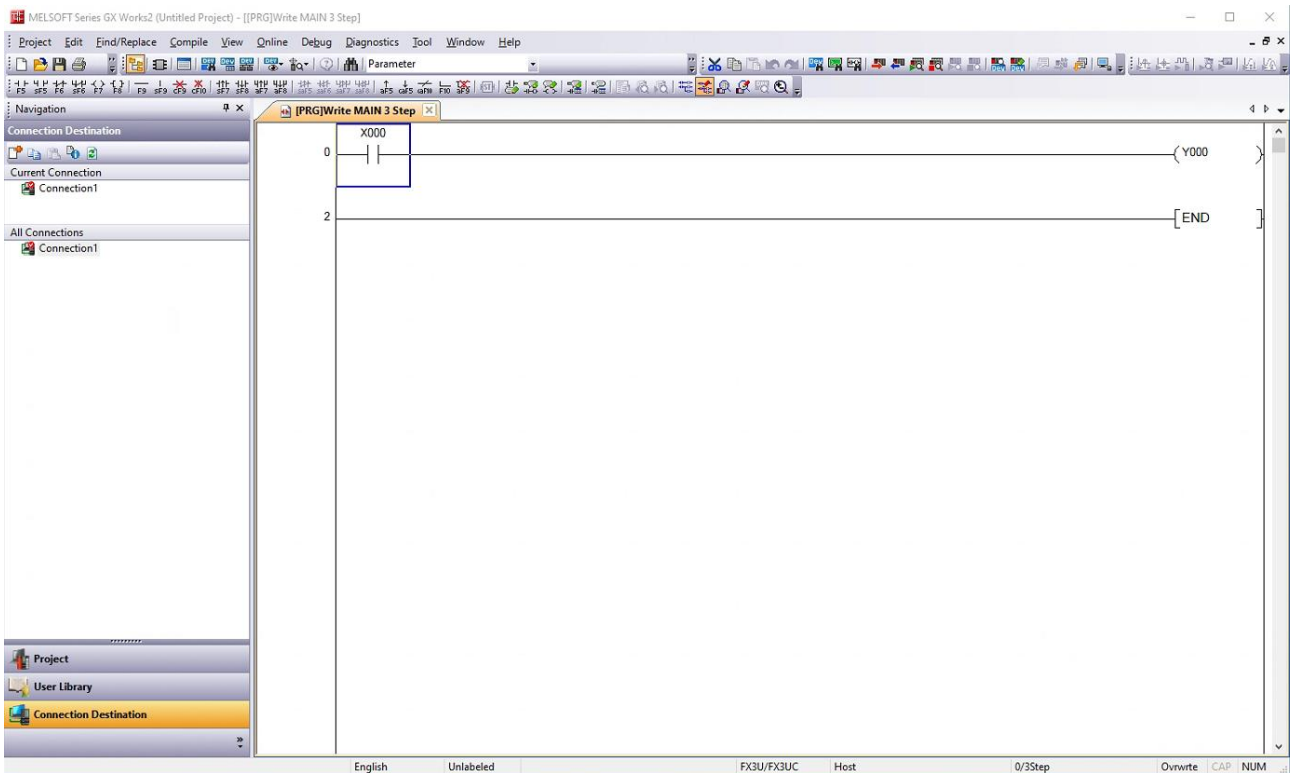
2.14 Click Connection Test, successful communication will be prompted, click OK.



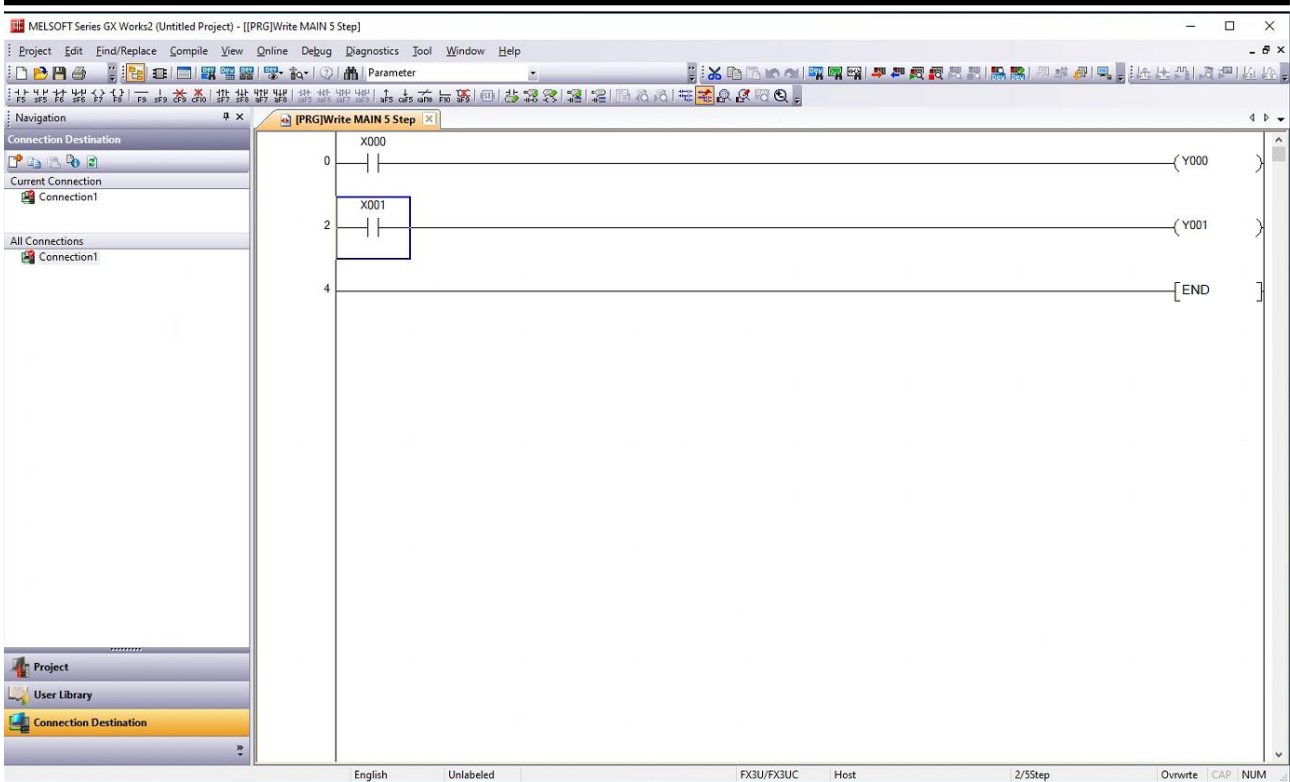
2.15 To read the PLC program, click Online and click the PLC.



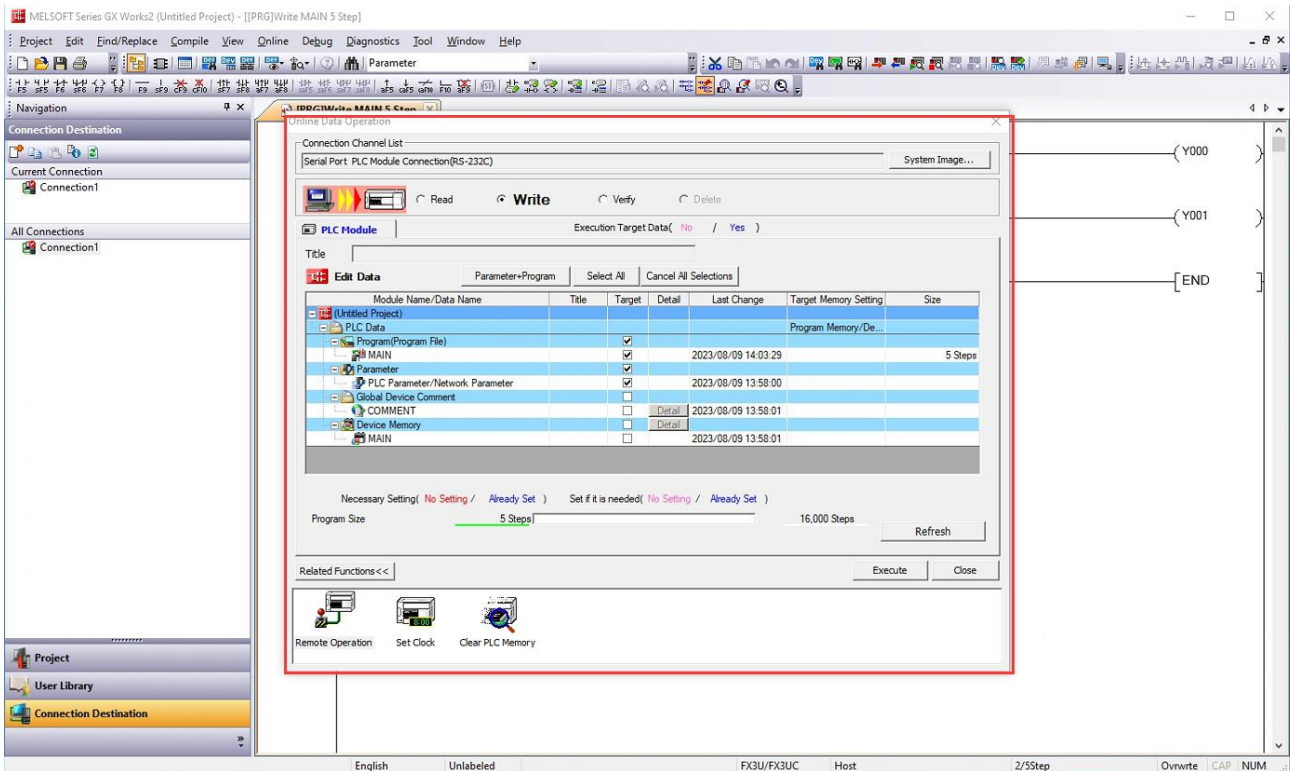
2.16 The PLC program as follows.



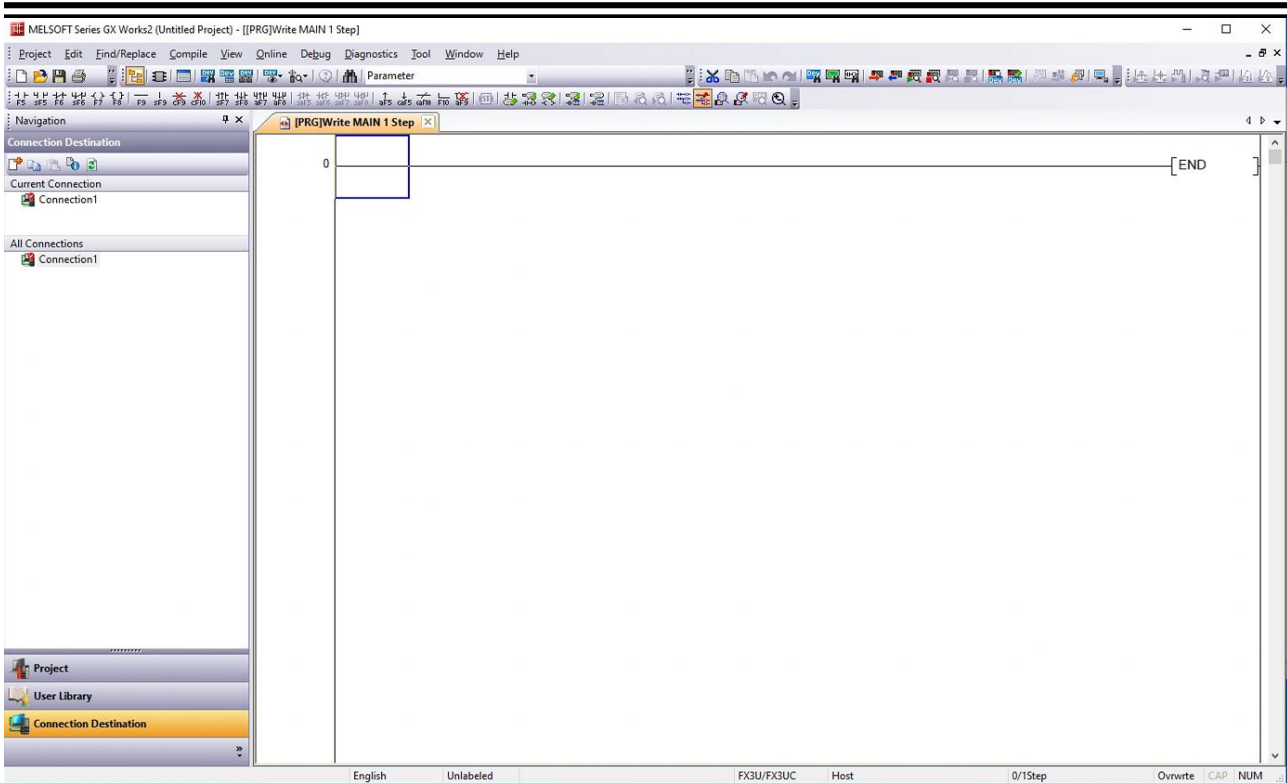
2.17 Modify the PLC program, e.g. add X1 closure to control Y1 closure.



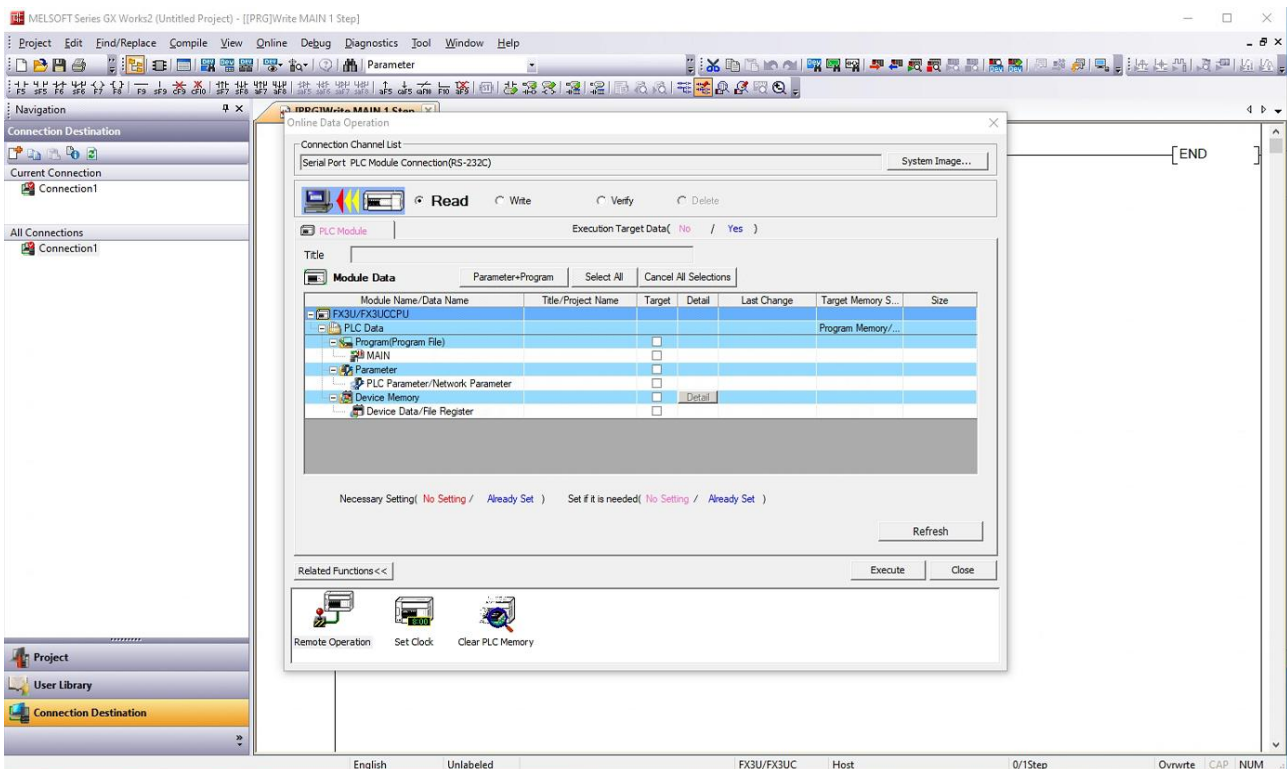
2.18 Download the programmed program to the PLC, click Online, and click PLC Write.



2.19 To confirm that the PLC program download was successful, create a new project and re-communicate with the PLC.

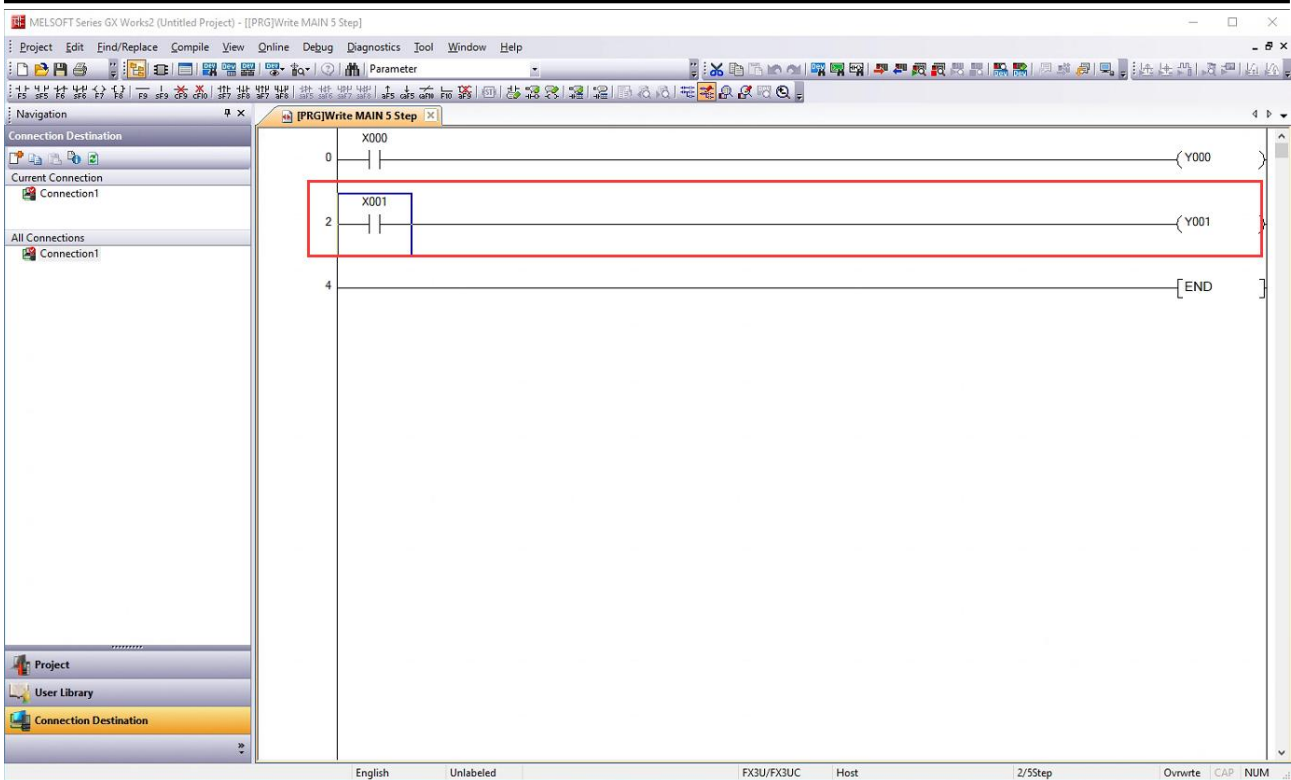


2.20 To re-read the PLC program, click Online and click PLC Read.



2.21 The newly added program segment is in the PLC program, proving that the download was successful.





2.22 Stop remote passthrough, click the Start Remote Passthrough button and click disconnect. Only then will the gateway resume data collection from the PLC.

