X2Profinet User Manual

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Content

1 Preface

1.1 Disclaimer

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1.2 Technical Support

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- TEL：+86 021-58776098
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  http://www.bacnetchina.com/english

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2 Overview

2.1 Feature

- **Functional description：**

  X2Profinet is a powerful protocol conversion gateway, where X represents different communication protocols from each company, 2 is a homophone of To representing conversion, and Profinet is the final standard protocol supported, which is the S7 protocol. Users can configure according to the communication protocol of the on-site device and convert it to the standard S7 protocol. After running the simulation on the PC without any errors, upload it to the hardware protocol conversion gateway.

- **Working principle:**

  X2Profinet is equivalent to a communication bridge that converts other non-standard communication protocols into the S7 communication protocol, allowing devices that support the S7 protocol (such as Siemens' 300 \ 400 \ 1200 \ 1500 PLCs) to communicate with different devices through a hardware protocol gateway, facilitating system integration.

- Advantage:

  1. Easy to Configure and Operation.
  2. Support Java Script.
  3. Support Chinese and English language to facilitate user operation.
  4. Support PC simulation with X2Profinet.
  5. Support the User review data and communication status. And download files and X2Profinet software from website.
  6. Support different protocol transfer to S7 Protocol.
  7. Gateway support analog linear transformation, support function, high and low byte exchange function.

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8. Support the user permission management.

2.2 Operation Platform

- Support Win 7/Win8/Win10/ XP/2000/2003
- WEB browser with Google Chrome、IE9 and above、Opera、Safari、and firefox

2.3 Applicable product models

PFN1001-ARM, PFN1002-ARM, PFN2004-ARM, PFN2004-A9.

PFN1001-MBus, PFN1002-MBus, PFN1010-MBus, PFN1011-MBus.

2.4 Supported Registered Type and Number

The register types and points supported by the gateway are dynamically al located. PFN1001-ARM, PFN1001-MBus, PFN1010-MBus supports 256 points, PFN1002-ARM, PFN1002-MBus, PFN1011-MBus supports 512 points, PFN2004-ARM supports 1024 points, and PFN12004-A9 supports 2048 points.

2.5 Application Fields

The PFN hardware gateway supports multiple protocol conversions and is used to solve the problem where S7 clients cannot connect to some uncommon control devices. For example, in building automation, there are DDC, PLC, central air conditioning, precision air conditioning, elevators, fire protection, lighting control systems, electricity meters, water meters, etc.

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3 Configuration And Operation

X2Profinet is a configuration software running on the PC. It used to configure project, upload the project to the machine hardware gateway. Finally, monitor by hardware gateway. X2Profinet also can be used alone on the PC .

Double click X2Profinet. exe(It is recommended to run as an administrator), open the main interface, as the following figure 3-1.

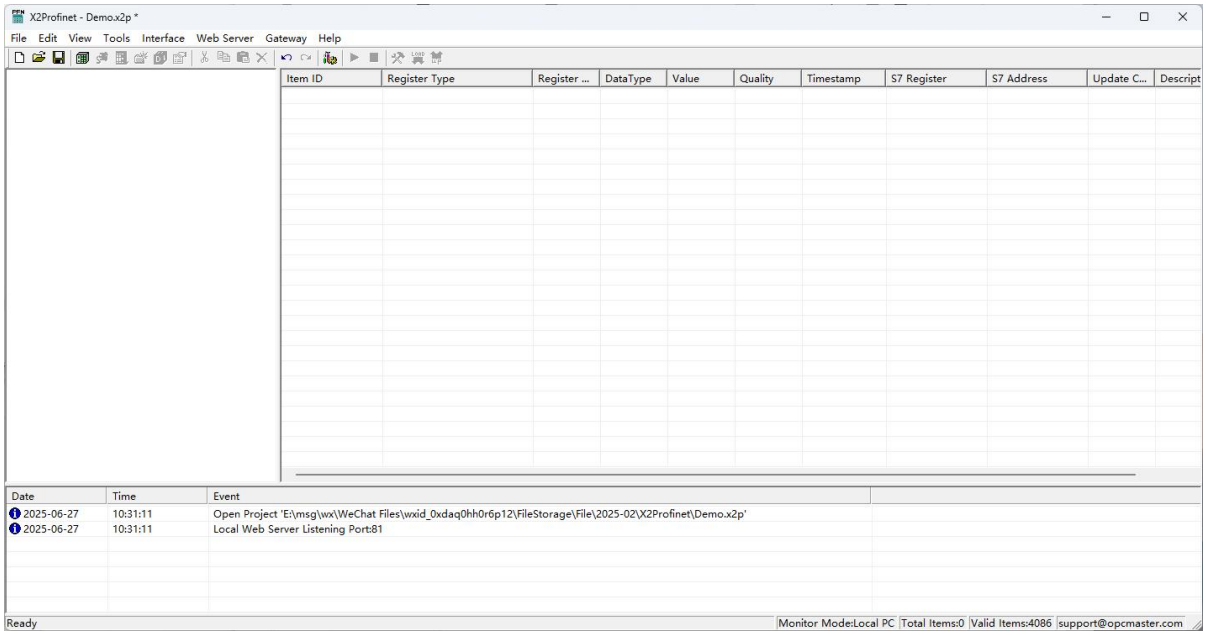

Figure 3-1 Main interface

Note: the PC configuration software X2Profinet and upload project can be downloaded from inside the gateway, operation steps, please see the WEB server 4 chapters.

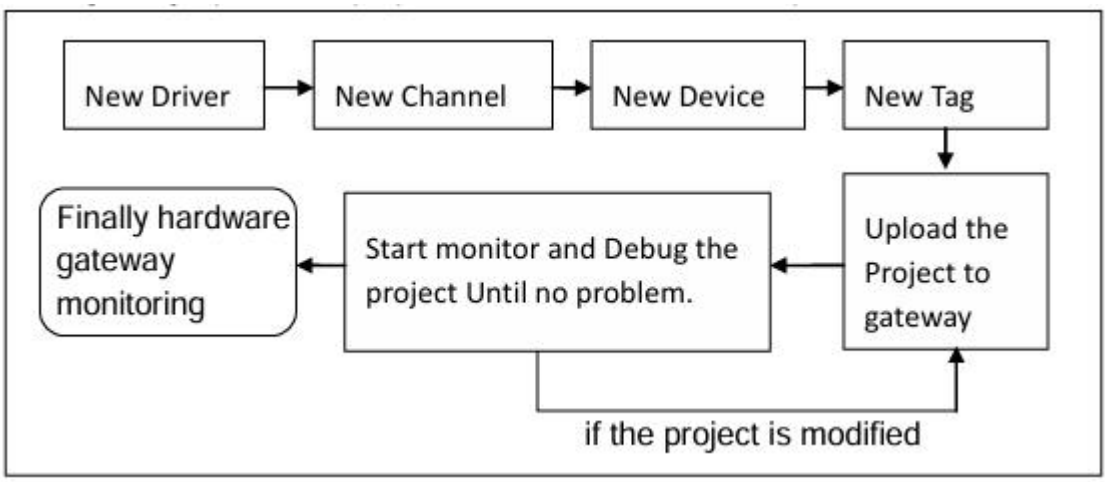

Figure 3-2 Simple operation flow

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3.1 New Driver

Click edit to choose "New driver" or click on the toolbar icon , as following figure 3-1-1. Here as X covers many of the agreement, we choose the Modbus RTU protocol as an example. If you need to understand other protocol configuration, please click "help" menu under "Communication Manual", open the Communication Manual - Ch. PDF.

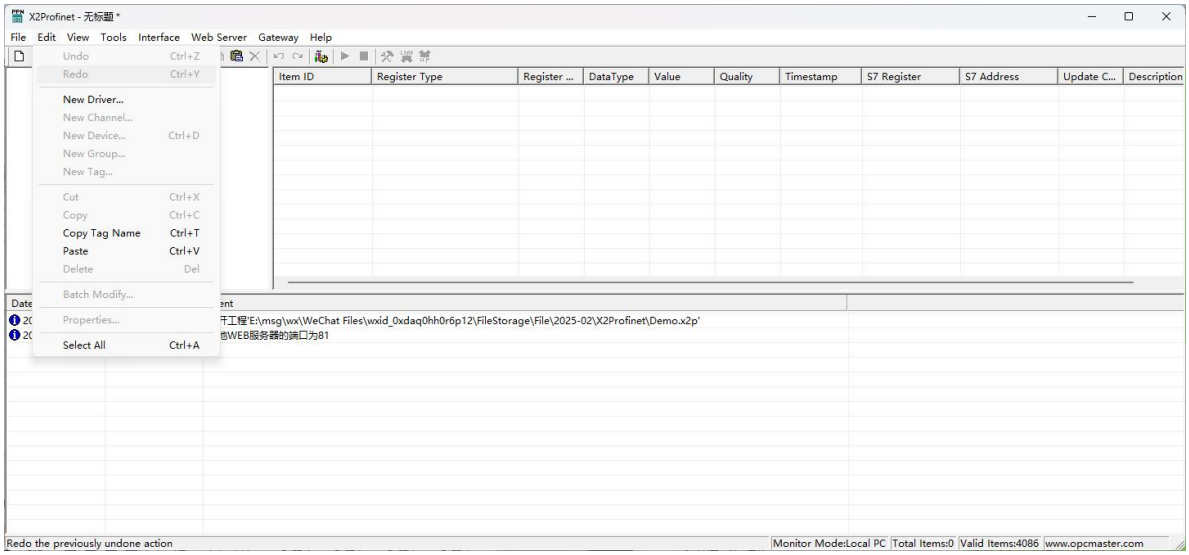

Figure 3-1-1 New Driver

Choose Driver Modbus RTU. As the below Figure 3-1-2.

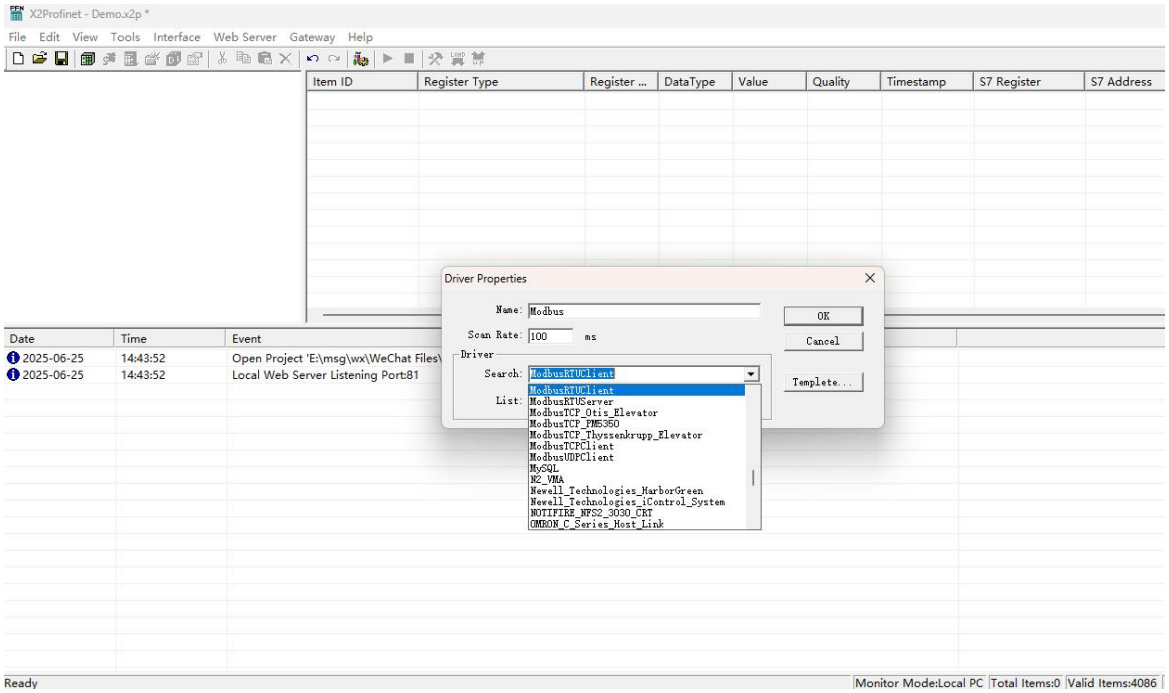

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Figure 3-1-2 choose driver

Edit drive properties. As the below Figure 3-1-3.

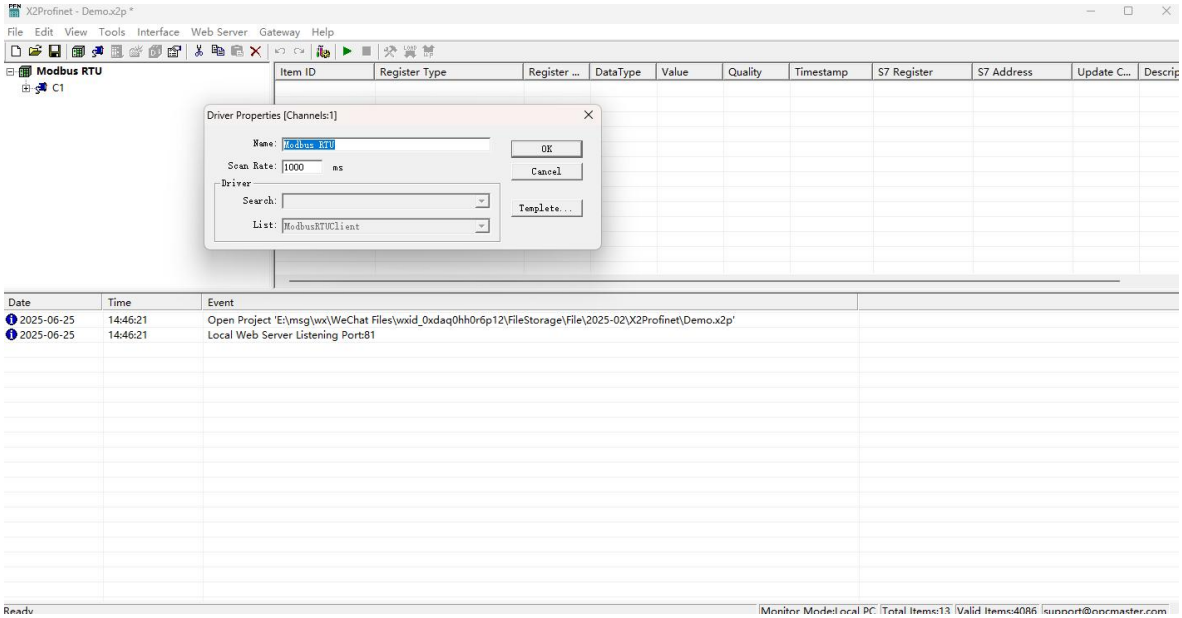

Figure 3-1-3 Driver Properties

Input driver name in the name of the project, the default Scan Rate is 1000 milliseconds. Scan Rate can adjust the frequency of access to all devices. If the time required to access all the devices is greater than the set scan rate, this time is invalid. if the time required to access all the devices is less than the set scan rate, the waiting time needs to reach the set scan rate for the next visit. user can according to the actual situation, change the scan rate.

After finish adding driver, as the below figure 3-1-4.

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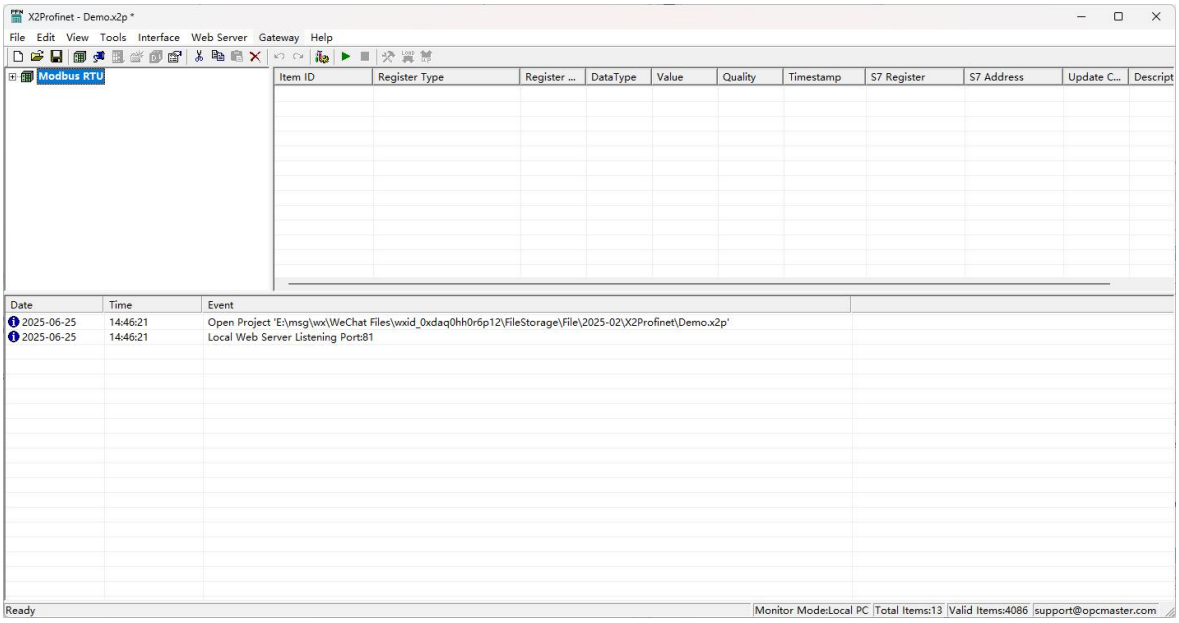

Figure 3-1-4 finish adding driver

3.2 New Channel

In the current driver, right click to select "New Channel" or click on the toolbar  .As the following figure 3-2-1.

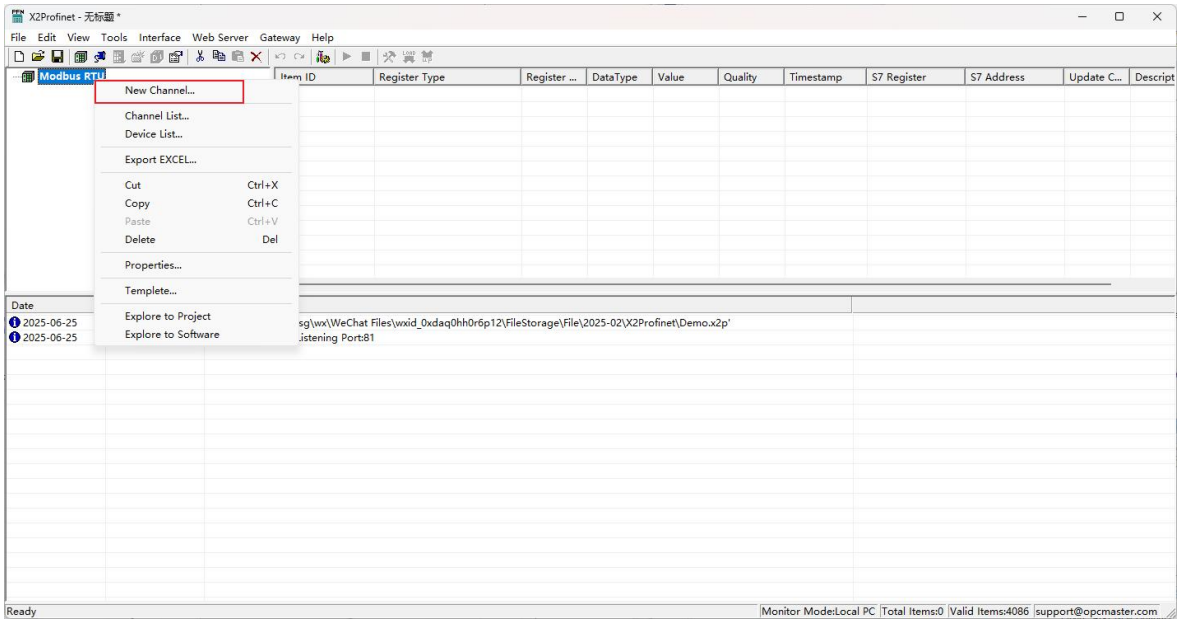

Figure 3-2-1 New Channel

In the pop up window, according to corresponding set by the driver communication protocol channel names can be arbitrary naming. As the following figure 3-2-2.

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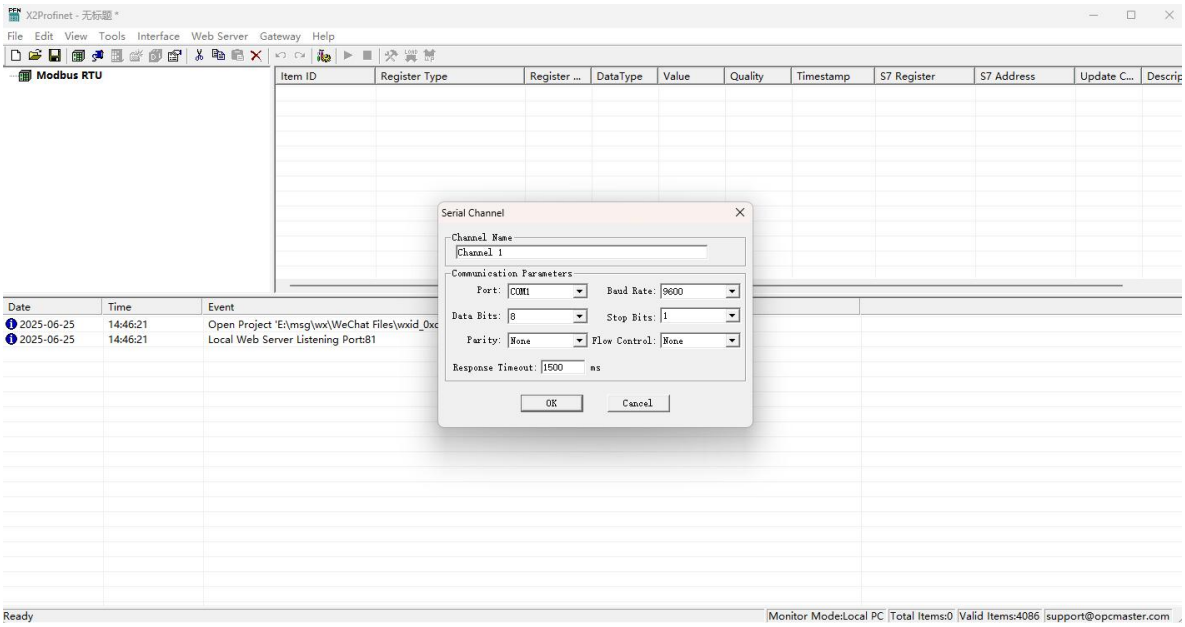

Figure 3-2-2 Set communication parameters

Since the acquisition terminal is intended to collect data from Modbus slave stations, so the setting of the setting of serial communication parameters should be consistent with the parameters in Modbus Slave.

When communication is normal, response timeout set longer does not affect communication speed. If the response speed of the device is relatively slow, it is recommended to set up a bit longer to avoid communication failure, As the following figure3-2-3.

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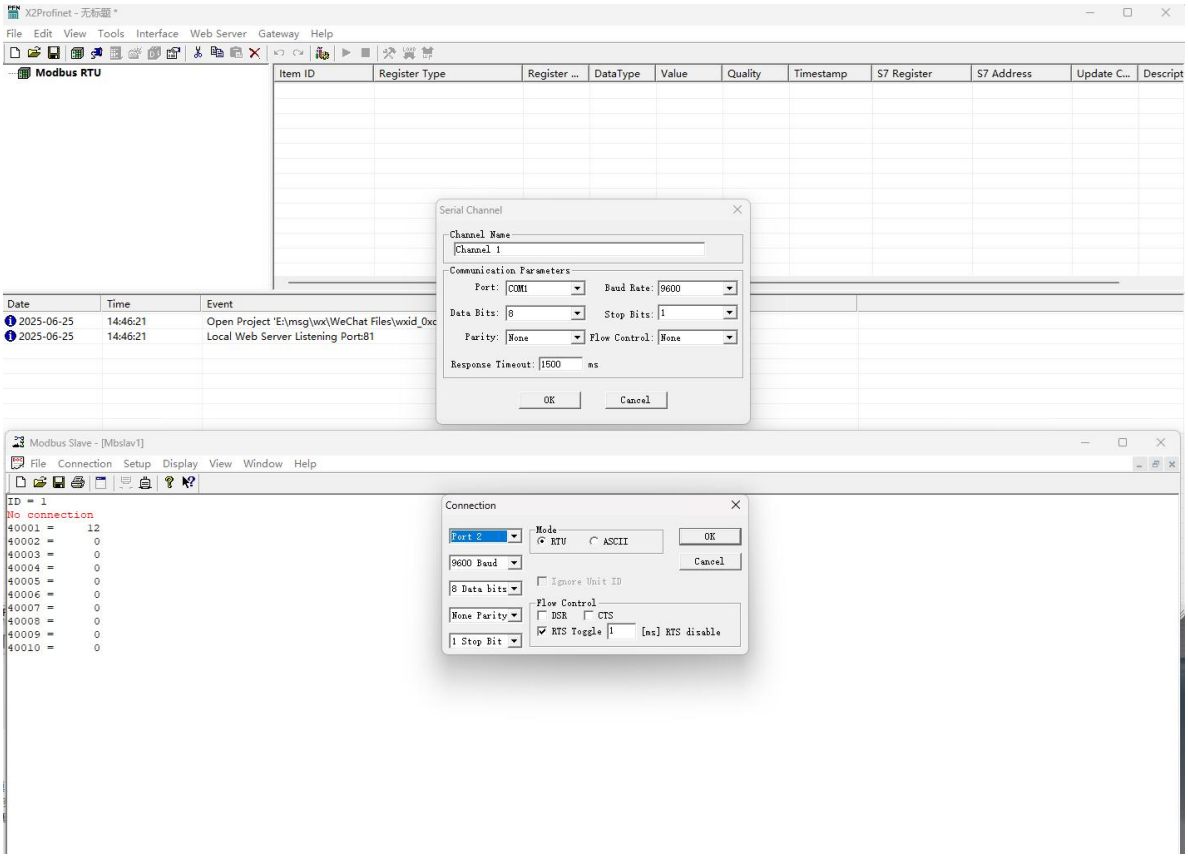

Figure 3-2-3 Channel parameters are consistent

After finish adding the channel, As the following figure 3-2-4.

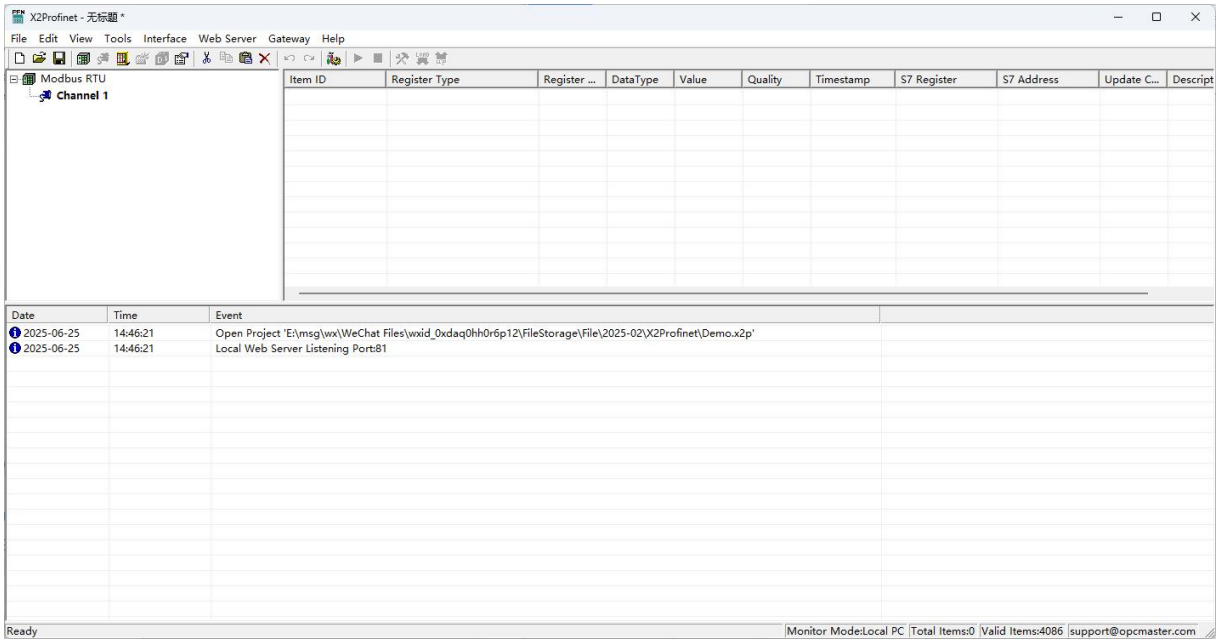

Figure 3-2-4 finish adding Channel

3.3 New Device

In the current Channel, Right-click to choose "New Device", or click on the

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toolbar  . As the following figure 3-3-1.

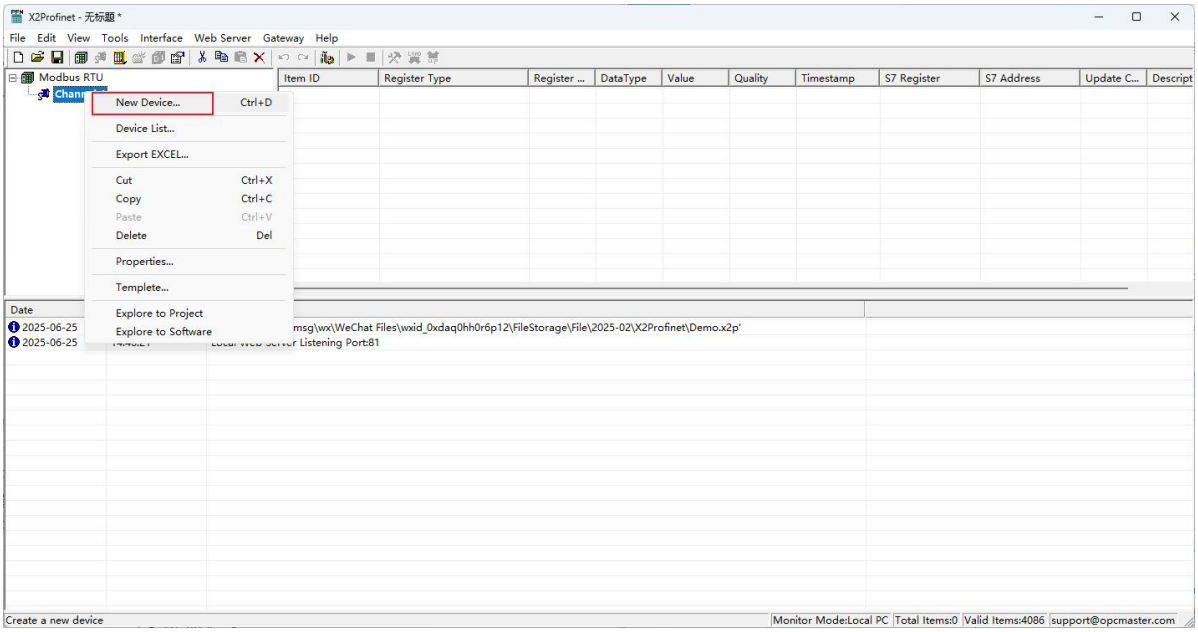

Figure 3-3-1 New Device

In the pop-up window set device properties , As the following figure 3-3-2.

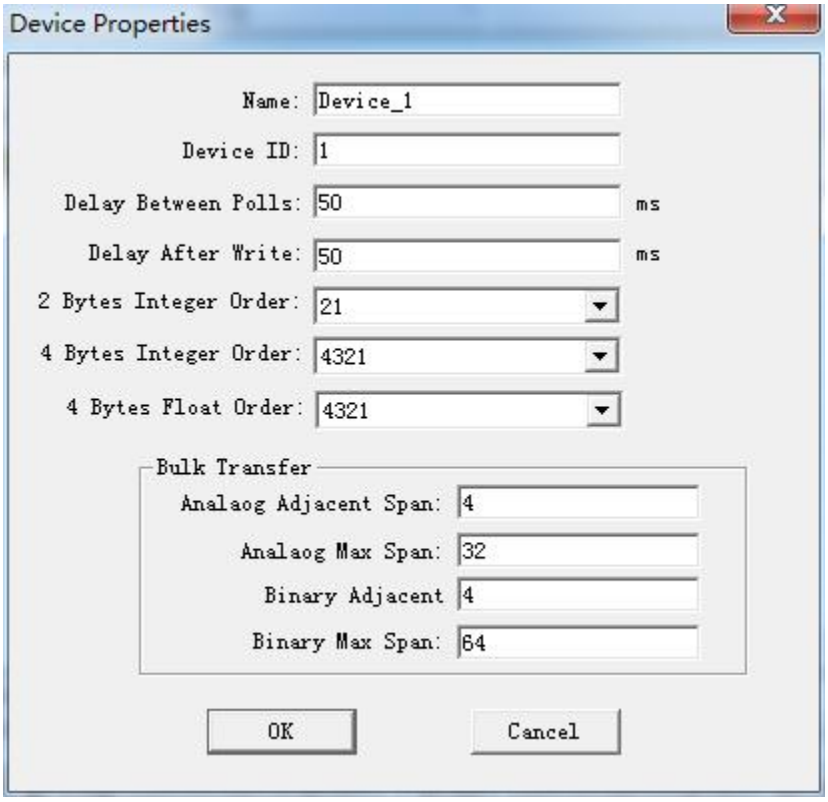

Figure 3-3-2 Device Properties

In order to improve the communication speed, the packet register communication can be realized under the continuous register address. When the

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device does not support packet communication, the parameters of the group package should be set to 0. In addition, when the response time of the device is slow, you can set the time interval between the data frame and the frame (that is Delay Between Polls) . The default of Delay Between Polls is 100 microseconds. As the following figure 3-3-3.

2 Bytes Integer Order, 4Bytes Integer Order, and 4 Bytes Float Order means the combination of integer or floating point byte order, the default is 4321. These parameters are used in combination with field devices for data transmission.For example, some meters adjust the sequence of high and low byte in the transmission of data, which will be used at this time. The default parameters are generally used, As the following figure 3-3-3.

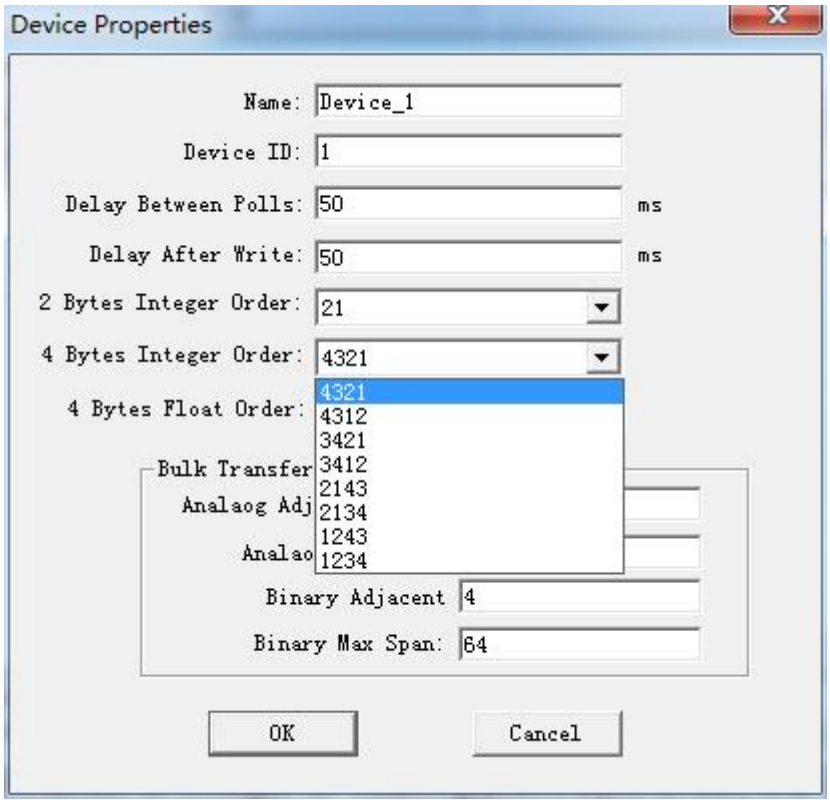

Figure 3-3-3 Byte order

After finish adding the device, As the following figure 3-3-4.

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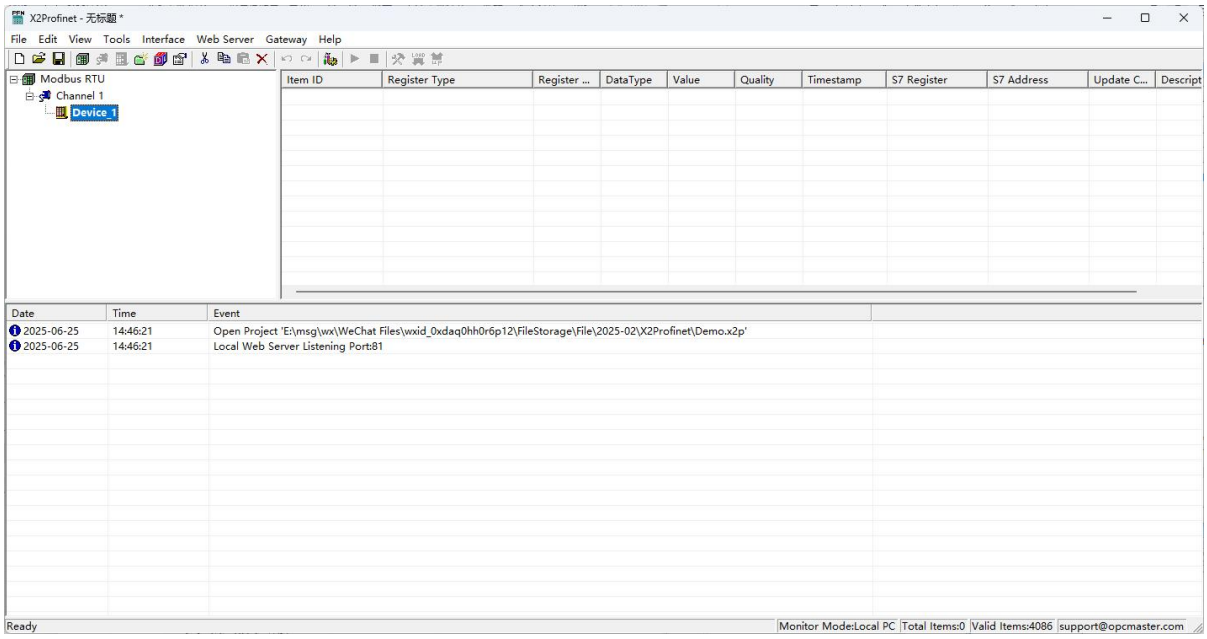

Figure 3-3-4 finish adding the device

3.4 New Tag

In the current Channel, Right-click to choose directly add tag (also add group first, and then new tag in the group), or click on the toolbar , As the following figure 3-4-1.

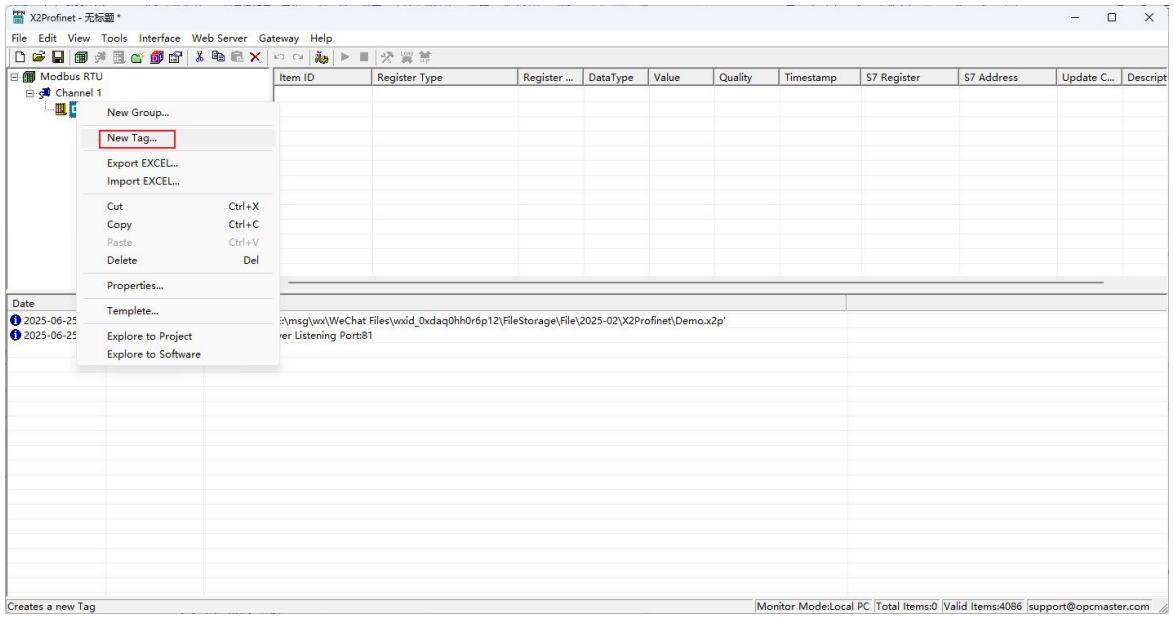

Figure 3-4-1 New Tag

Or right-click on the right side of the edit box blank space, add a new tag.As the following figure 3-4-2.

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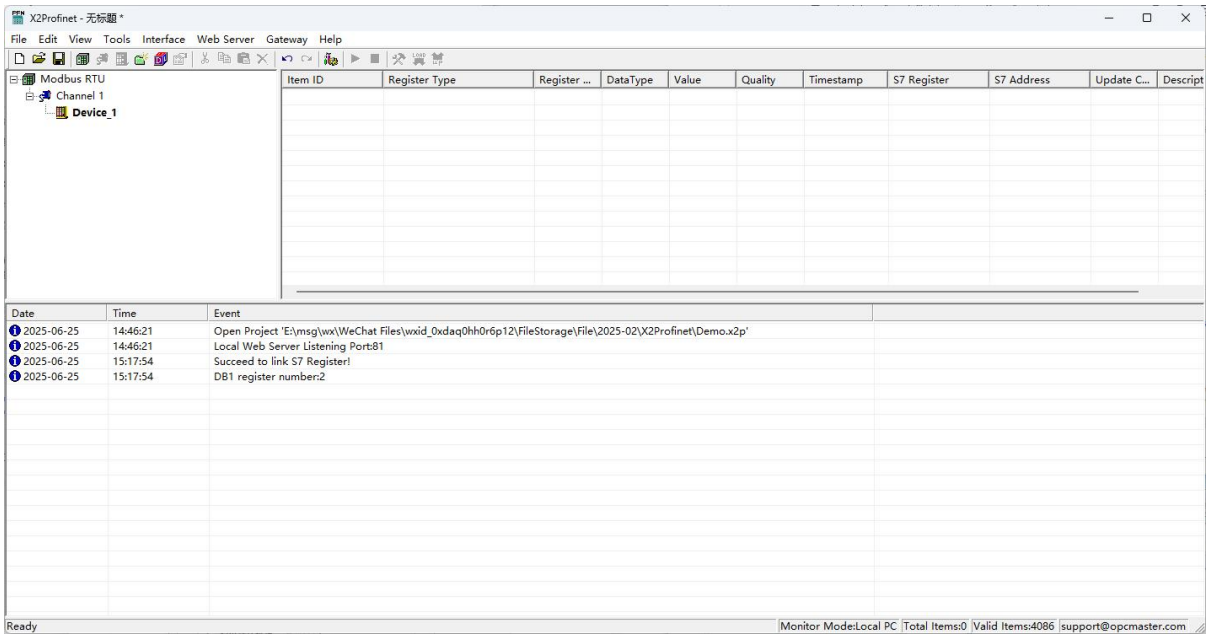

Figure 3-4-2 New Tag

In the pop-up dialog box , Set the parameters of collection and transfer(Modus Server). As the following figure 3-4-3.

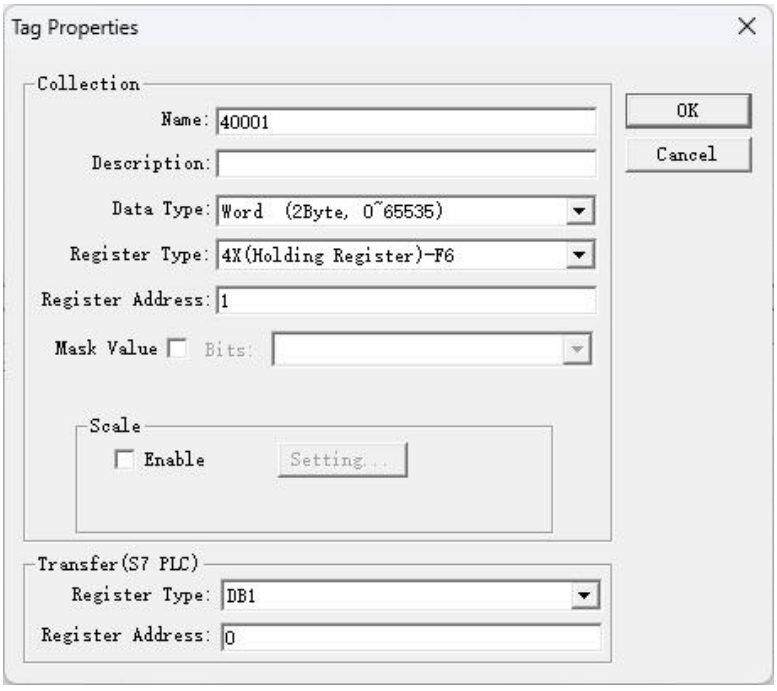

Figure 3-4-3 Tag Properties

Set the tag name, data type, register type and register address of the acquisition end in the tag attribute. The register address of the acquisition end selected in the above figure is 4X0001, and the data type is Word type. Additionally, when the data type is Short, Word, Long or DWord, the data bit values can be taken

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according to bytes. For some special data, the linear conversion function can be enabled to achieve linear amplification and reduction of the data.

Note that the initial address of the S7 server register address starts from 0. Click "OK" to complete the addition of the tag, as shown in Figure 3-4-4.

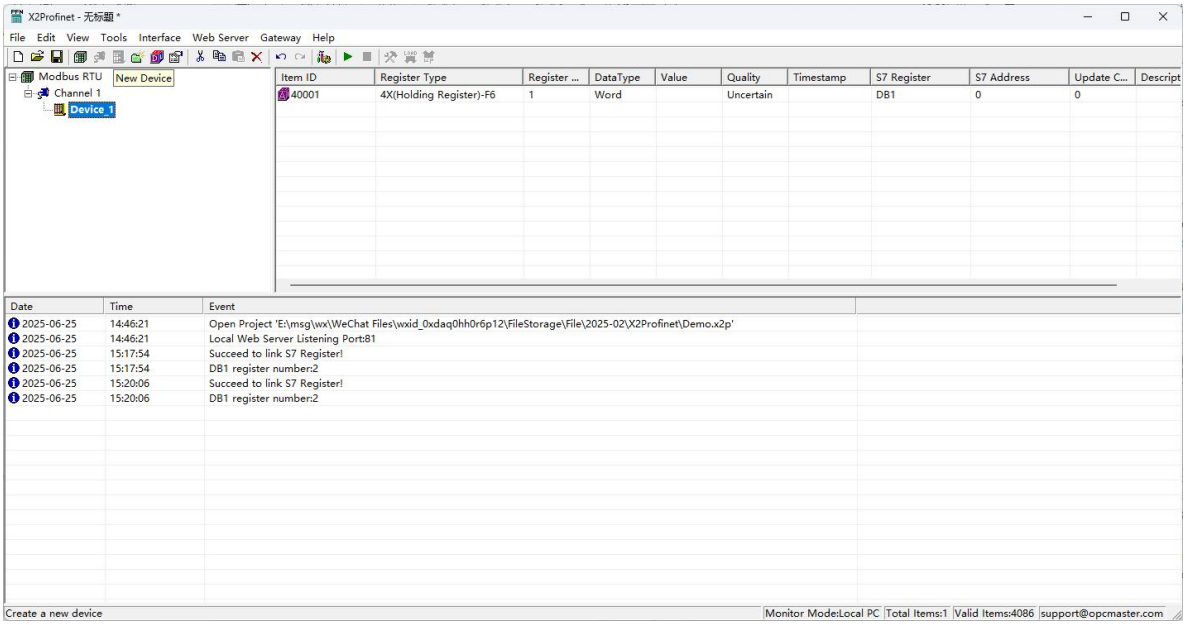

Figure 3-4-4 Finish adding a tag

You can continue to add steps one by one, and suggest using the copy and paste of the toolbar. Select a tag to copy, click the copy button in the toolbar, or choose the copy on the right button, or use shortcut key Ctr+C and Ctrl+V, as the following figure 3-4-5。

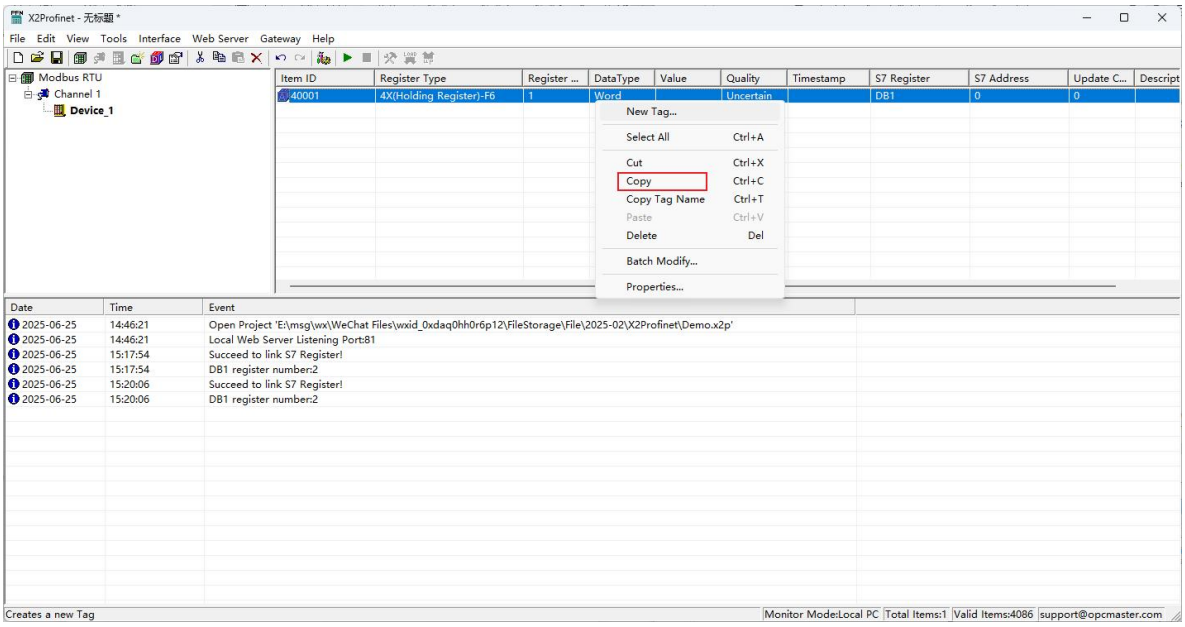

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Figure 3-4-5 Copy Tag

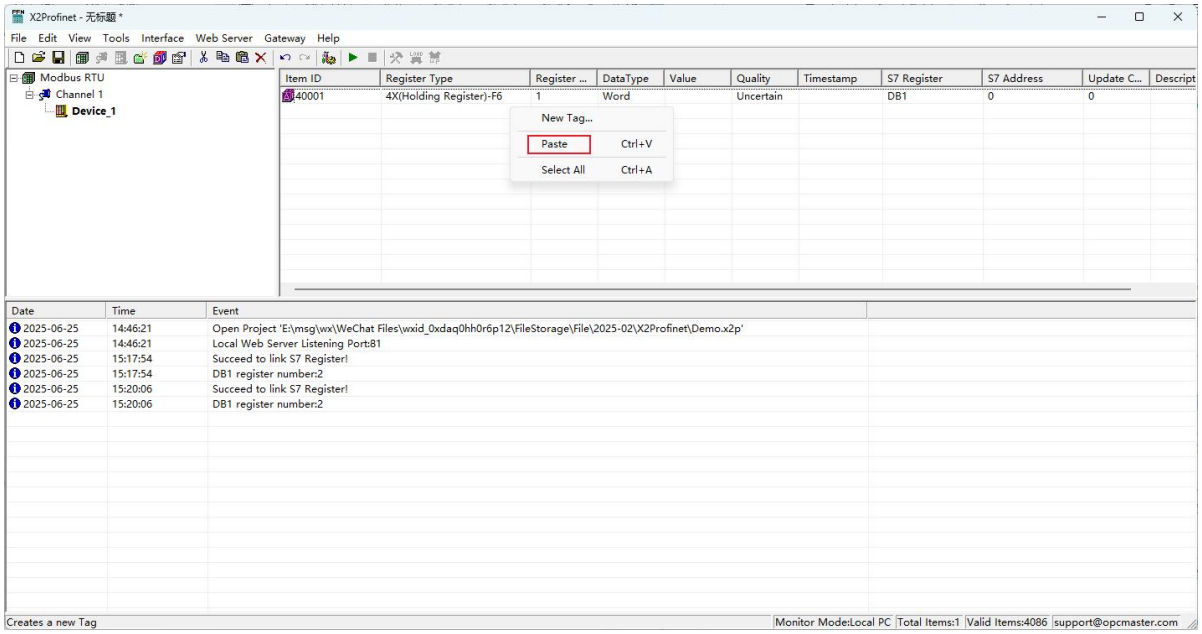

Figure 3-4-6 Paste Tag

It will automatically add new tags. The parameters of the new tags (such as the addresses of Modbus registers) will be automatically generated accordingly. The settings need to be made based on the actual situation on site, as shown in Figure 3-4-7.

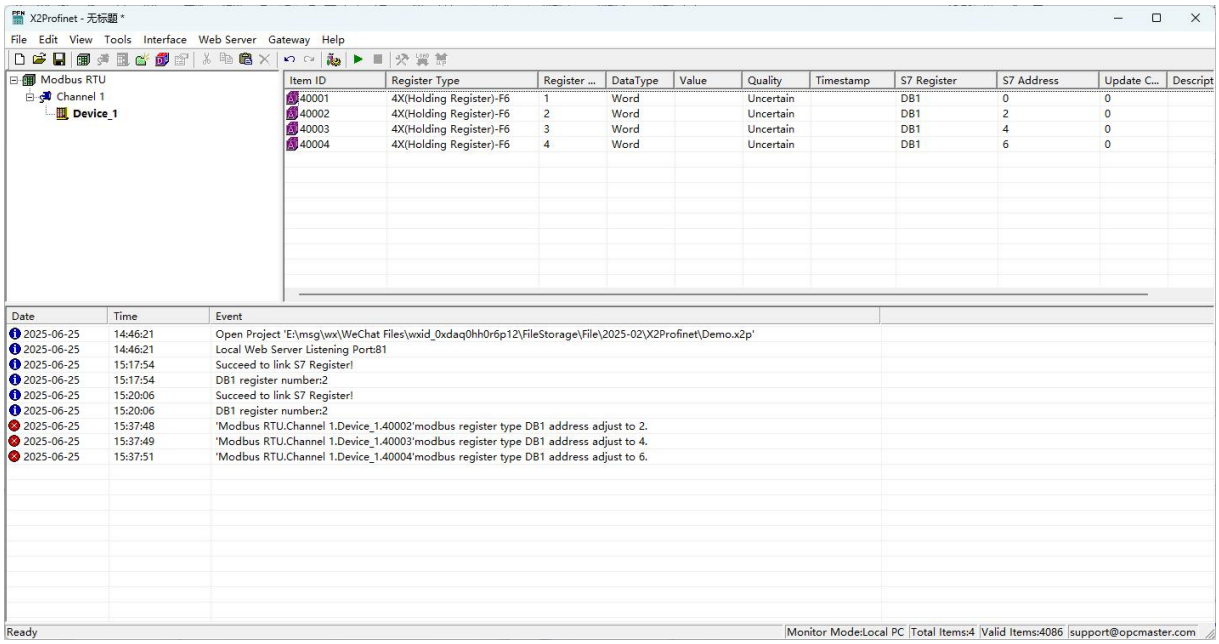

Figure 3-4-7 Copy tags completed

Create a new tag under the newly created device, as the figure 3-4-8.

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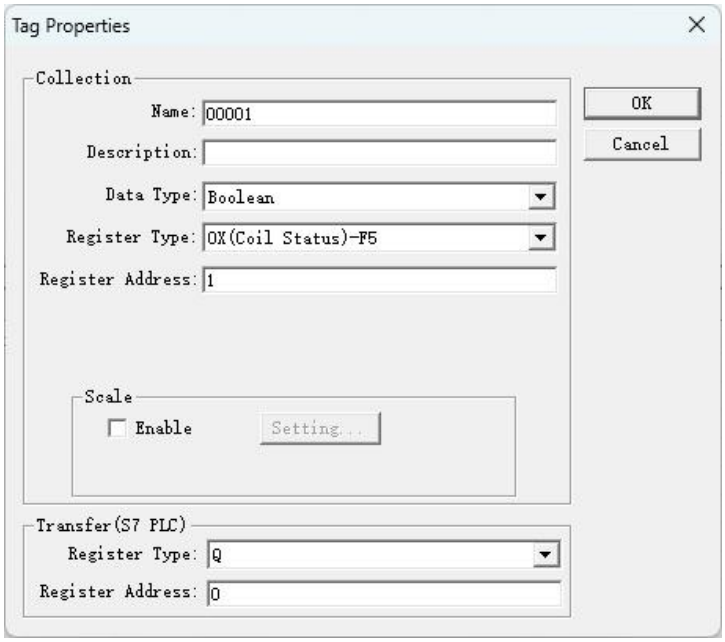

Figure 3-4-8 New tag

Taking Boolean data type as an example, adding a new tag as the figure 3-4-9.

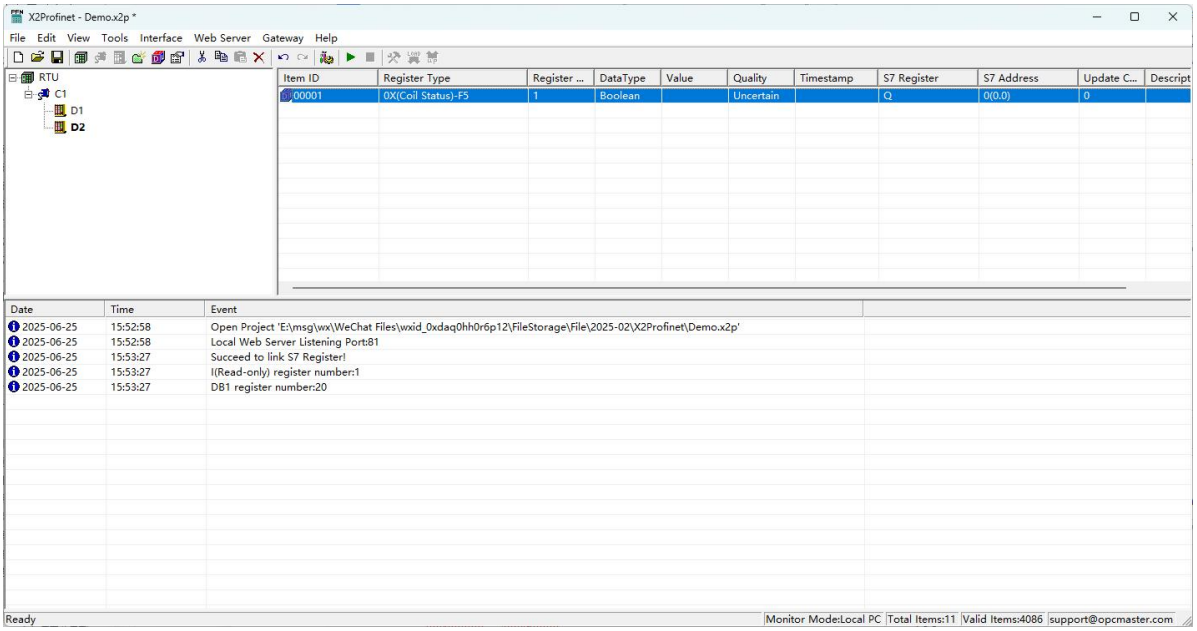

Figure 3-4-9 Finish adding a tag

It can also be edited in the EXCEL table, and then edit the engineering point by importing excel and exporting excel functions.

Right-click the device to choose “Export Excel”, As the figure 3-4-10. Save as xls file.

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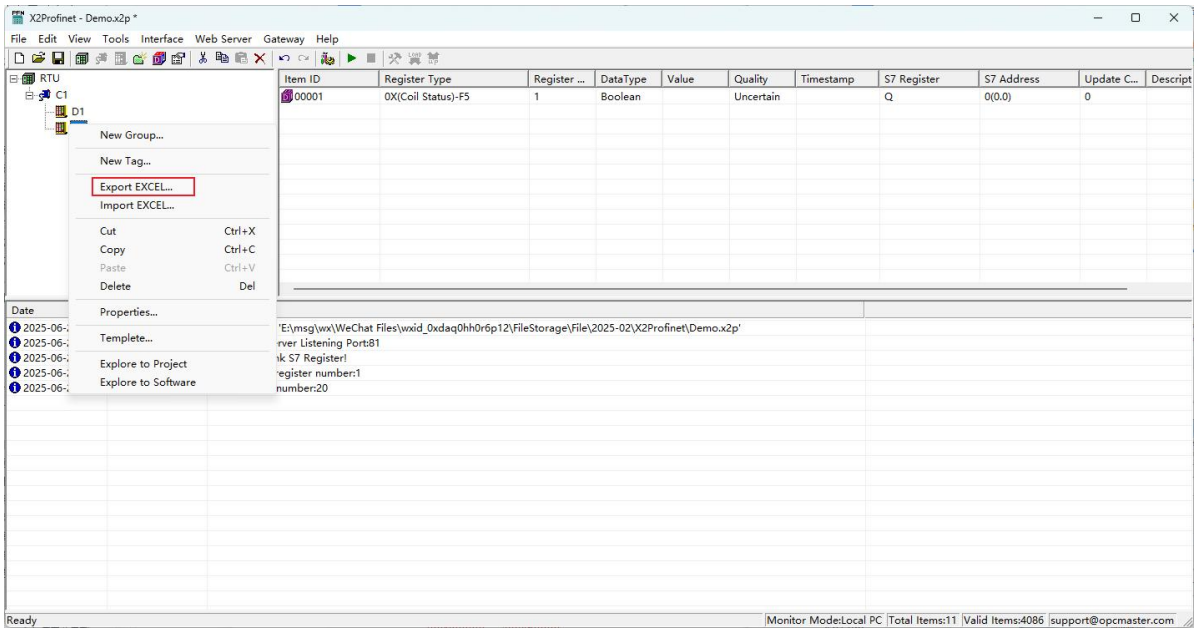

Figure 3-4-10 Export EXCEL

Save the completed, open the EXCEL for editing, As the figure 3-4-11.

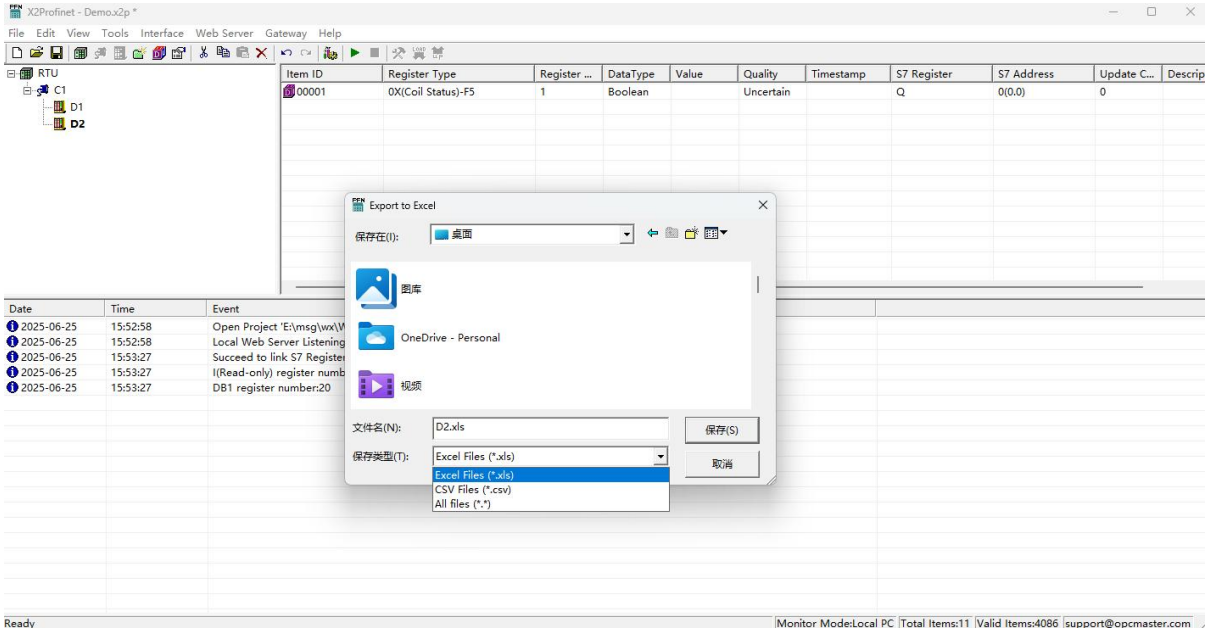

Figure 3-4-11 save the EXCEL

Save the completed, open the EXCEL for editing.

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milesgoiiot@gmail.com / sales@opcmaster.com

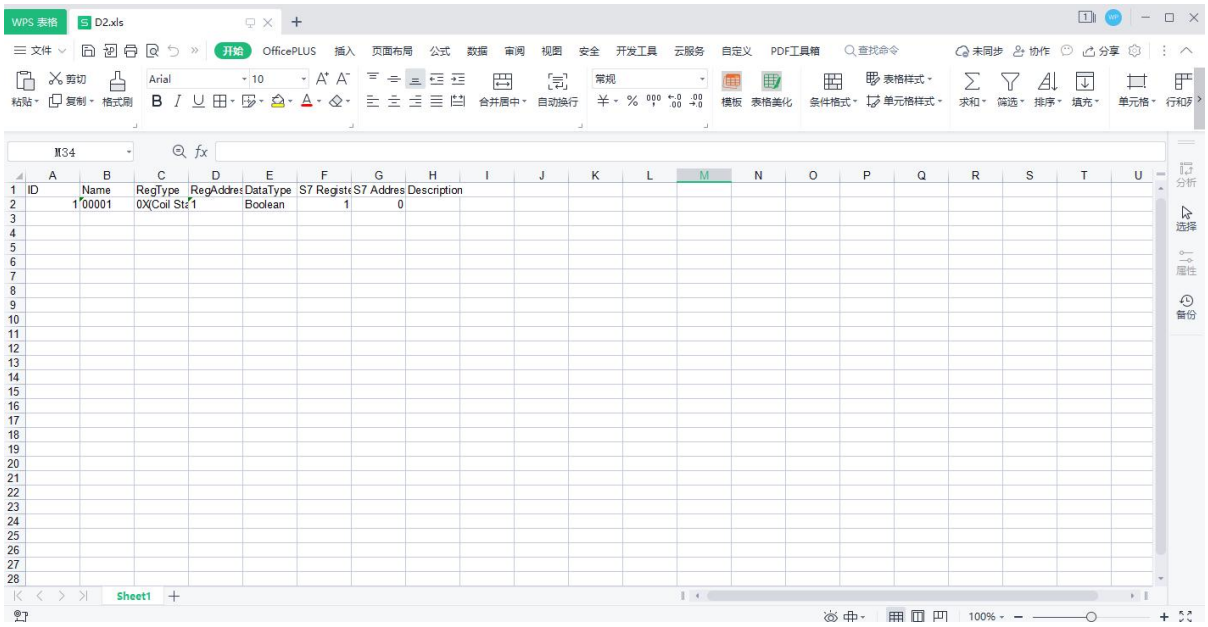

Figure 3-4-12 Open the EXCEL

After editing the Excel file, As the figure 3-4-12.

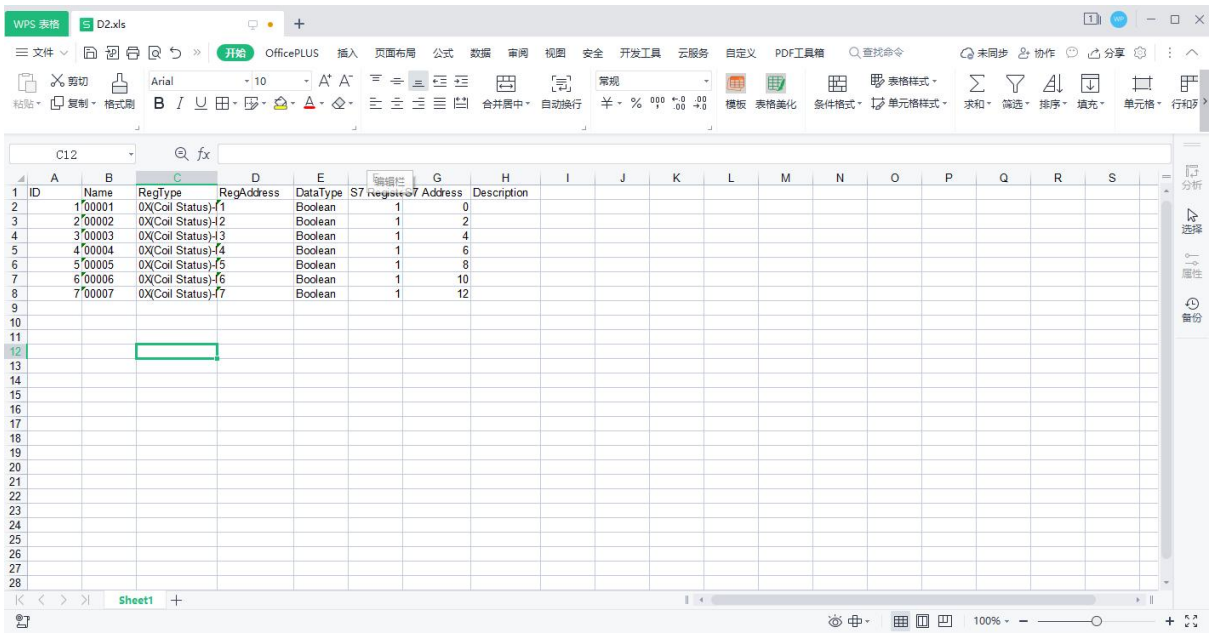

Figure 3-4-12 Edit the EXCEL

Back to X2Profinet software, Right-click the device to choose “Import Excel”, find the edited Excel file to import. As the following figure 3-4-13.

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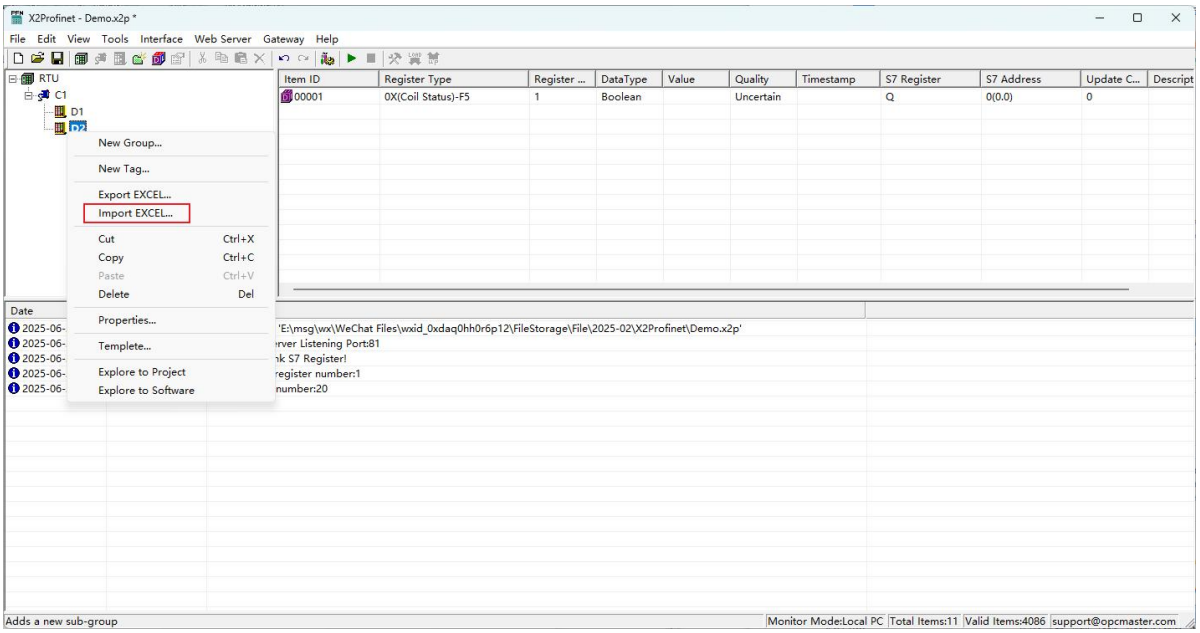

Figure 3-4-13 Import EXCEL

The import is complete, the following figure 3-4-14.

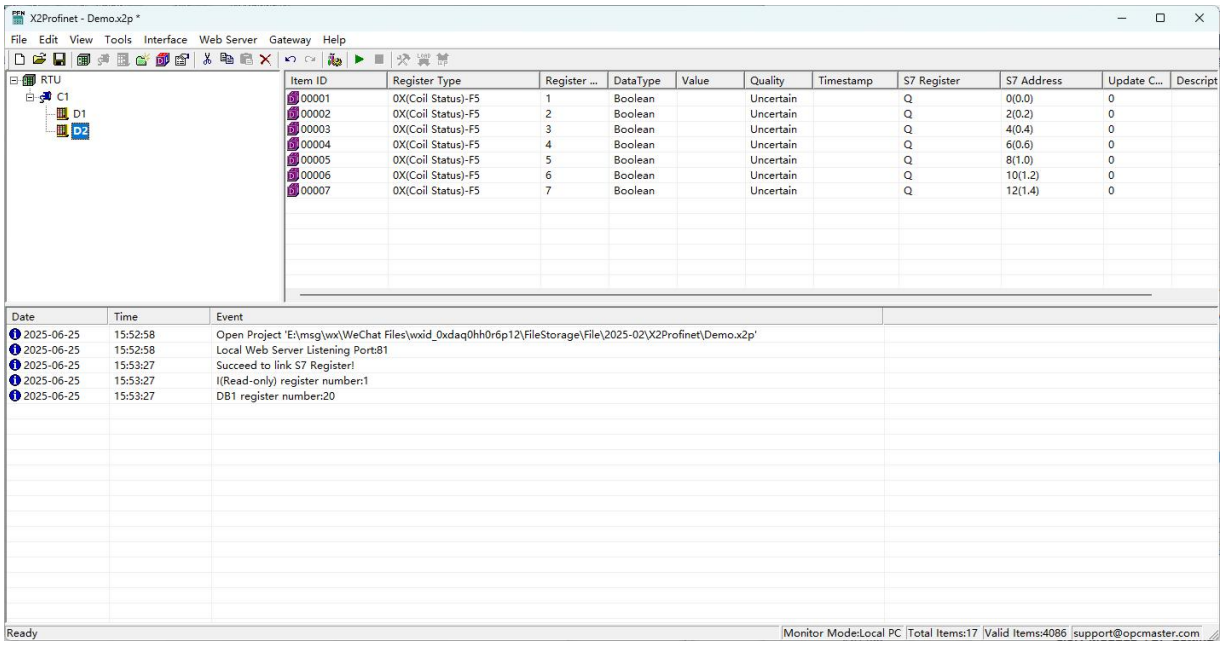

Figure 3-4-14 Complete the import

3.5 S7 Server

3.5.1 S7 Setting

The default port number for the S7 gateway at the factory is 102. If the user needs to change it, they can click on the Profinet settings, as the figure 3-5-1-1.

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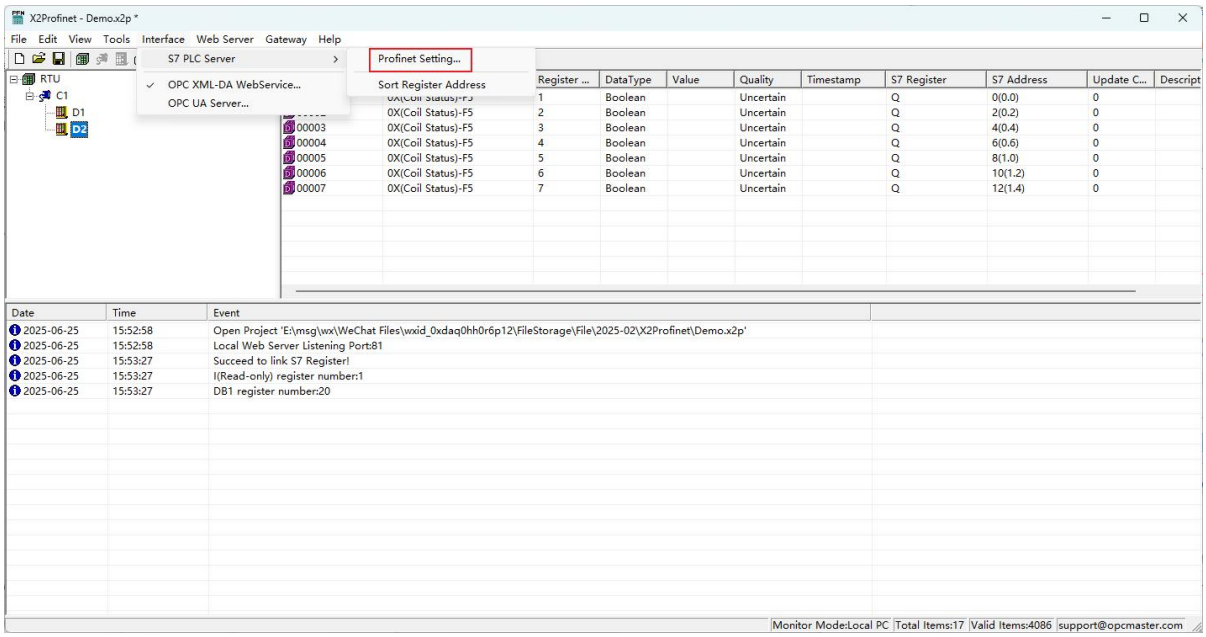

Figure 3-5-1-1 Select Profinet Setting

In the popped-up dialog box, set the S7 server settings. The port number is fixed at 102 and does not need to be changed. As the figure 3-5-1-2.

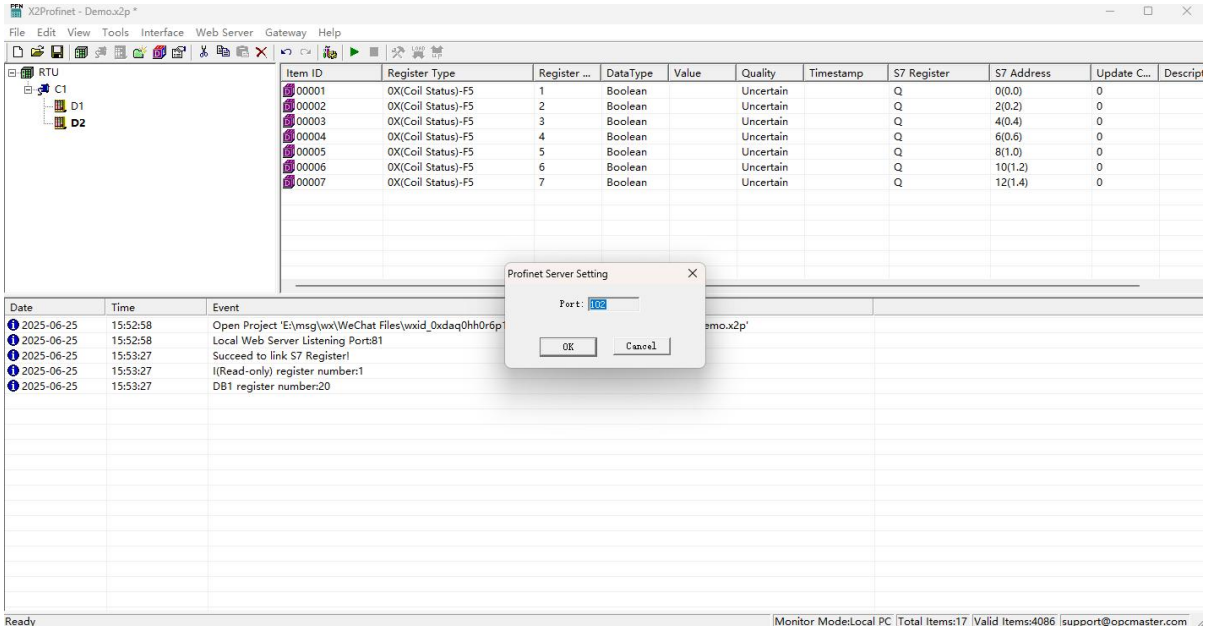

Figure 3-5-1-2 Parameter setting

3.5.2 Sort Register Setting

"Sort Register Setting" is a function that users can use after completing the point allocation. If the associated S7 server register addresses are disordered and there are possible repetitions, they can simply click "Sort Register Setting" to sort them,

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thereby saving the point allocation time, as the figure 3-5-2-1.

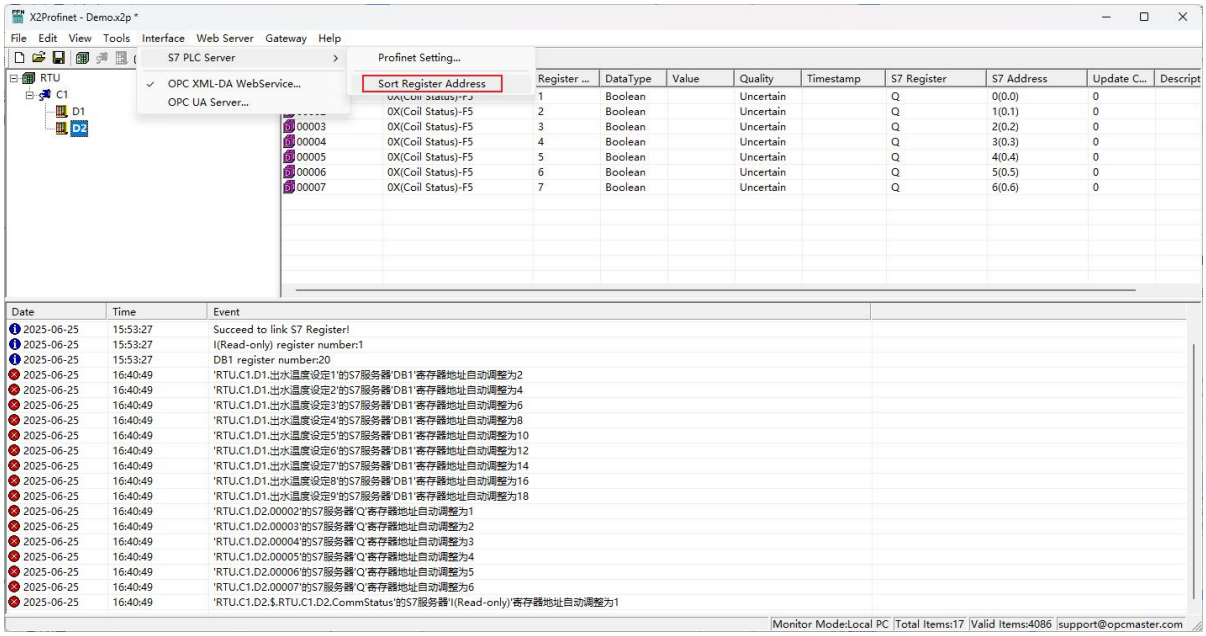

Figure 3-5-2-1 Sort Register Setting

3.6 Local PC Monitor

After completing the project configuration, click the menu bar "Tools" to select "Start Monitor" or click the toolbar icon , as shown in figure 3-6-1 below.

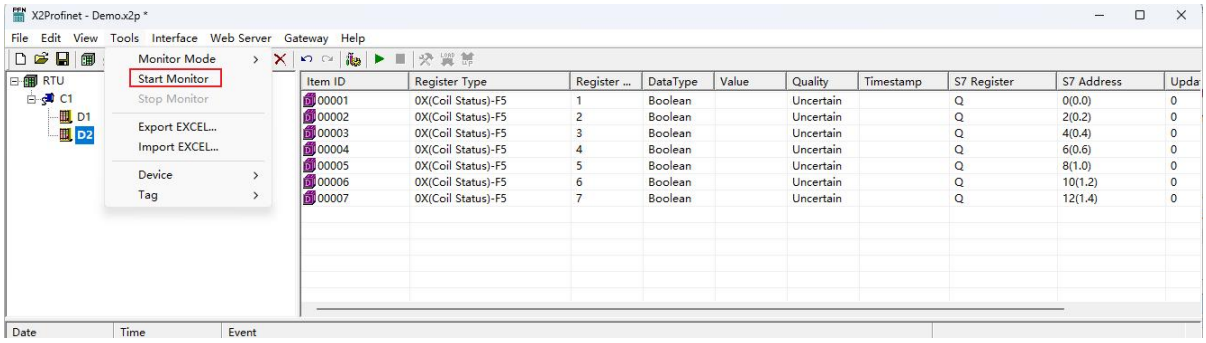

Figure 3-6-1 Select start Monitor

Note: The X2ProfinetRuntime program will only be enabled when using the soft gateway on a PC or during simulation.

Then the X2ProfinetRuntime runtime program will be started. In the local mode, it can only simulate data acquisition but cannot perform data forwarding. As shown in figure 3-6-2.

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milesgoiiot@gmail.com / sales@opcmaster.com

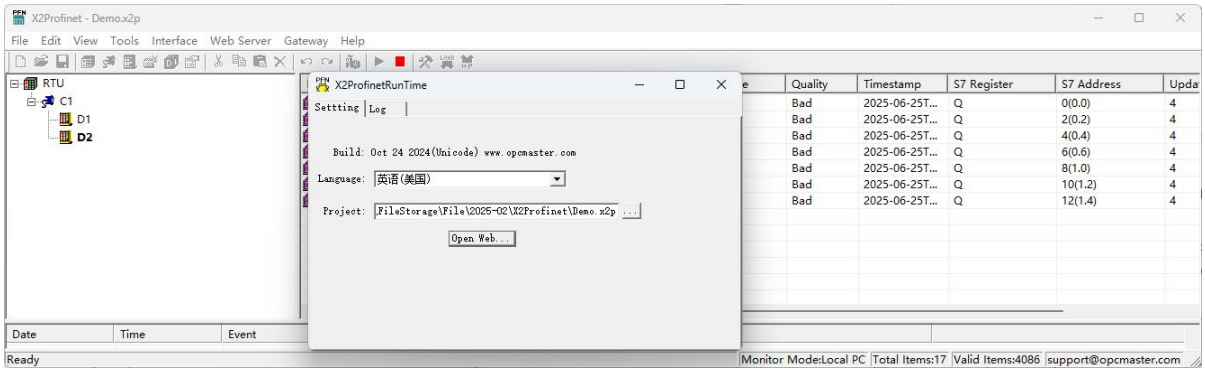

Figure 3-6-2 X2Profinet Runtime Main Interface

In the X2ProfinetRunTime program, you can view the operation log and switch the operating language. You can also switch the operating language of X2ProfinetRunTime. Additionally, you can click the "Open Webpage" button to quickly log in to the Web server to view the data. If the IE browser opens a blank page, simply refresh the page, as shown in figure 3-6-3.

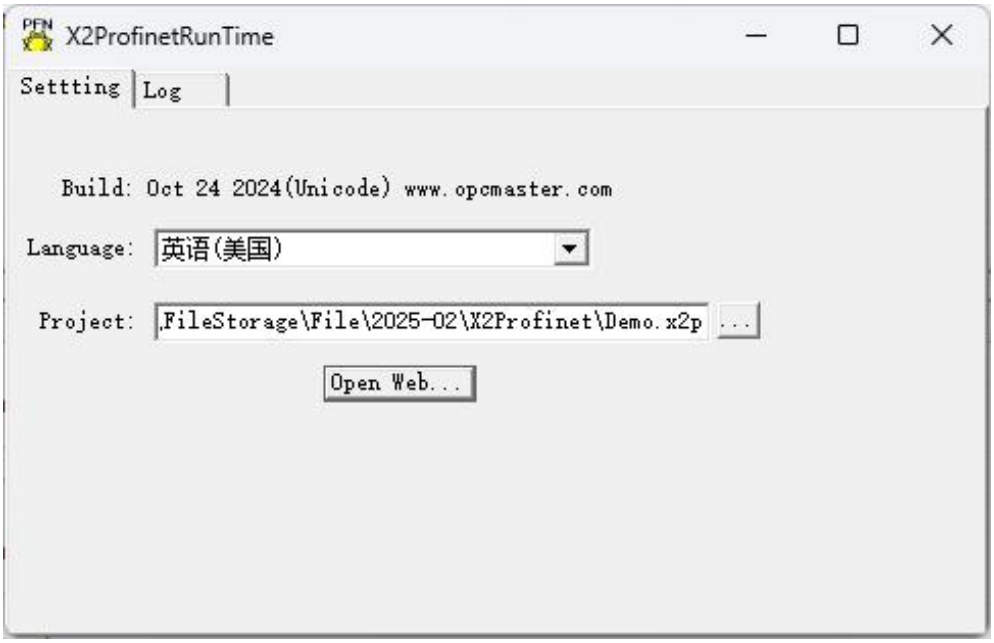

Figure 3-6-3 Open Webpage

Return procedure monitoring interface, can see some real time data on the device and the data on the interface is consistent, As the Figure 3-6-4.

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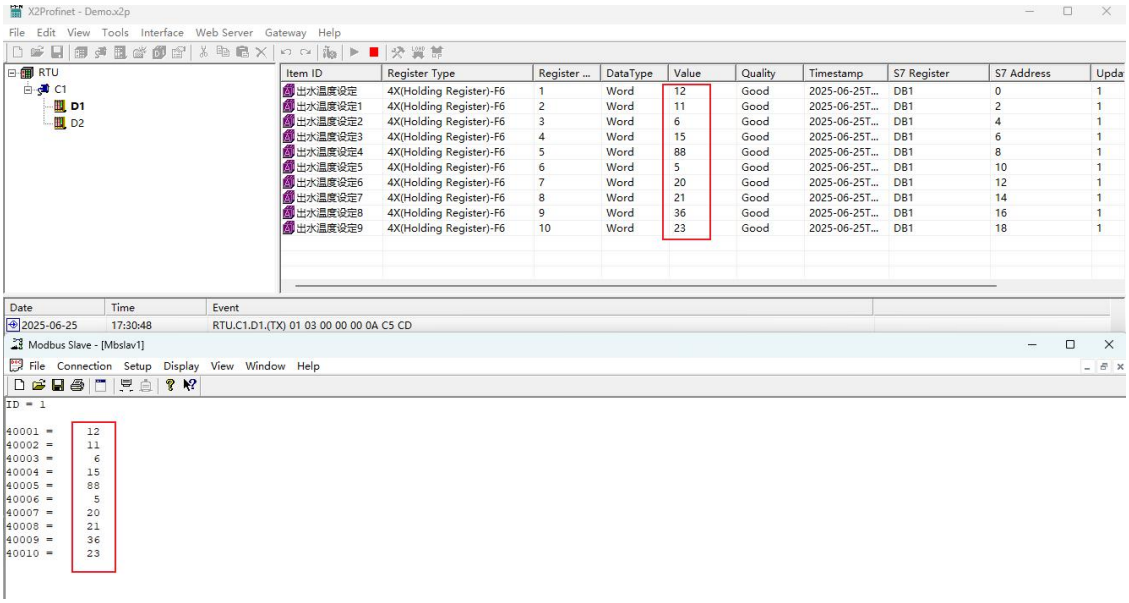

Figure 3-6-4 Successful Communication

3.7 Upload the project(Remote Gateway Monitor Mode)

Before uploading project, we must ensure that the monitoring mode is Remote Gateway mode, and the specific mode switching operation is as follows.

- on the menu bar , monitor mode under the tool need to be chosen “Remote Gateway”.
- Double click the “Monitor Mode” of the status bar at the bottom of the software can also switch monitoring mode.

After Configuring the project, the project can be uploaded to the hardware gateway to debug by starting monitor.

If the project is modified, it is necessary to upload the project to the gateway for debugging until there is no problem, finally monitor by hardware gateway.

You can see "Monitoring Mode: Gateway 192.168.1.88". This IP is the IP of the current uploaded project. When users forget the IP of the last uploaded project, by opening this project, they can see the IP of the last uploaded project. This function is to help users remember the IP used during the last upload of the project.As the Figure 3-7-1.

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milesgoiiot@gmail.com / sales@opcmaster.com

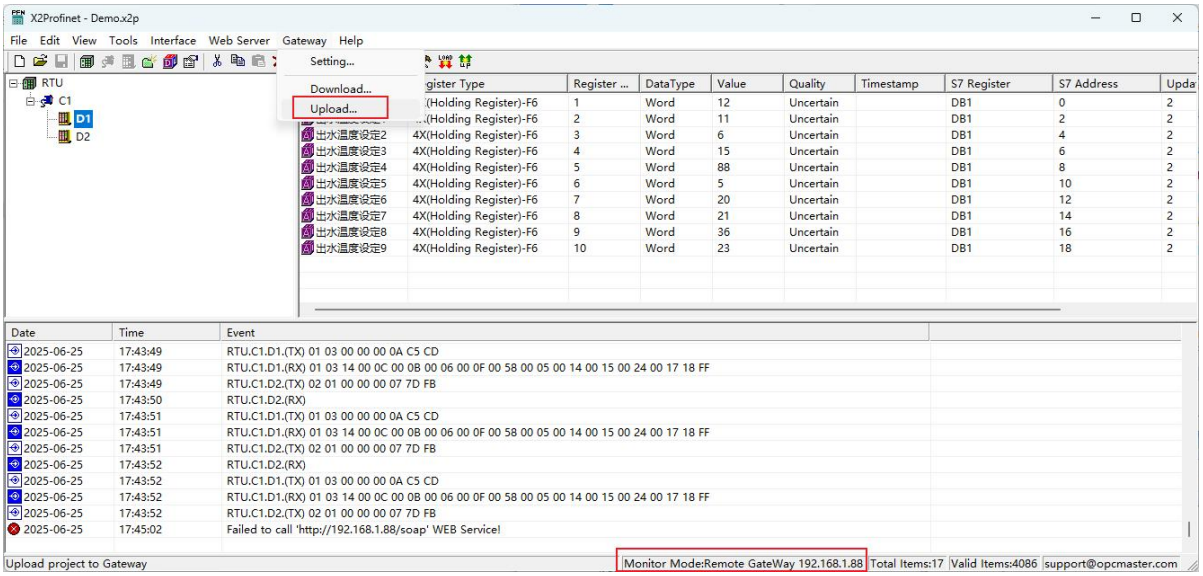

Figure 3-7-1 Select Gateway Mode

Click on the menu bar "Gateway" to choose "Upload…" or click on the toolbar  ,As the Figure 3-7-2.

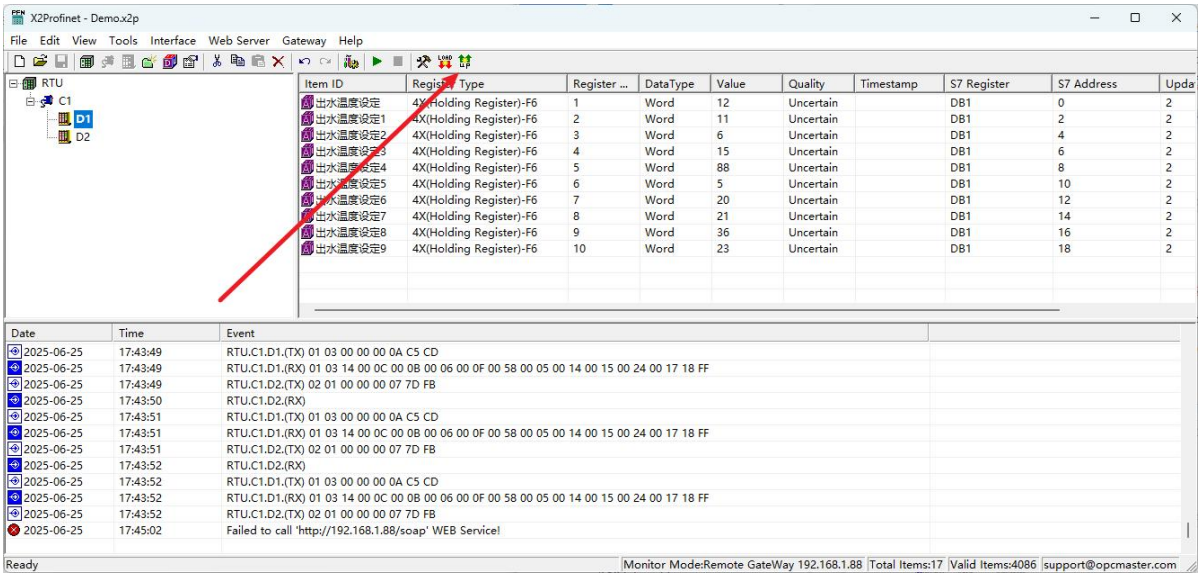

Figure 3-7-2 Select Upload project

In the pop up dialog box enter the gateway IP address, click the "Upload"，As the Figure 3-7-3.

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milesgoiiot@gmail.com / sales@opcmaster.com

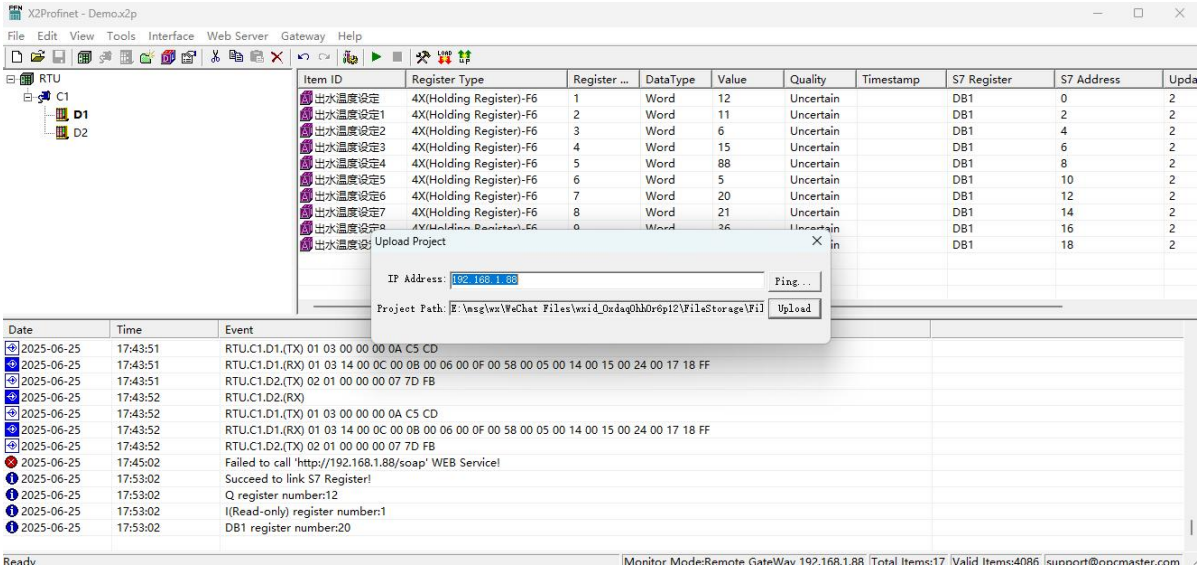

Figure 3-7-3 Upload

After uploading, the pop-up dialog prompt succeed to upload. As the Figure 3-7-4.

If uploading is failed, it will also pop up the failure prompt box.

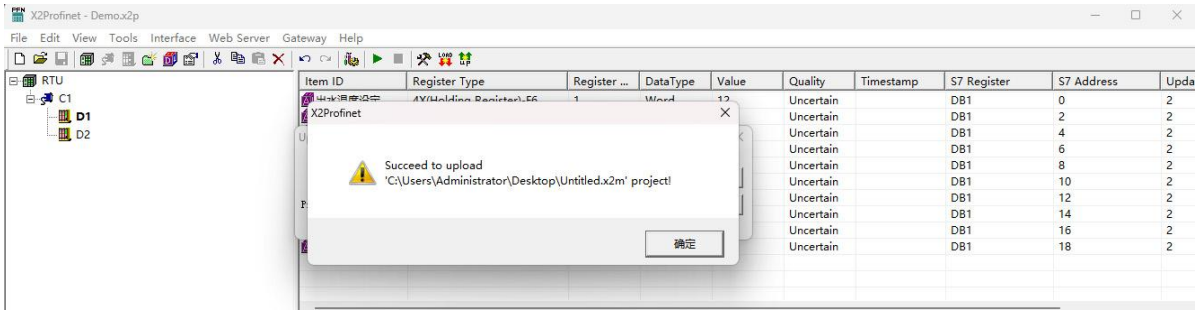

Figure 3-7-4 Succeed to upload

Note: the IP address of the gateway must be correct, the factory default gateway IP address is 192.168.1.88, the IP address of the PC to set up to the same network segment, Ping can be uploaded after successful.

3.8 Gateway Setting

Choose the menu bar under the Gateway Setting, as the following figure 3-8-1.

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milesgoiiot@gmail.com / sales@opcmaster.com

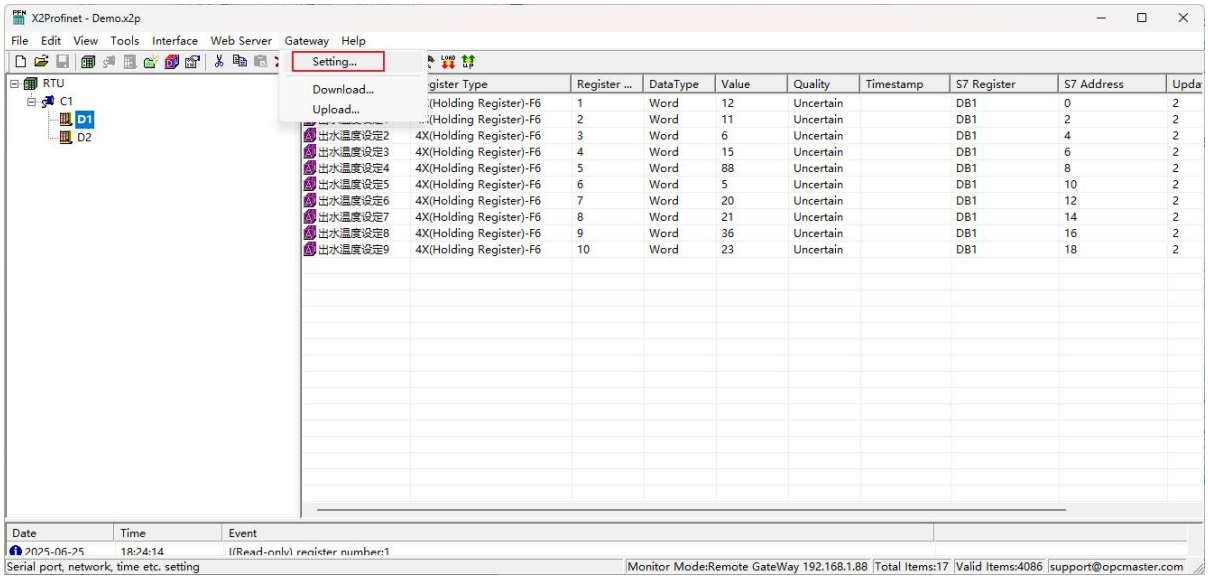

Figure 3-8-1 Gateway Setting

Ethernet Setting: The IP address of the hardware gateway can be changed. The factory default IP address of the gateway is 192.168.1.88, the default subnet mask is 255.255.255.0, and the default gateway is 192.168.1.1.

After setting is completed, click "OK" to proceed. The "Ping" function is used to test whether the current IP address can be successfully pinged. The "Login to Webpage Function" allows you to log in to the WEB server where the gateway is located. As the figure 3-8-2.

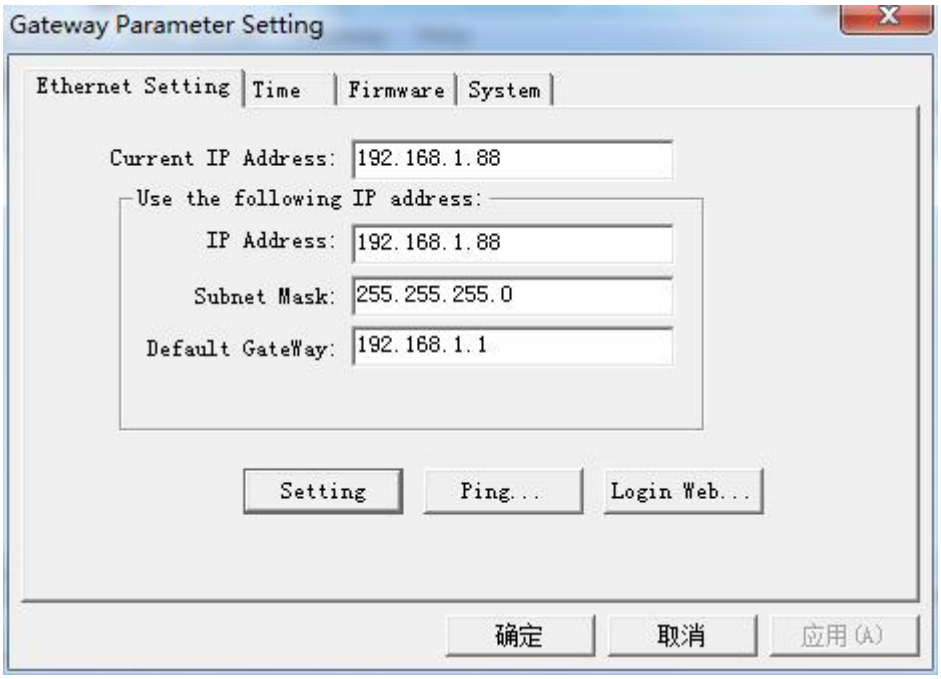

Figure 3-8-2 Ethernet Setting

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Time: Read the gateway or written to a local PC time.

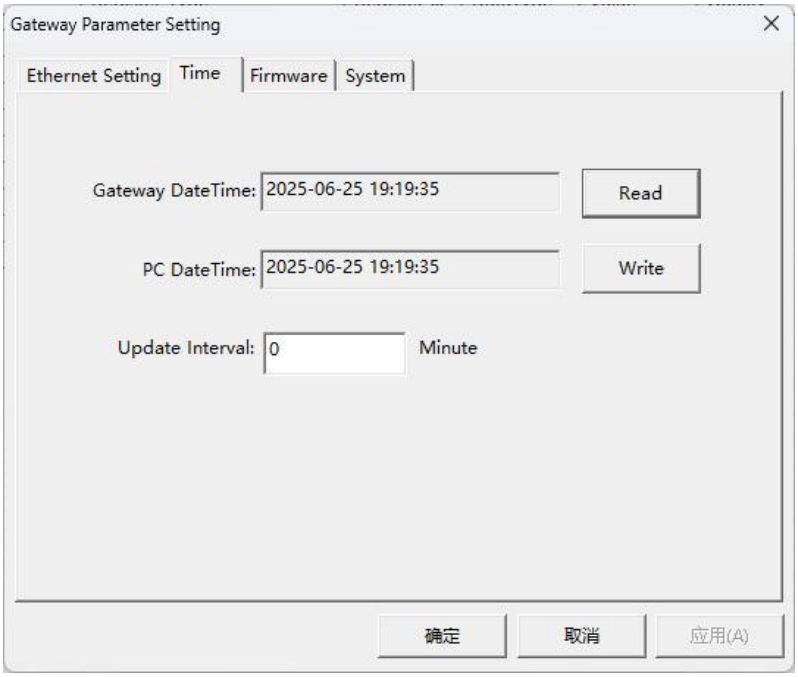

Figure 3-8-3 Time

Firmware: Click Refresh read gateways firmware information.

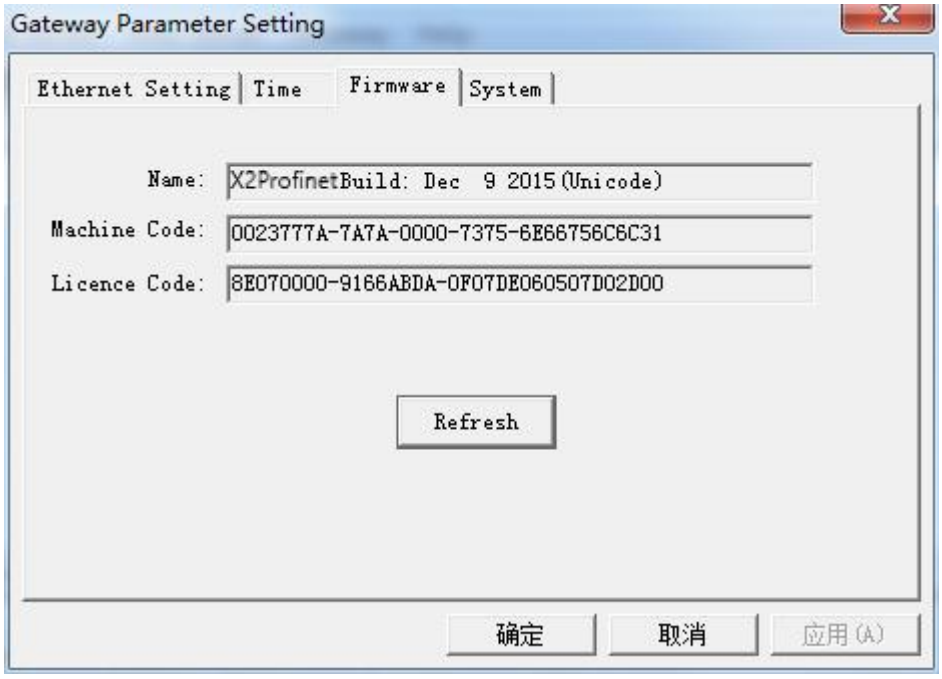

Figure 3-8-4 Firmware

System: Read Memory Status, Reboot Gateway, Delete Config File and Recover Config File.

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milesgoiiot@gmail.com / sales@opcmaster.com

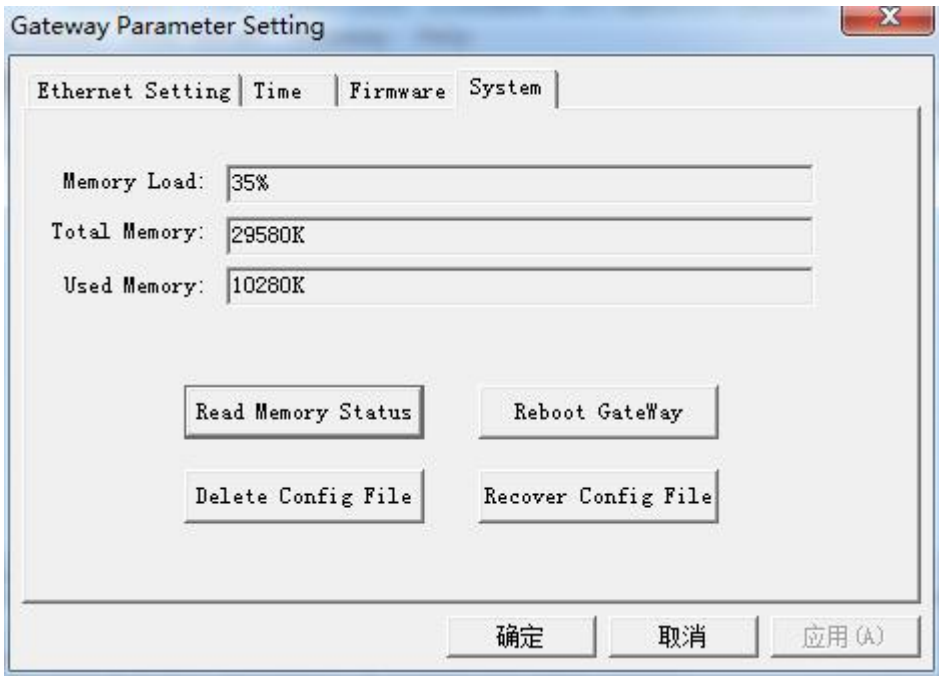

Figure 3-8-5 System

3.9 Download Project

Before uploading project, we must ensure that the monitoring mode is Remote Gateway mode, and the specific mode switching operation is as follows.

- on the menu bar , monitor mode under the tool need to be chosen “Remote Gateway”.
- Double click the “Monitor Mode” of the status bar at the bottom of the software can also switch monitoring mode.

Download project is to download the last configuration project from the hardware gateway to PC, and edit the project and view real-time data on the PC to facilitate user debugging. Click on the "Gateway" choose "Download ", user name: admin, password: admin123456. As the Figure 3-9-1.

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milesgoiiot@gmail.com / sales@opcmaster.com

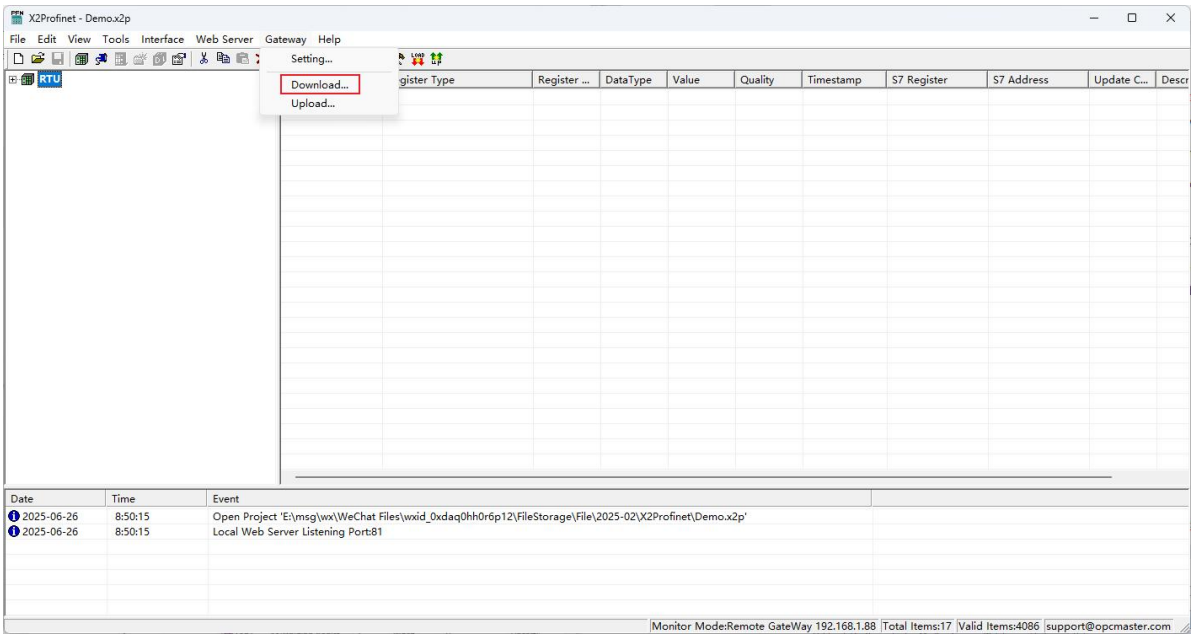

Figure 3-9-1 Download Project

In the pop up dialog box enter the gateway IP address, can be downloaded from the gateway of the current project, as the figure 3-9-2.

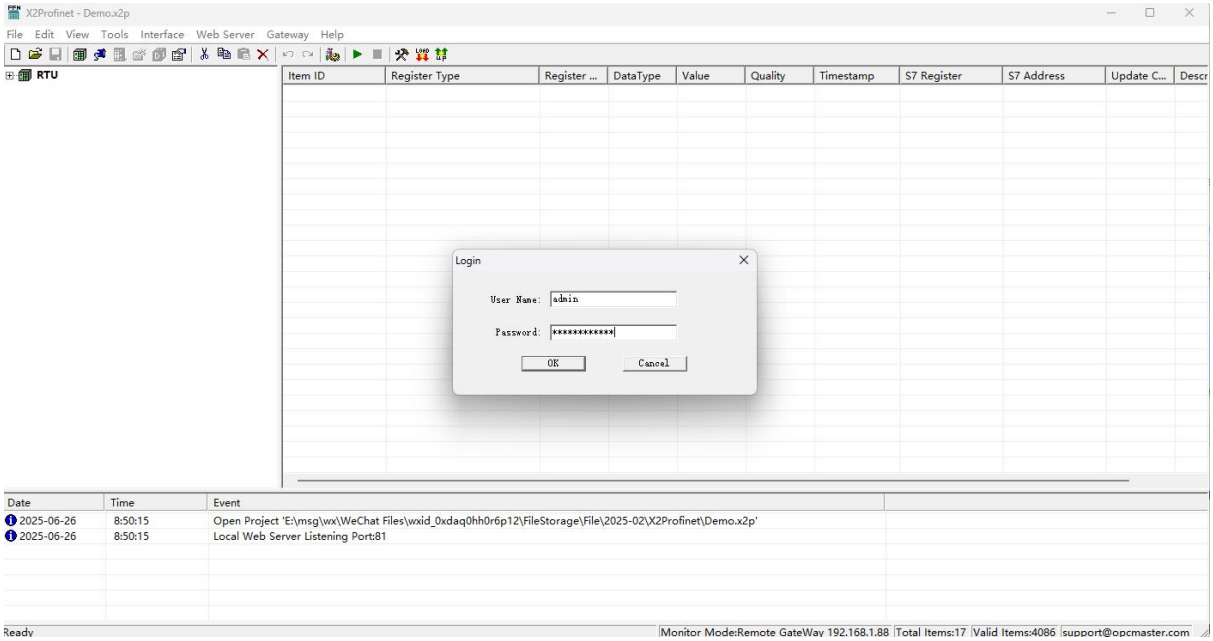

Figure 3-9-2 Login

Users can also through the WEB server log in to the gateway, download the project.

3.10 Software Licence

The hardware gateway has been authorized at the factory.

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The configuration software is used to configure the project and provide 30 minutes of local simulation monitoring for debugging. After configuring the project, upload it to the gateway and monitor it through the hardware gateway, so the software does not require authorization.

3.11 Timer Group and Timer

3.11.1 Timer Group

The function of timing group list is to facilitate users to manage points in the same time period, and to place timed points at the same time point in a group, which is convenient for users to view and manage. The timing group list refers to the internal clock of the gateway, so before using the timer function, please calibrate the time of the gateway first.

Click on the "View" item in the menu bar, and in the pop-up dialog box, select "Timer Group" or the shortcut icon " ", then you can enter the timer group list, as shown in figure 3-11-1-1 below:

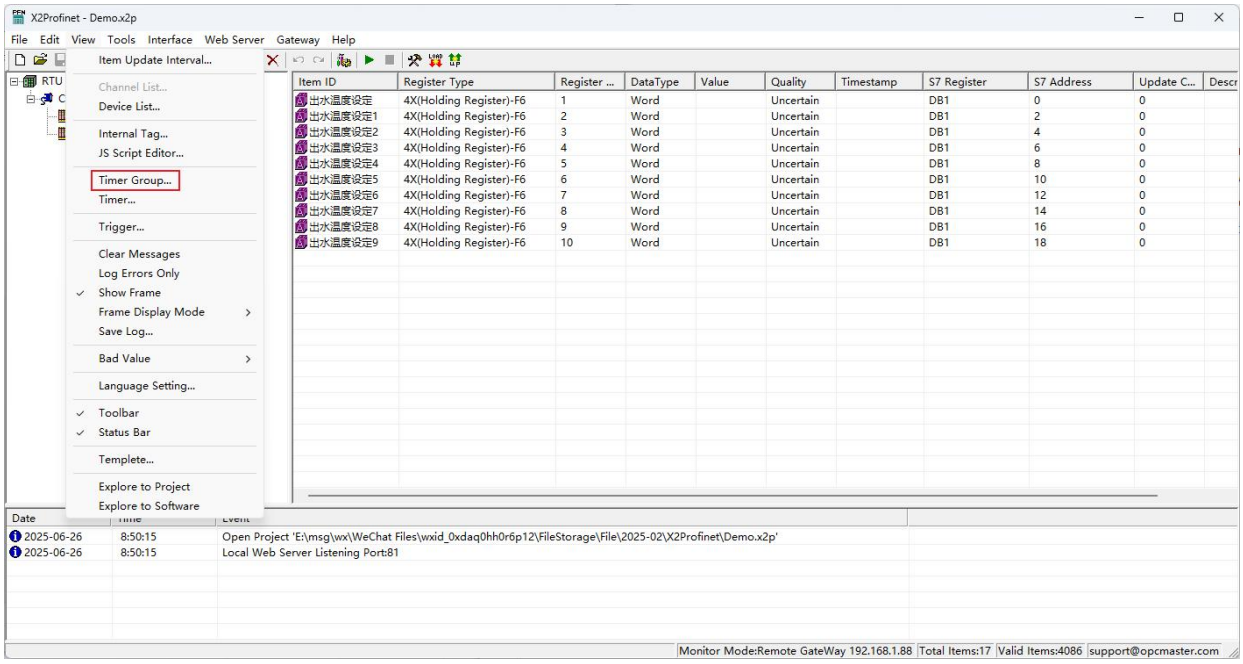

Figure 3-11-1-1 Timer Group List Menu Bar

In the pop-up "Timer Group" dialog box, right-click and select "New Timer Group",

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as shown in figure 3-11-1-2.

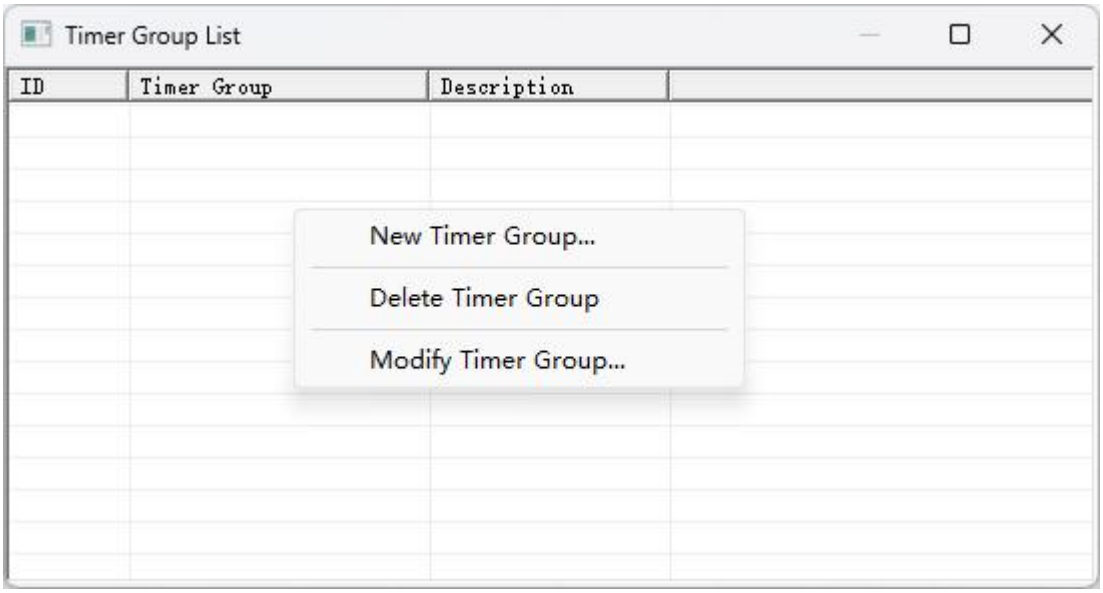

Figure 3-11-1-2 New Timer Group

In the pop-up "Timer Group" dialog box, set the corresponding properties, double click the tag to complete the add. **Note that the selected point must be controlled.**

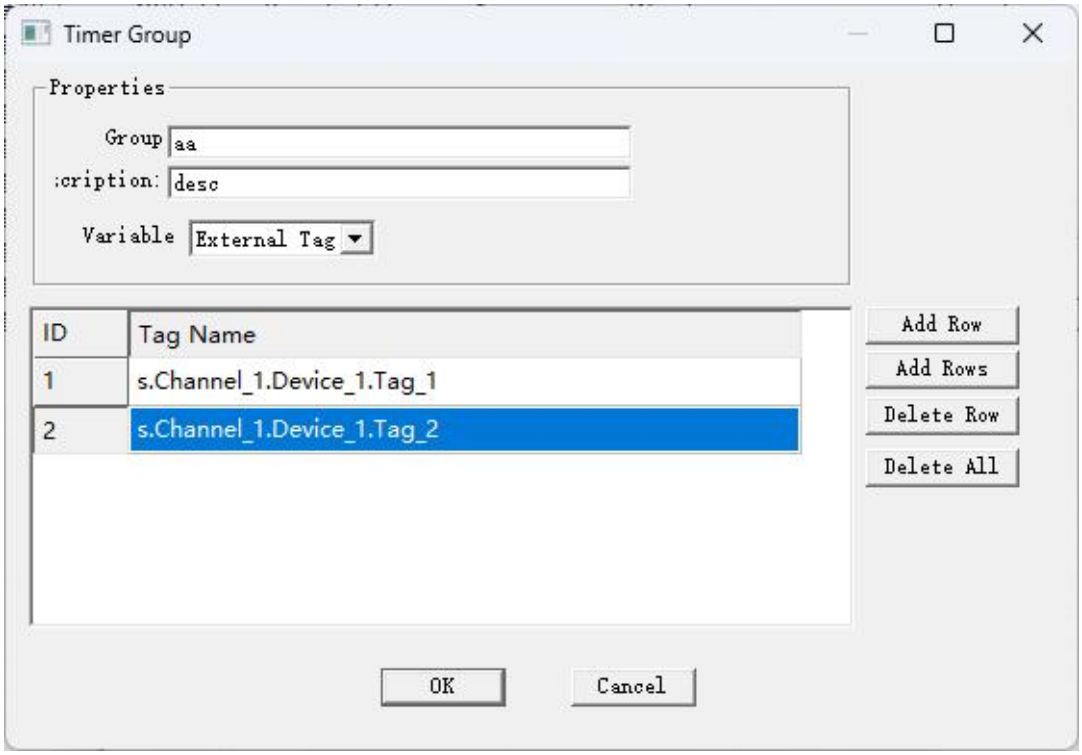

Figure 3-11-1-3 Finish to New Timer Group

After clicking "OK", back to the timer group list dialog box, you can see the just

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set timer group, as shown in figure 3-11-1-4.

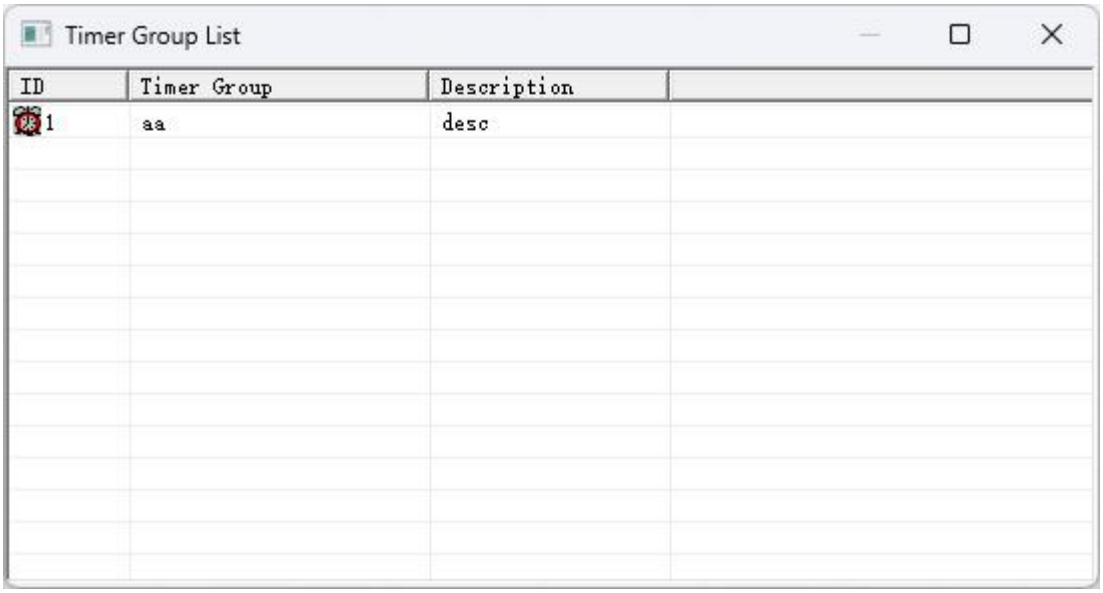

Figure 3-11-1-4 Finish to Set Timer Group

Repeating the above steps, users can add multiple timed group lists according to actual requirements. Right- click can be edited or deleted on the timing group.

3.11.2 Timer

The timer function is to edit the timer and manage the timer when the timer is grouped. The operation steps are as follows:

Click the “View” menu, and select the "Timer" in the pop-up dialog, as shown in figure 3-11-2-1.

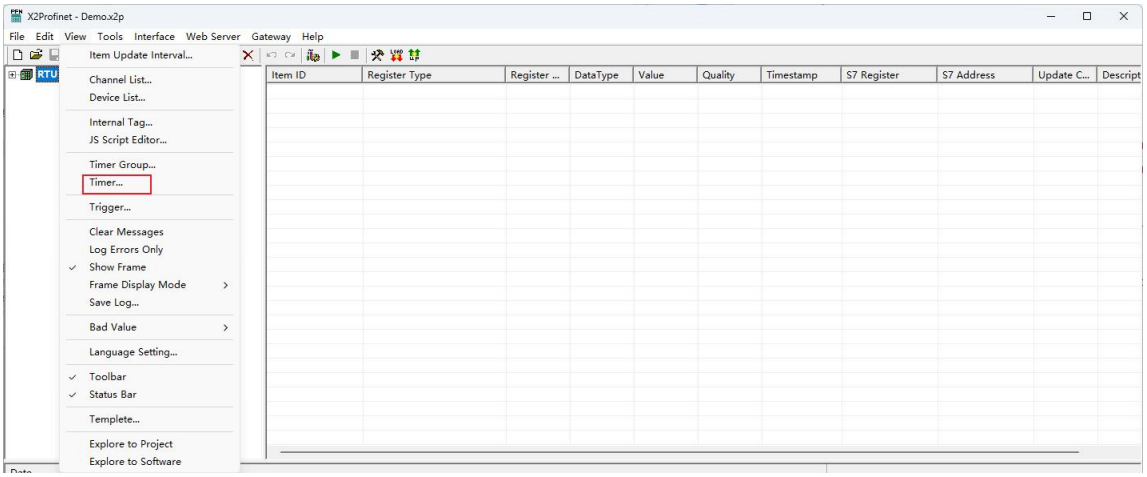

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Figure 3-11-2-1 Finish to Set Timer Group

After selecting the timer in the monitor object, the "Timer" dialog box is popped out, with its properties as shown in figure 3-11-2-2.

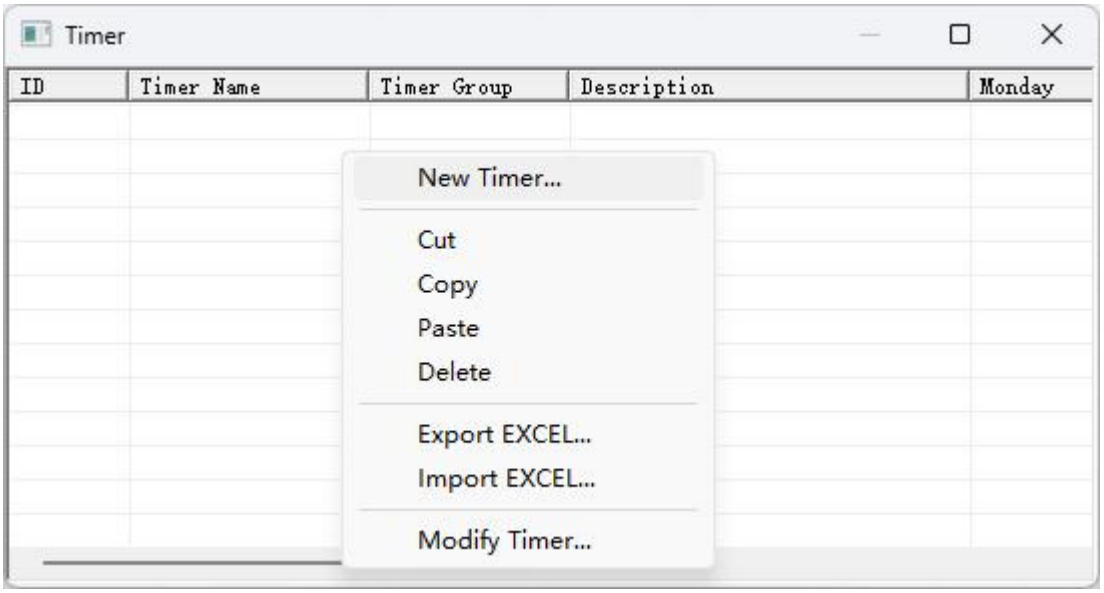

Figure 3-11-2-2 Timer

Right click the blank, select "New Timer" in the pop-up list, open the timer edit window, and its related properties are:

1) Timer Group: select the timer group.

2) Monday to Sunday: can be single or multiple selections, tick, tick timer is only carried out in time.

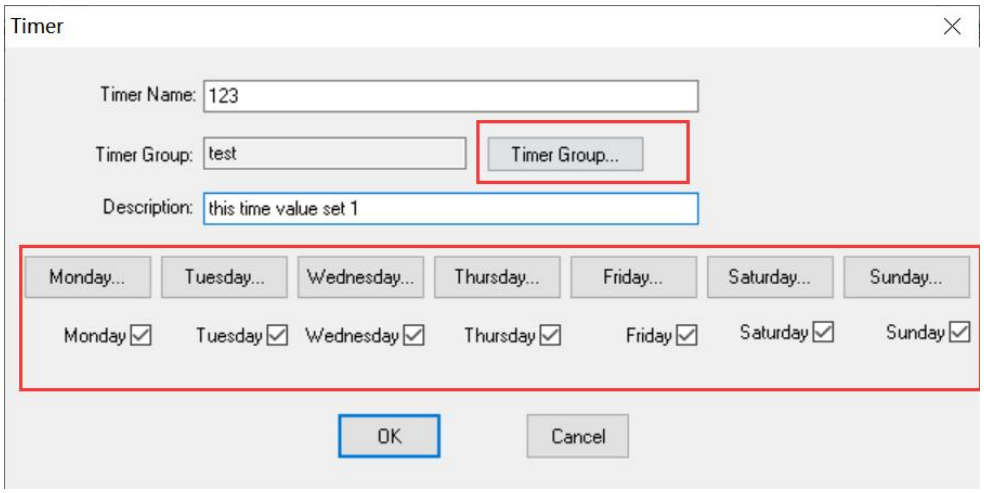

Figure 3-11-2-3 Timer Group Edit

3) time: range 00: 00: 00-23: 59: 59.

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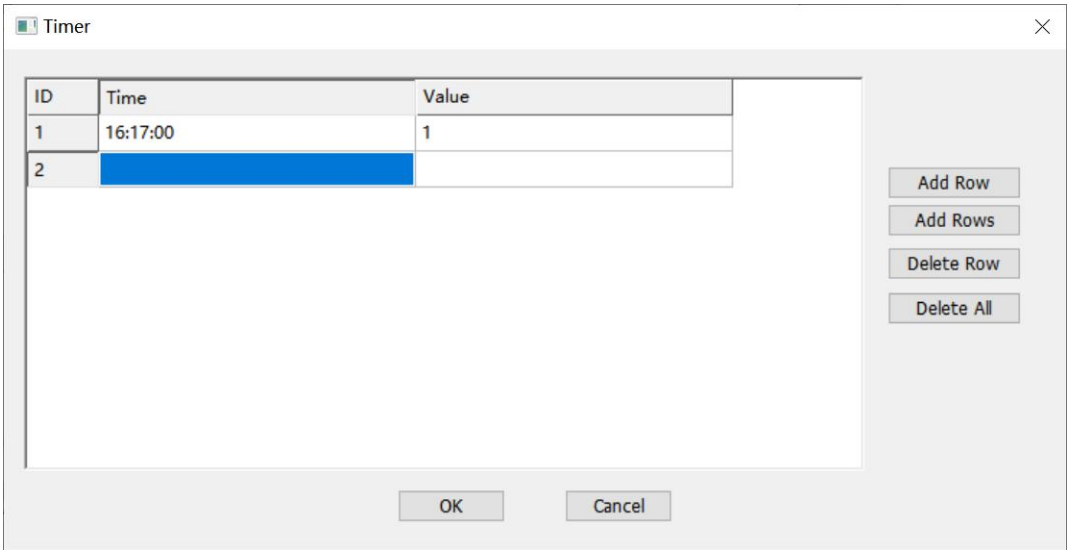
4) value: at the time, the value will set to 1.



3.12 Trigger

The command group function is a new good time sequence for group management. The specific operation steps are as follows: Click the “View” menu, and select the "Trigger" in the pop-up dialog, as shown in figure 3-12-1

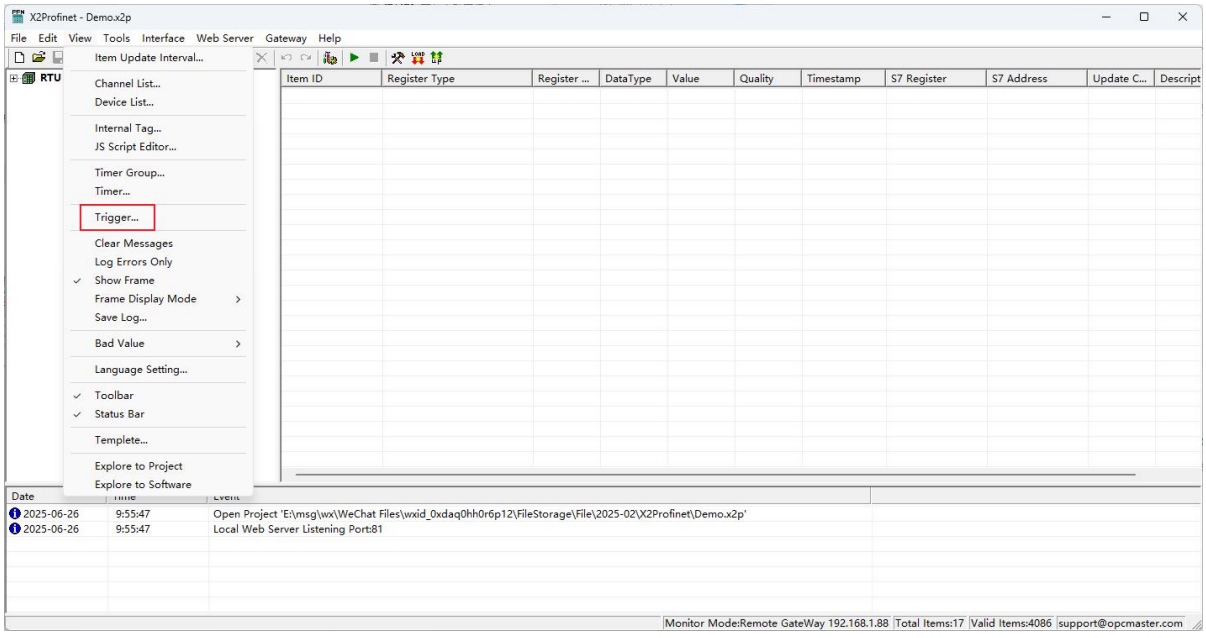


Figure 3-12-1 Select Trigger

After selecting the "Trigger" in the "View", the "Trigger" dialog box is popped out, as shown in figure 3-12-2.

Note: It will set “Source” tag value to “Target” tag value when “Source” value

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changed.

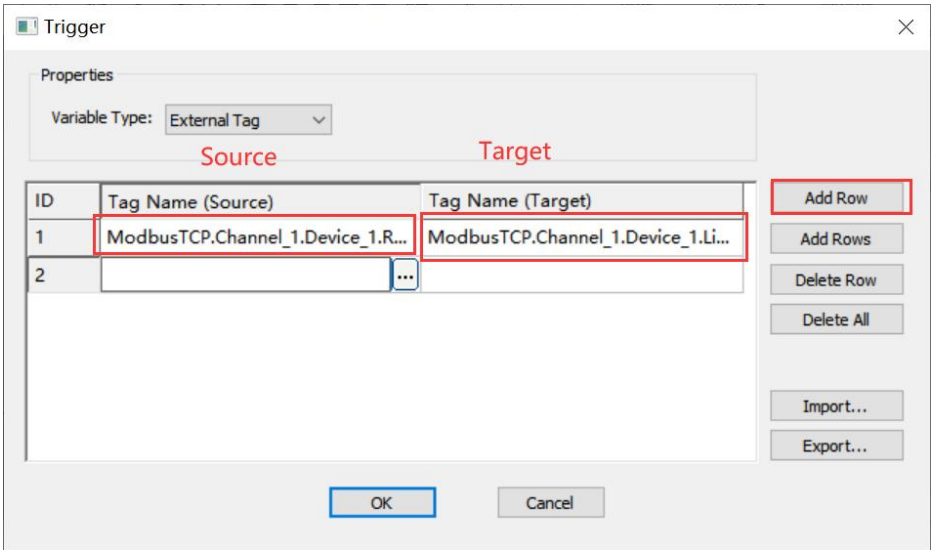

Figure 3-12-2 New Trigger

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4 WEB Server

Gateway with a WEB server, the default port is fixed for 80. Users can through the browser can log on to the WEB server, in a WEB page can modify hardware gateway IP address, serial interface communication mode, view real-time data, download X2Modbus PC configuration software and engineering documents, etc.

Note: the factory default gateway IP address is 192.168.1.88, the user to change the IP address for the first time, users only need to direct connect a network cable and gateway. Need to set the PC and gateway to the same network segment, and then in the browser input 192.168.1.88 complete gateway IP address changes.

In the pop up window enter the user name and password to login, As the Figure 4-1.

Username: admin

Password: admin123456

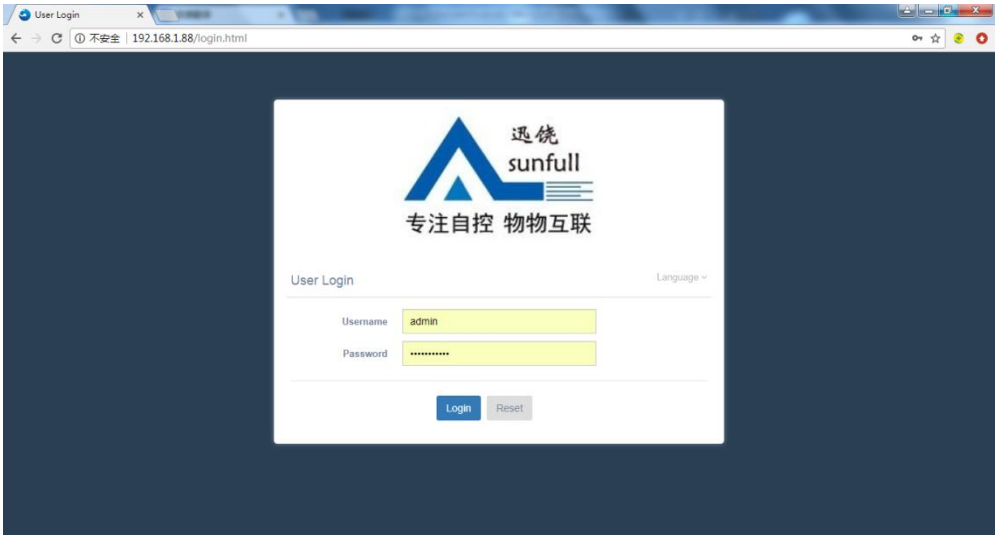

Figure 4-1 Login

4.1 Download

Click “Download”, you can download the following files, As the Figure 4-1-1.

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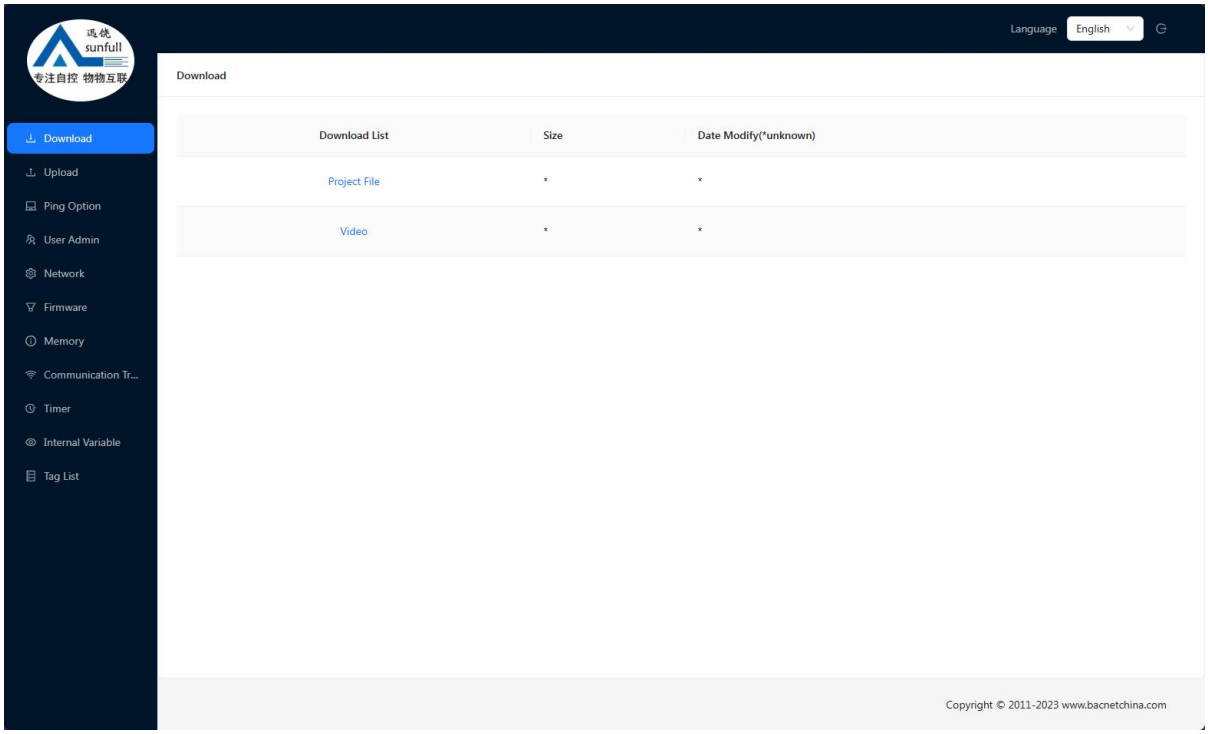

Figure 4-1-1 Download

X2Profinet: Configuration Software

X2Cloud: upload the project to the cloud

BACnetSCAN: the tool of Scanning BACnet device

Modbus_Poll: the tool that simulate Modbus master station

Modbus_Slave: the tool that simulate Modbus Slave stationProject Files: the last configuration project that Upload to gateway

4.2 User Admin

Users can manage their landing accounts by adding, modifying, deleting, and so on, as shown in figure 4-2-1 below.

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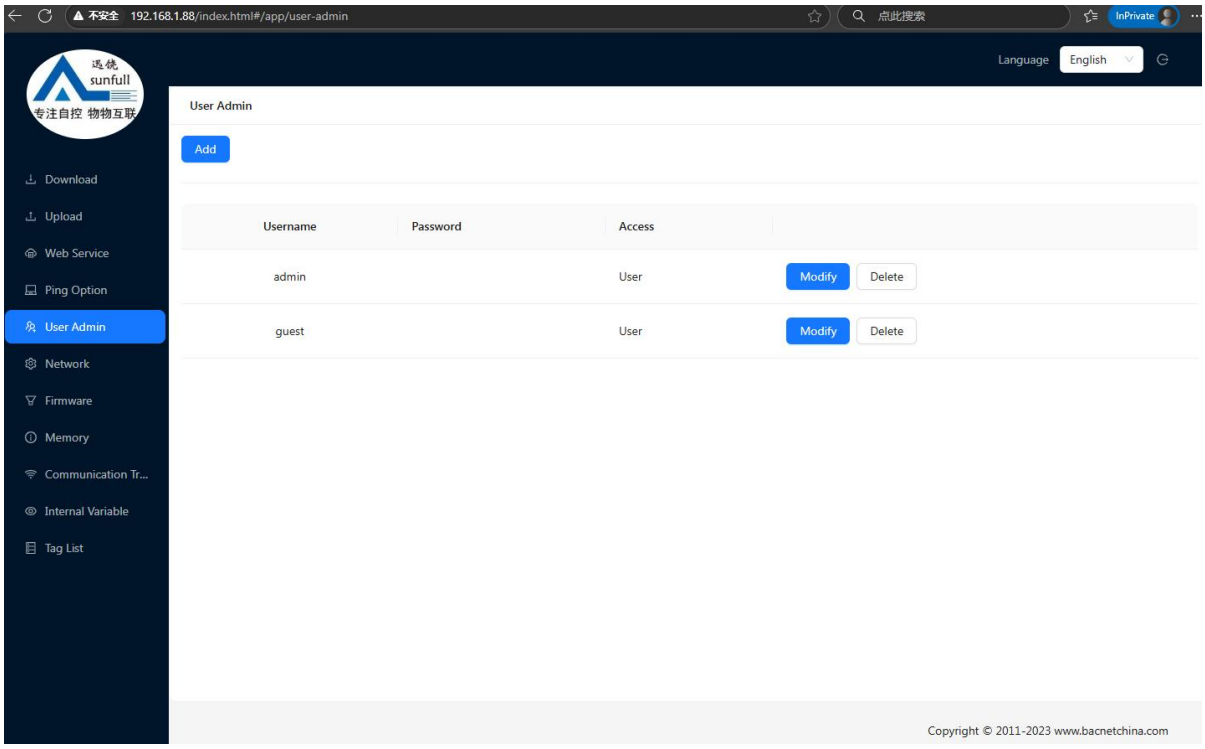
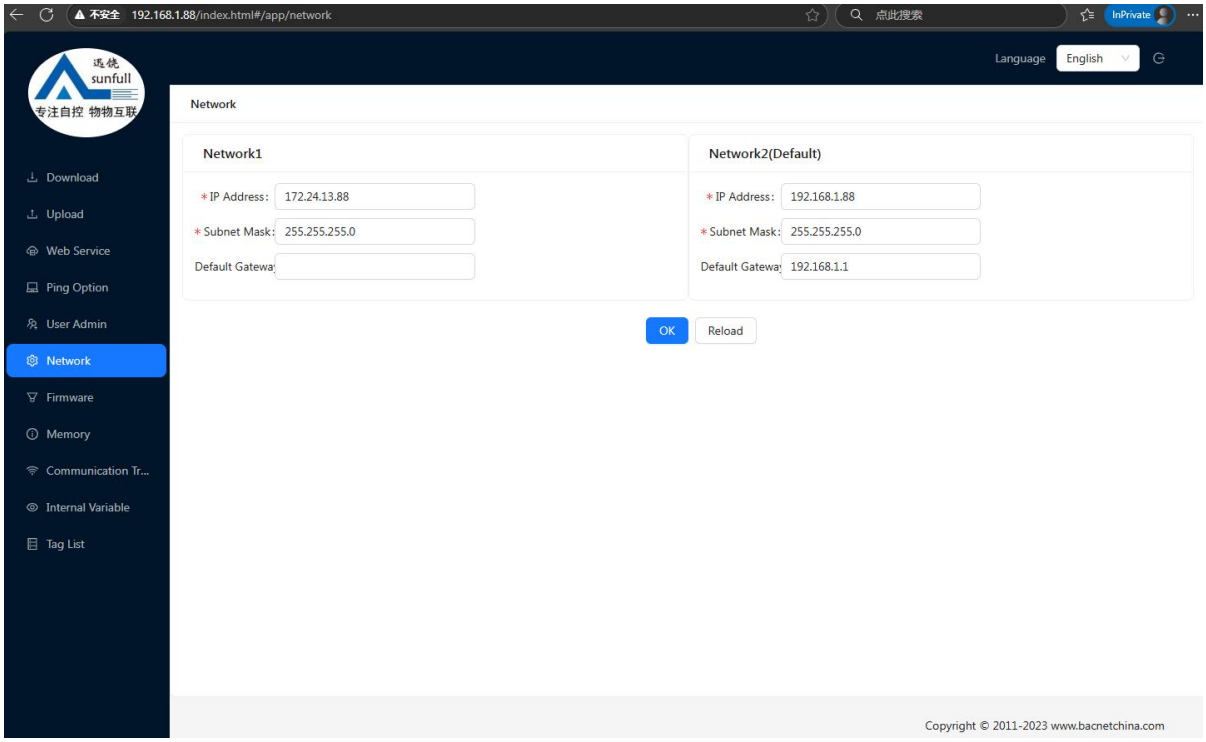


Figure 4-2-1 User Admin

4.3 Network

Click “Network”, you can set gateway IP address, as shown in figure 4-3-1 below.

- Ethernet 1: 172.24.13.88
- Ethernet 2: 192.168.1.88(Communication port)



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milesgoiiot@gmail.com / sales@opcmaster.com

Figure 4-3-1 Network

4.4 Firmware

In this page, user can view the firmware version information, machine code and license key.

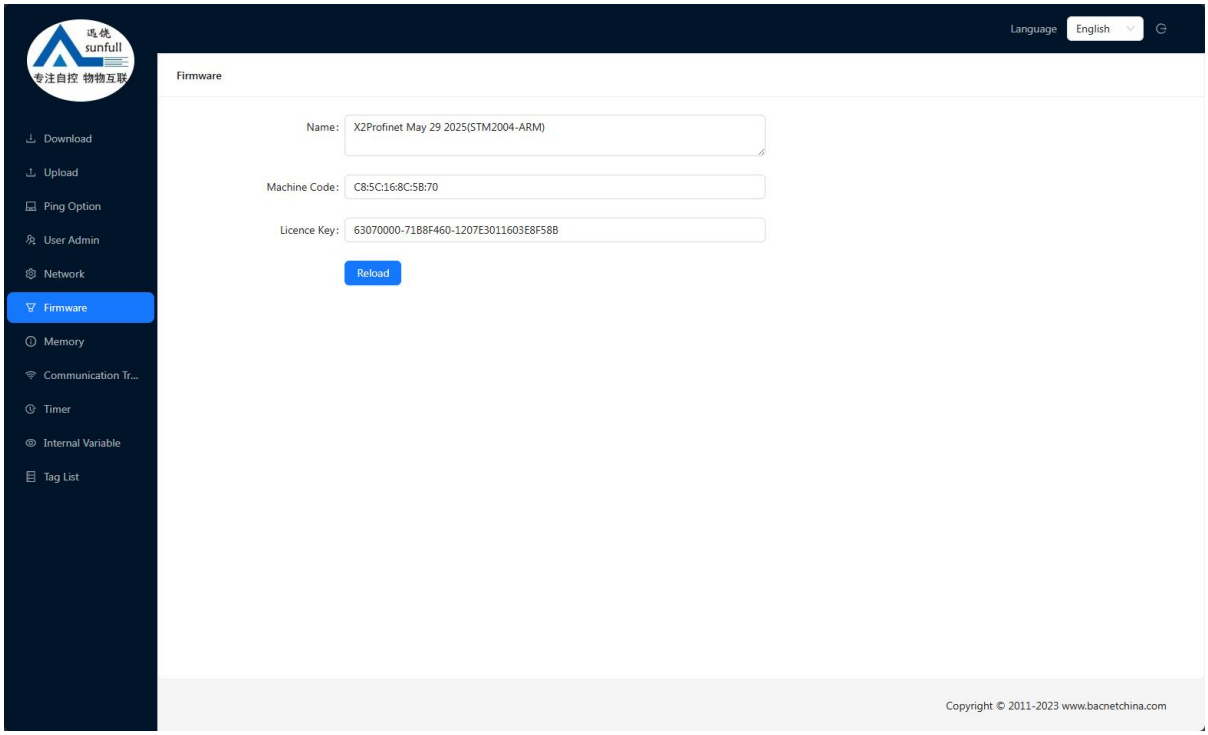

Figure 4-4-1 Firmware

4.5 Memory

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milesgoiiot@gmail.com / sales@opcmaster.com

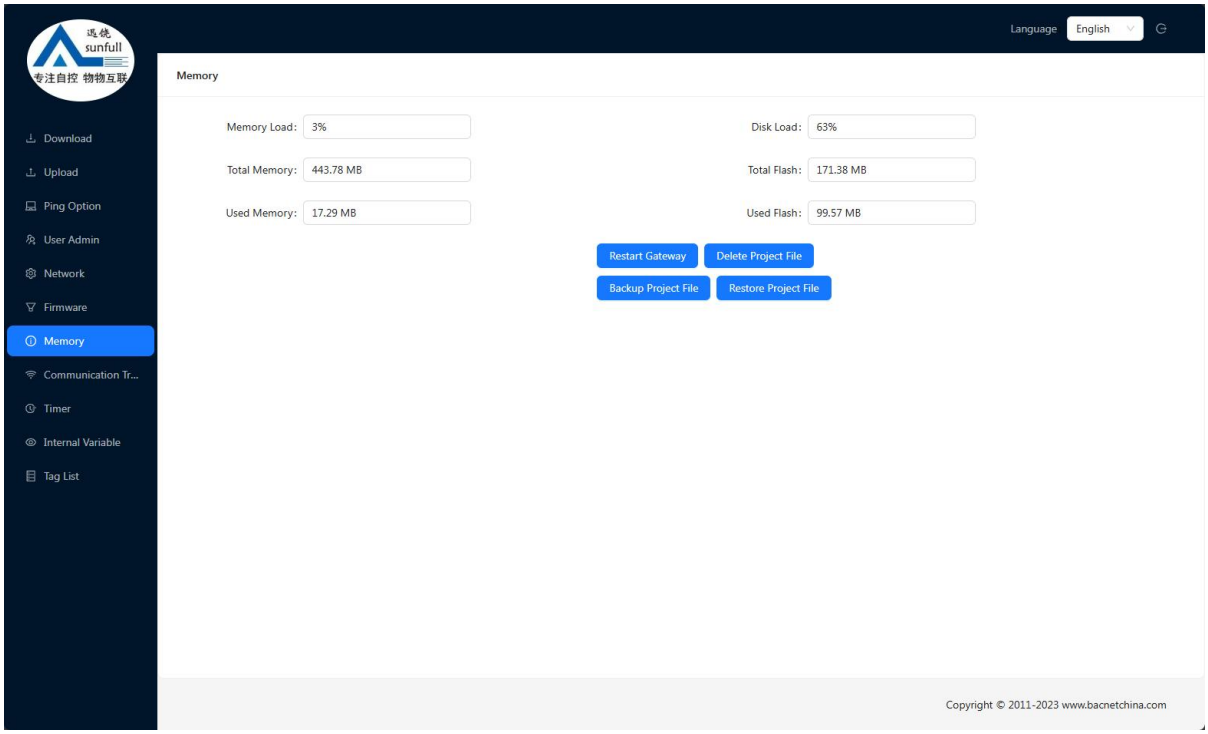

Figure 4-5-1 Memory

1. check the system memory usage. (this function automatically refreshes the gateway memory information every 5S).

2. Restart Gateway (remote restart the current gateway).

3. Delete Project File (delete the current gateway configuration project).

4. Backup Project File (can backup the current project to the isolation area).

5. Restore Project File (restore a project that has been backed up by the user).

The project can be backed up to the isolation area, which has 2 advantages.

First, it prevents the wrong operation from uploading the wrong project and can be quickly restored.

Two, it is easy to debug. Once the project is modified, it can be quickly restored.

4.6 Communication Traffic

In addition, the real-time dynamic data frame can be viewed in the web page to facilitate the user to understand the real-time communication state intuitively. Through the analysis of the data frame, the cause of the failure can be found, which brings great convenience to the user.

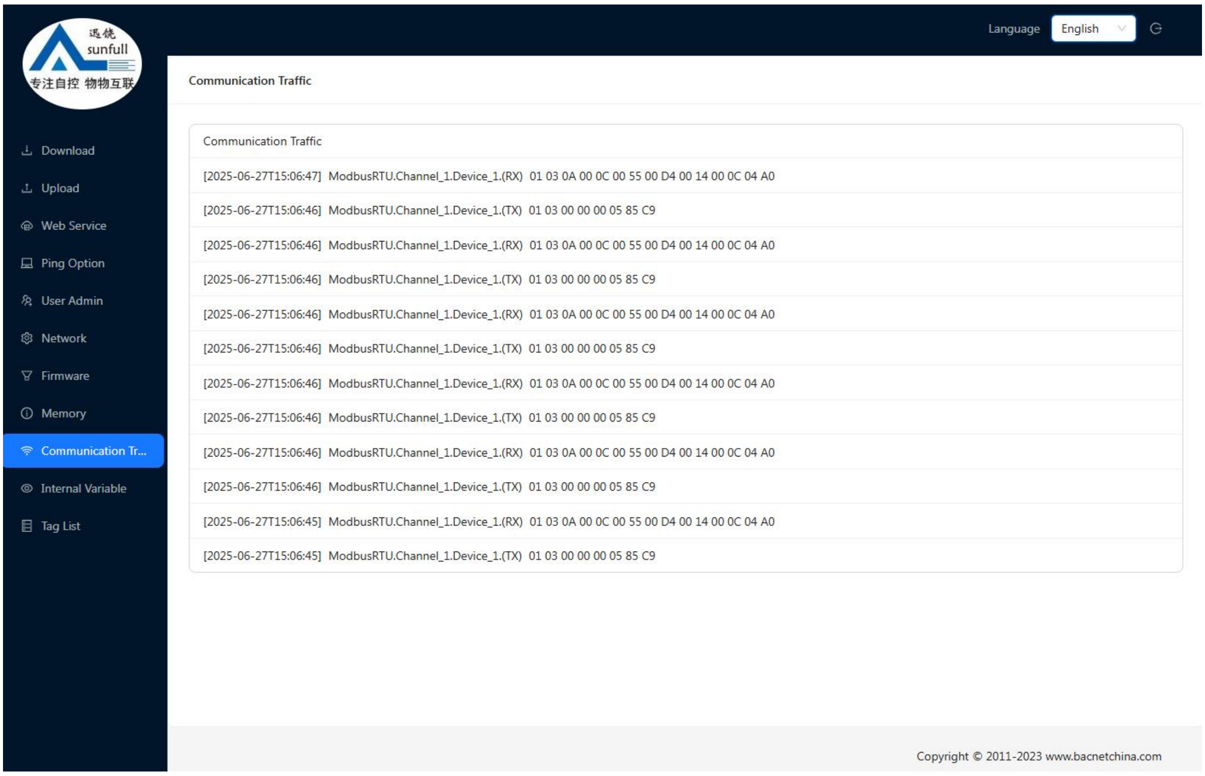

Figure 4-6-1 Communication Traffic

4.7 Internal Variable

You can query the device’s off-line status, newly created internal variables, and the system date and time that comes with the system, as shown in figure 4-7-1 below.

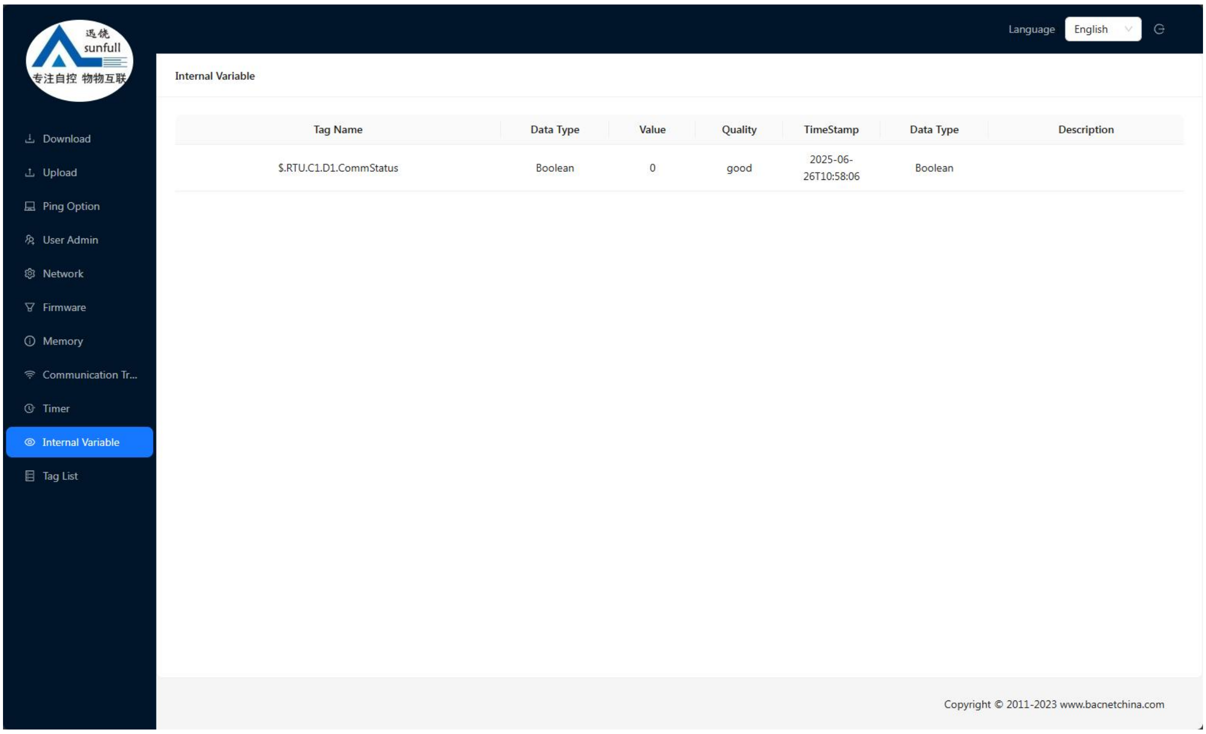

Figure 4-7-1 check the real-time data

4.8 Real-time Data

Check the equipment real-time data on the web, as the Figure 4-8-1.

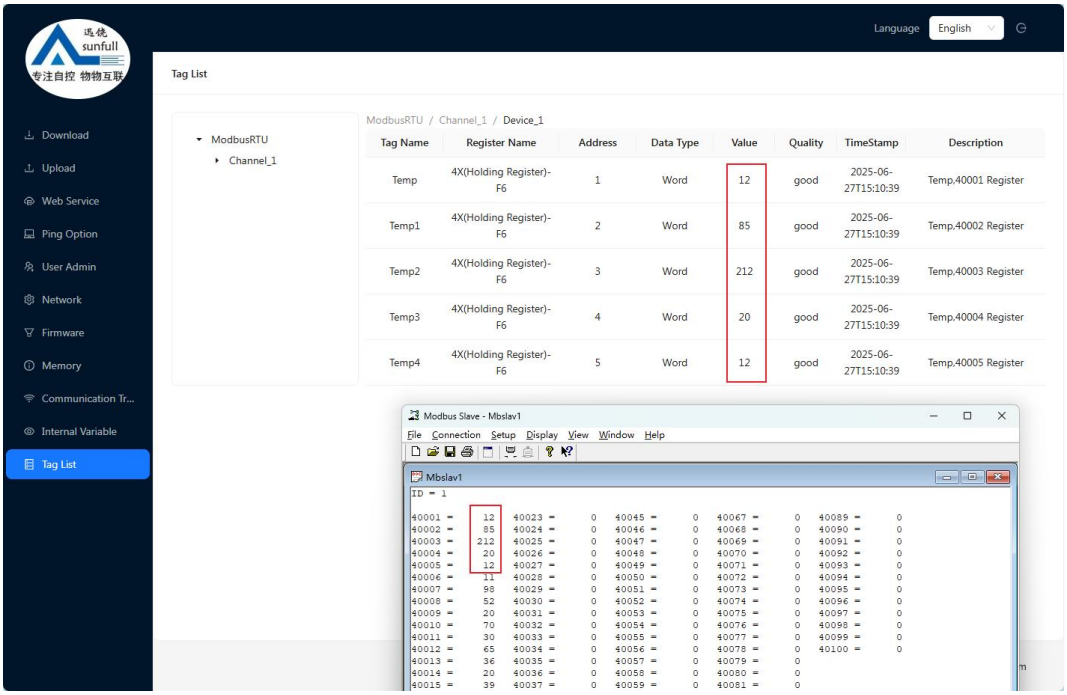

Figure 4-8-1 Real-time data

Click the tag, in the pop-up window user can also write value on a web page, as the Figure 4-3-2.

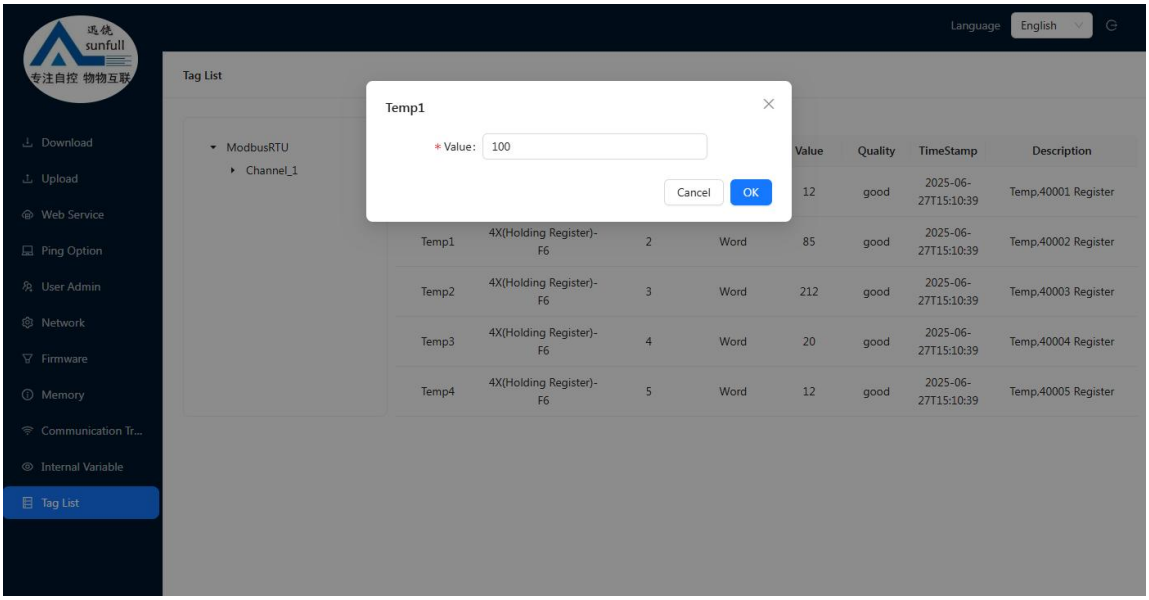

Figure 4-8-2 Write value

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5 Profinet client（Master Station）Access

5.1 Siemens SMART200 access

The S7 gateway can use PUT and GET commands for Ethernet communication when communicating with SMART200 PLC, as shown in the figure 5-1-1.

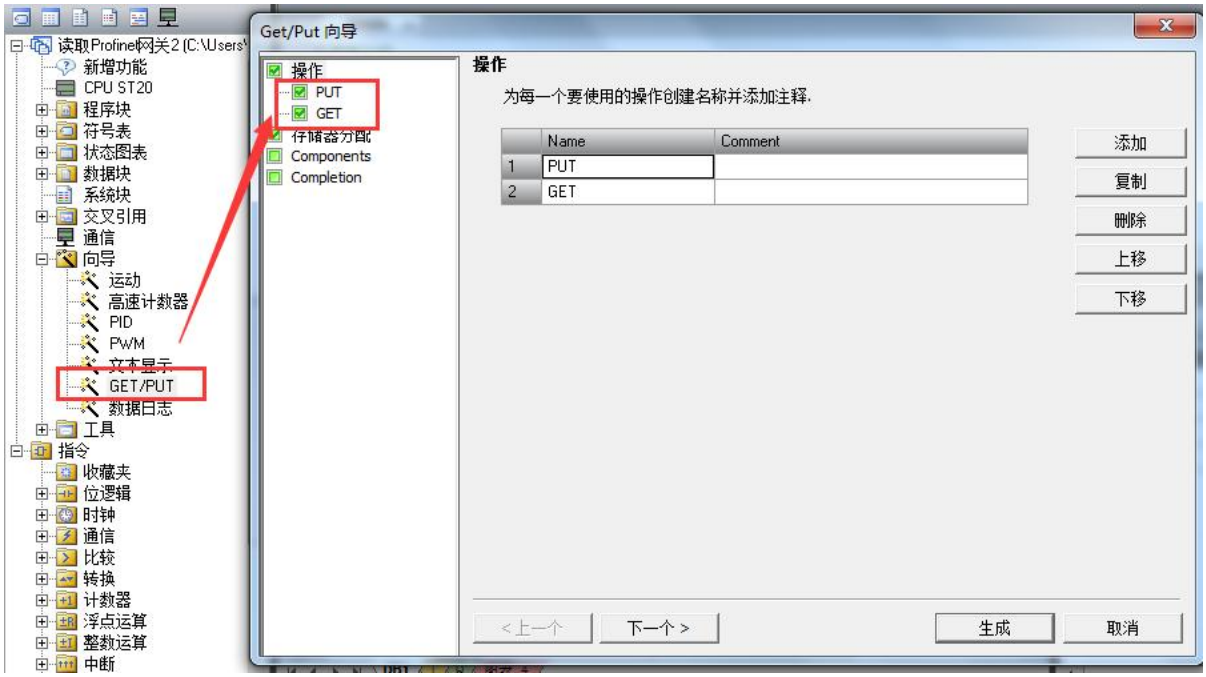

Figure 5-1-1 Create a new PUT/GET command

Set the type PUT to write the address data of the local PLC (SMART200) to the remote CPU (S7 gateway), as shown in the figure, write the VB0-VB9 data from SMART200 to the VB0-VB9 of the remote 192.168.1.69 device;

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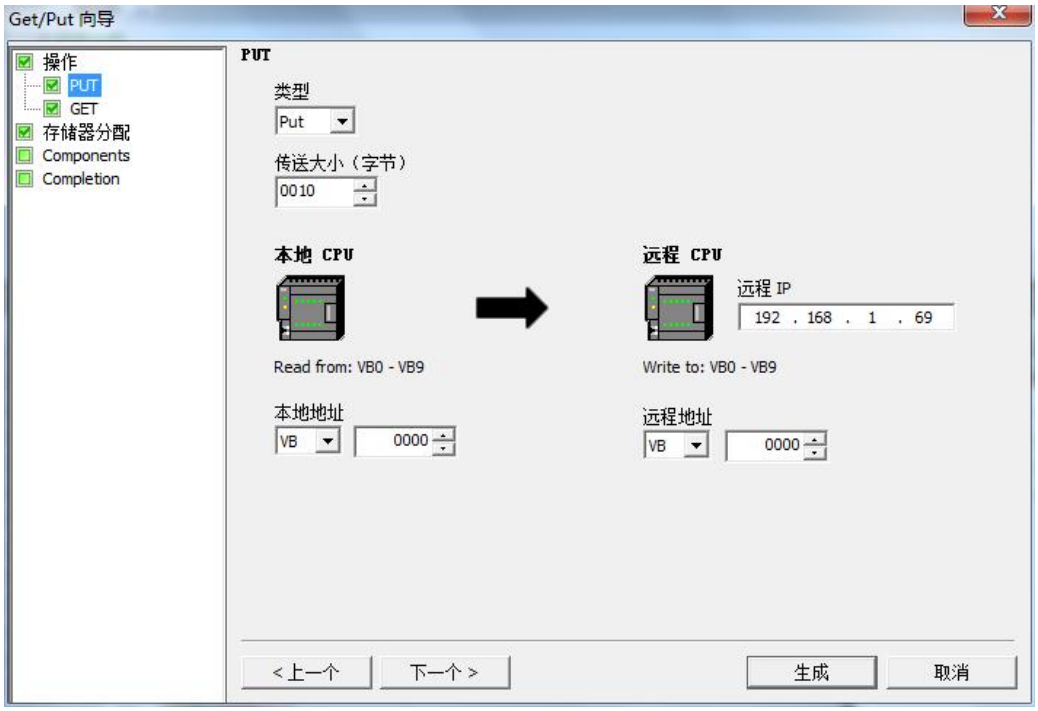

Figure 5-1-2 PUT Instruction Definition

Set the GET type to read the remote CPU (S7 gateway) address data to the local PLC (SMART200) address, as shown in the figure, read the VB10-VB20 address data of the remote 192.168.1.69 gateway to the VB10-VB20 address in SMART200;

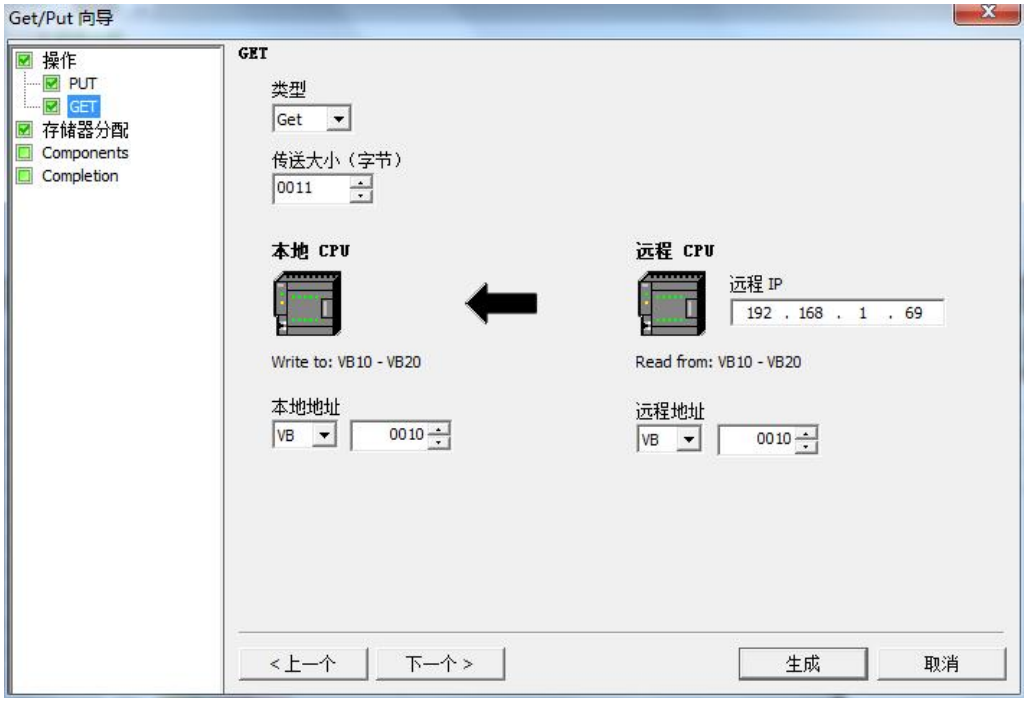

Figure 5-1-3 GET Instruction Definition

Call the program in the program after the instruction definition is completed.

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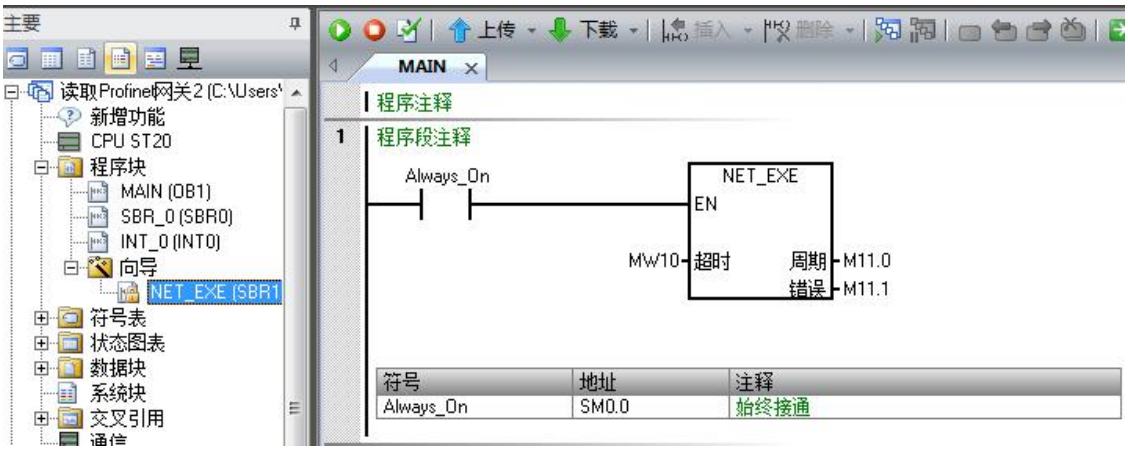

Figure 5-1-4 Call program

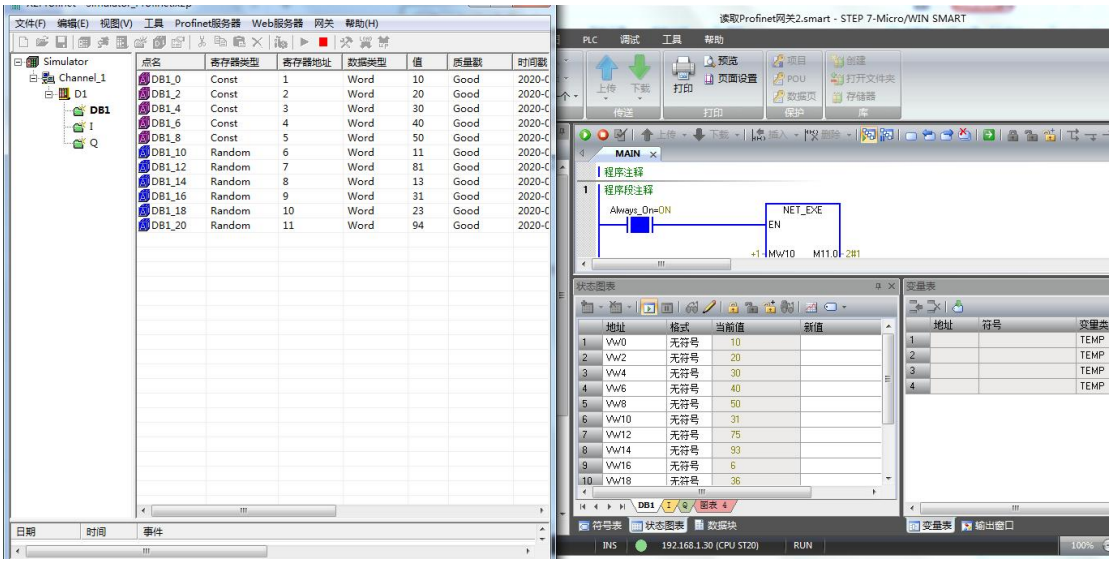

Figure 5-1-5 Program execution result

5.2 Siemens 1200 access

When communicating with 1200PLC, S7 gateway can use PUT and GET commands for Ethernet communication, configure PLC addresses, and ensure that each group of PLC addresses is in the same network segment and has different IP addresses. And click the 'Add New Subnet' button to add a subnet to the PLC.

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Figure 5-2-1 Set IP to add subnet

Enable remote access permission and run using PUT/GET communication access.

Figure 5-2-2 Enable remote access permission

Add S7 connection in hardware configuration. Switch to the network view, click on 'Connect', select 'S7 Connection', then right-click on the PLC and click on 'Add New Connection'. Click Add in the pop-up Create New Connection window. Then

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click to close.

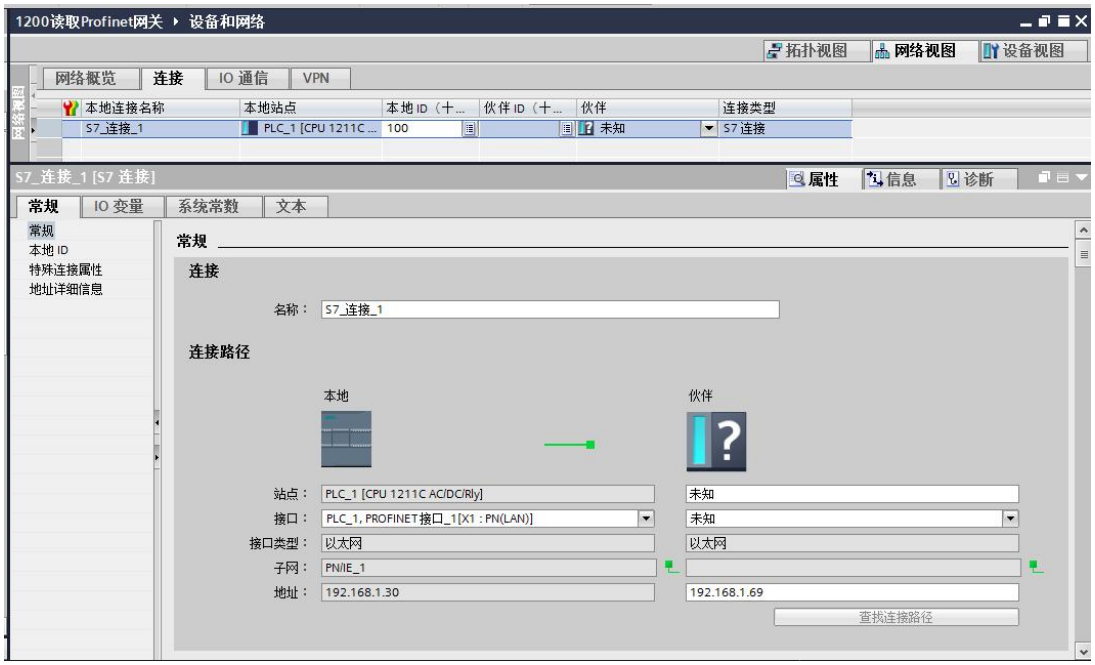

Figure 5-2-3 Create a new S7 connection

Establish a DB block. For example, we want to read the data from DB1 of the target PLC into DB1 of the local PLC and create a DB block in the local PLC.

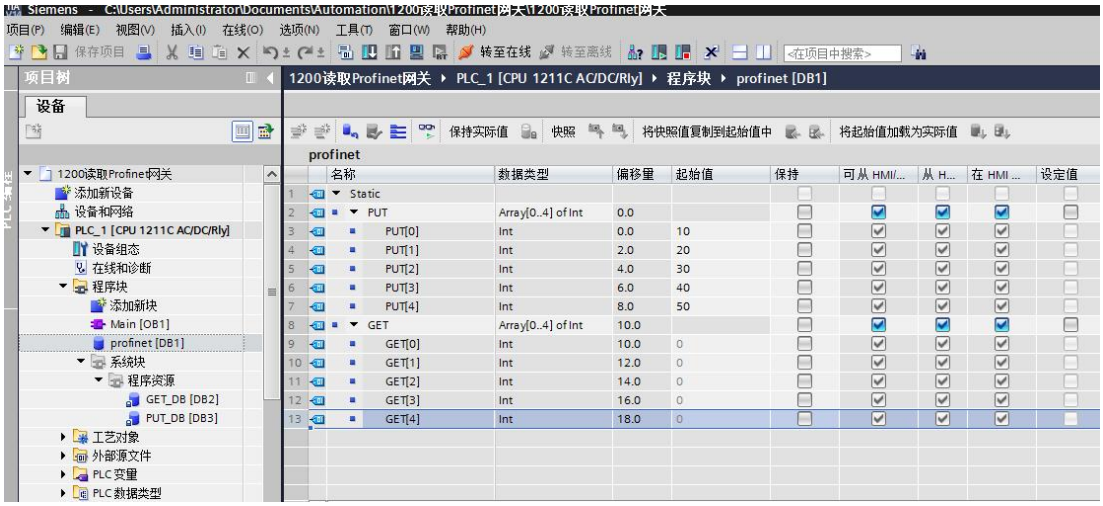

Figure 5-2-4 Establish a DB block

Then select the DB block, right-click on the properties, and turn off optimized block access in the properties tab.

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Figure 5-2-5 Cancel optimization block access

Add program segment GET instruction.

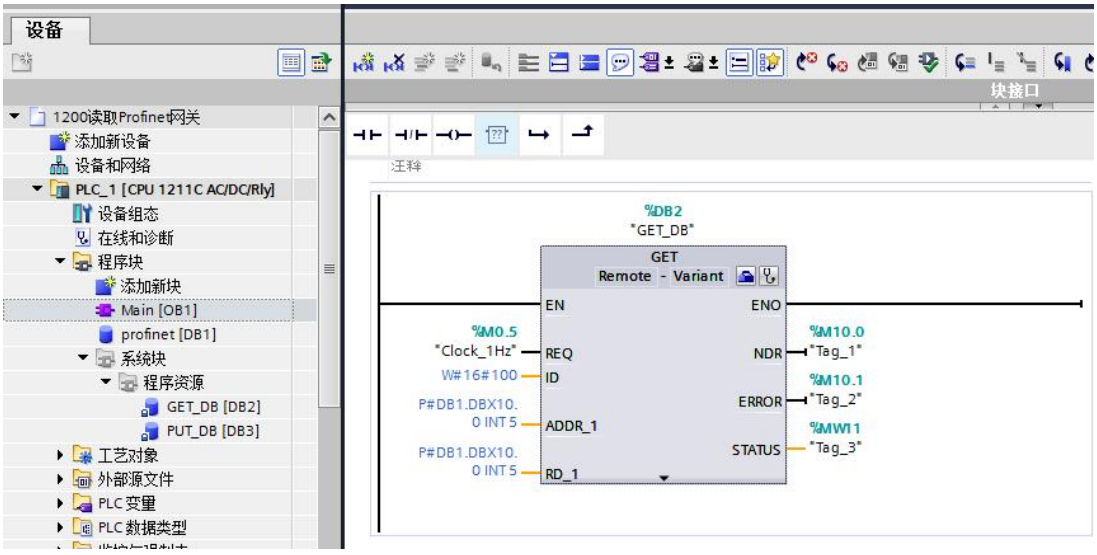

Figure 5-2-6 GET instruction

Add program segment PUT instruction.

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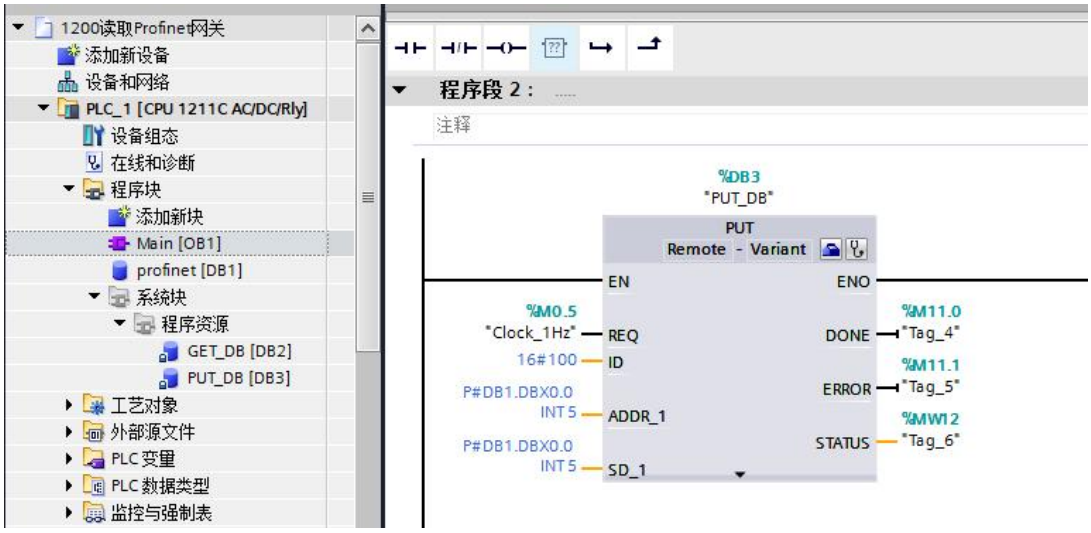

Figure 5-2-7 PUT instruction

Screenshot of data communication status:

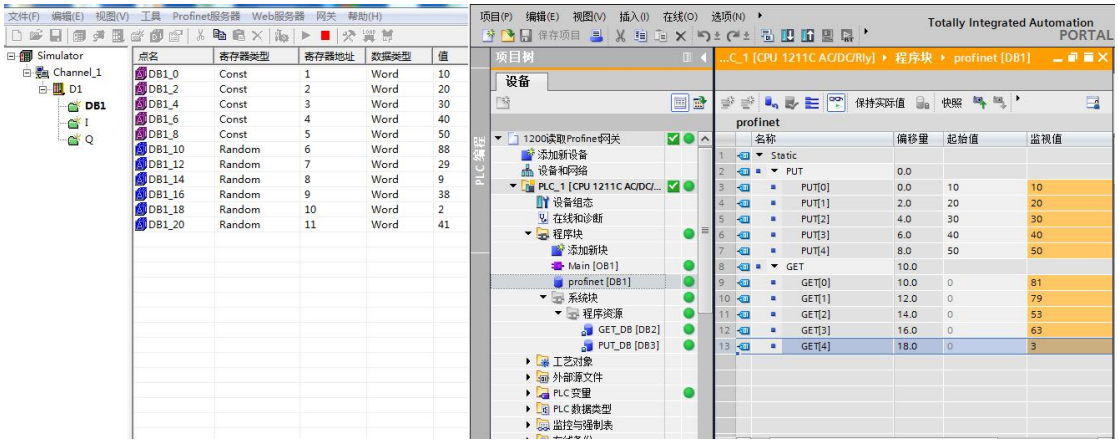

Figure 5-2-8 Data communication situation

5.3 WinCC access

When communicating with WinCC, the S7 gateway can use the TCP/IP driver in SIMATIC S7 Protocol Suite for Ethernet communication. Before communication, the PG/PC interface of the computer needs to be set up:

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milesgoiiot@gmail.com / sales@opcmaster.com

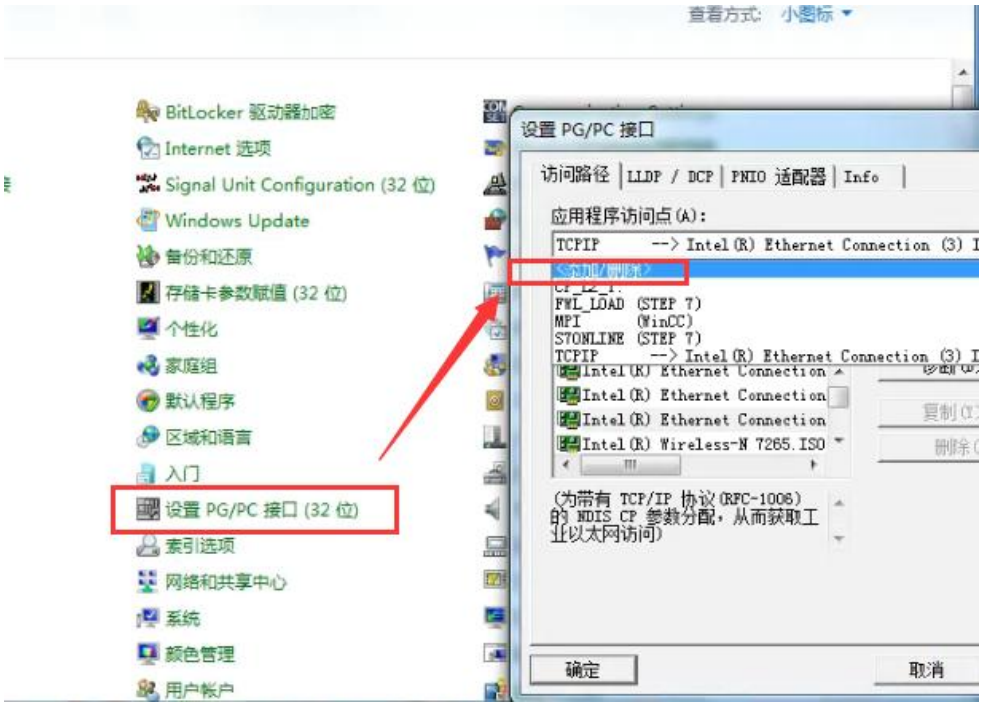

Figure 5-3-1 Add TCPIP access point to PG/PC interface

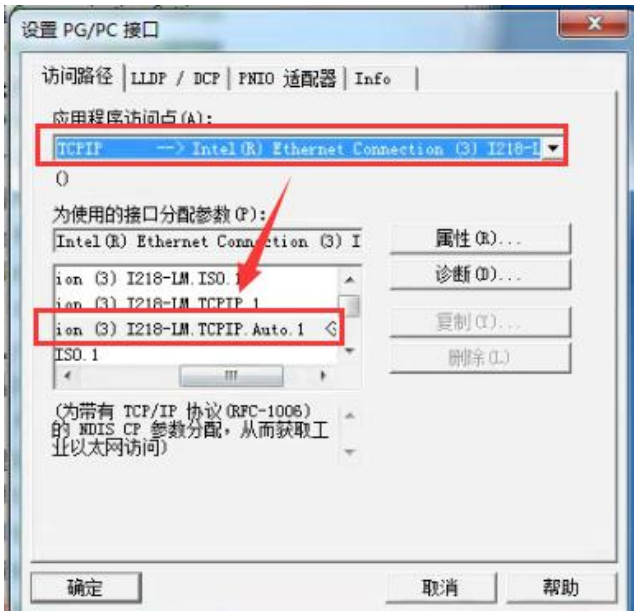

Figure 5-3-2 The network card bound to TCPIP access point is a local Auto network card

In the WinCC software SIMATIC S7 Protocol Suite, the TCP/IP driver SIMATIC S7 needs to uncheck the option to use PLC, as shown in the following figure:

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milesgoiiot@gmail.com / sales@opcmaster.com

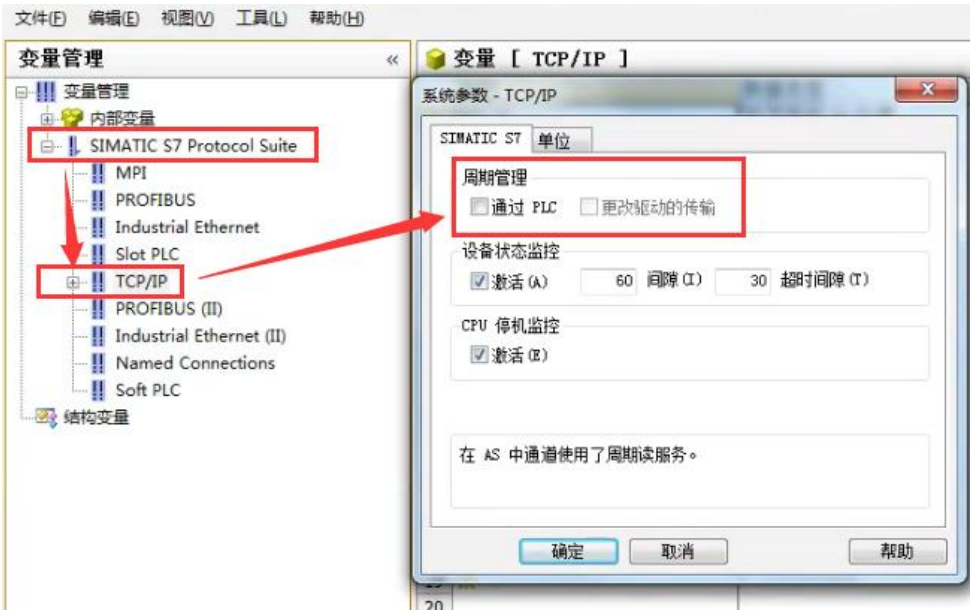

Figure 5-3-3 Uncheck the option to use PLC

The logical device name in TCPIP unit parameters needs to be selected as the network card defined by the computer PG/PC interface.

Figure 5-3-4 Access point for selecting and setting logical device names

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milesgoiiot@gmail.com / sales@opcmaster.com

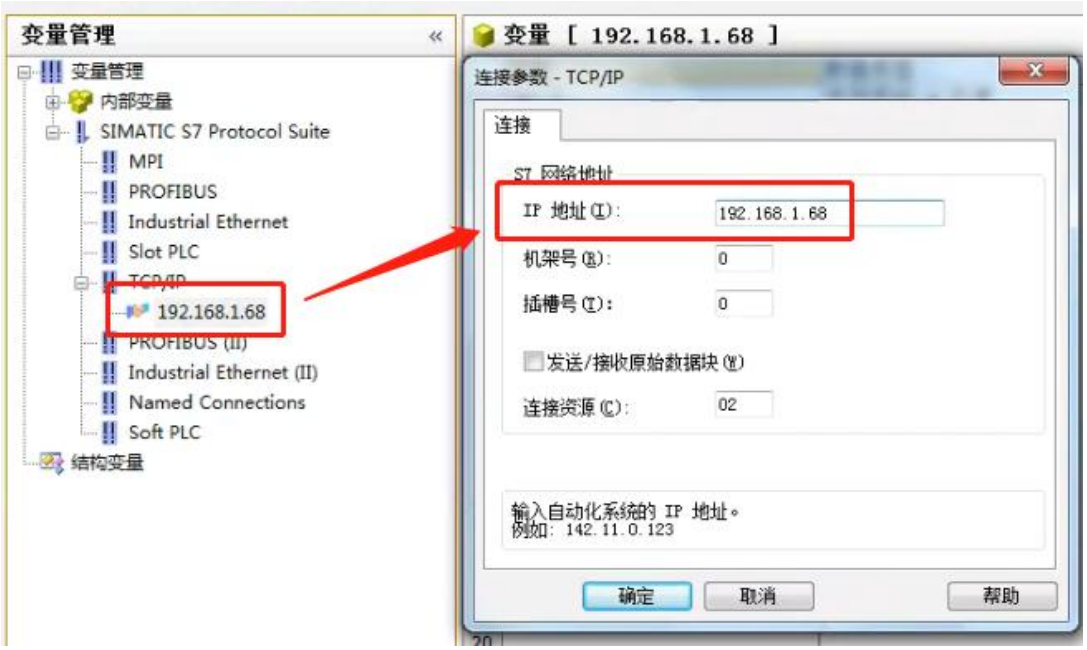
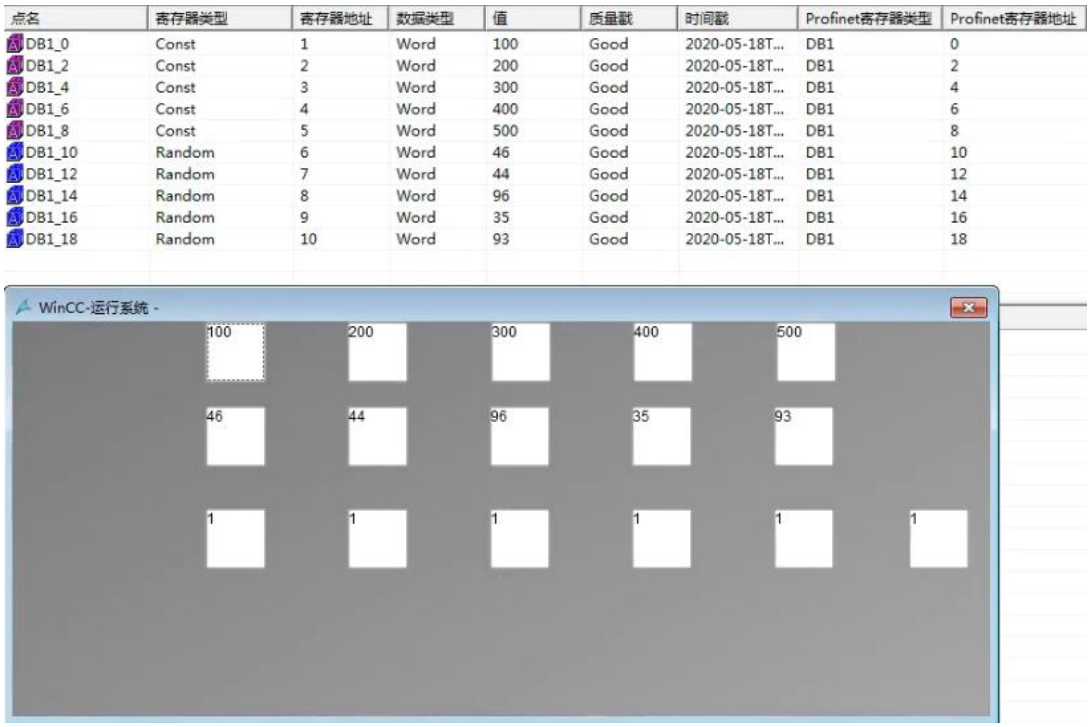


Figure 5-3-5 Fill in the gateway IP address

After completing the configuration, edit the data point configuration of WinCC, view the comparison of data, or view real-time values in the variable table.



点名	寄存器类型	寄存器地址	数据类型	值	质量戳	时间戳	Profinet寄存器类型	Profinet寄存器地址
DB1_0	Const	1	Word	100	Good	2020-05-18T...	DB1	0
DB1_2	Const	2	Word	200	Good	2020-05-18T...	DB1	2
DB1_4	Const	3	Word	300	Good	2020-05-18T...	DB1	4
DB1_6	Const	4	Word	400	Good	2020-05-18T...	DB1	6
DB1_8	Const	5	Word	500	Good	2020-05-18T...	DB1	8
DB1_10	Random	6	Word	46	Good	2020-05-18T...	DB1	10
DB1_12	Random	7	Word	44	Good	2020-05-18T...	DB1	12
DB1_14	Random	8	Word	96	Good	2020-05-18T...	DB1	14
DB1_16	Random	9	Word	35	Good	2020-05-18T...	DB1	16
DB1_18	Random	10	Word	93	Good	2020-05-18T...	DB1	18

Figure 5-3-6 Comparison of configuration data and gateway data in WinCC

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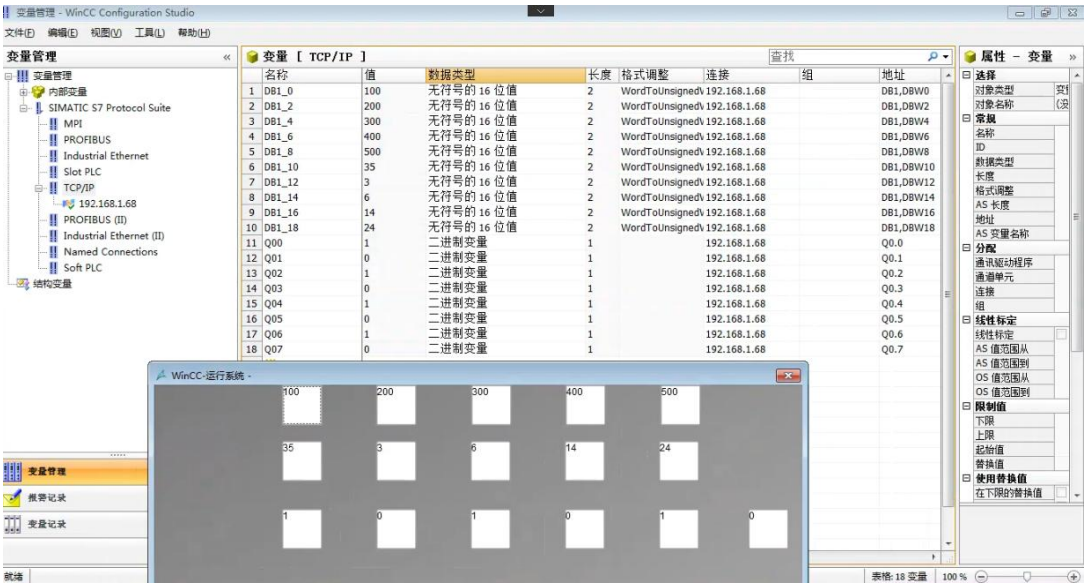

Figure 5-3-7 View values in the variable table

5.4 KeepServer access

The transferred S7 protocol can support any Profinet client (master) software to access our S7 server (slave), as shown in Figure 5-4-1.

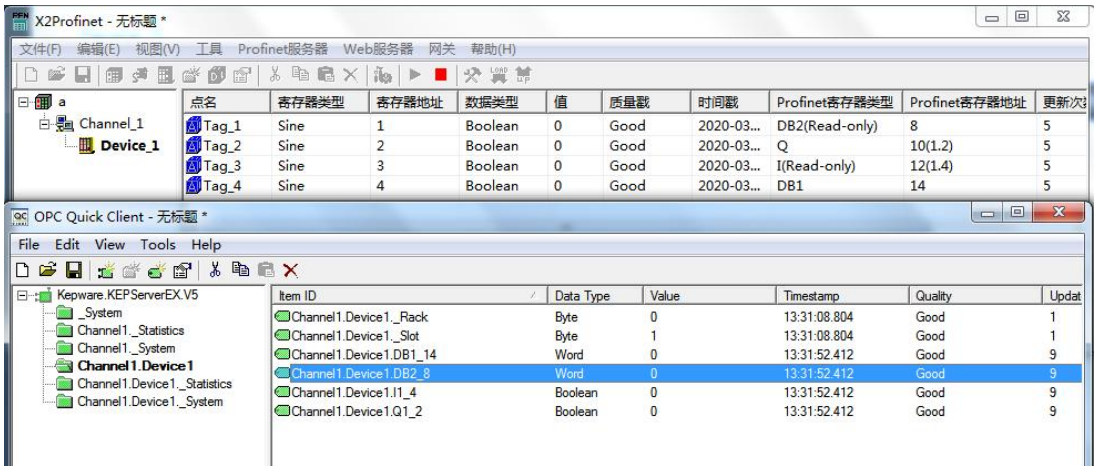

Figure 5-4-1 Profinet 客户端访问

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6 JS Script Editor

Hardware gateway also has JS script editor. Users can achieve some logic control by editing script language. There are some common functions in the script editor. The user can select some functions to edit the language. After the editor is complete, click "Syntax Check", and the syntax will be checked automatically. If there are any grammatical errors, it will prompt which specific line of grammar has problems.

6.1 Operation steps

Click the menu bar view to select the JS script editor, or click the toolbar to open the script editor, as shown in figure 6-1-1.

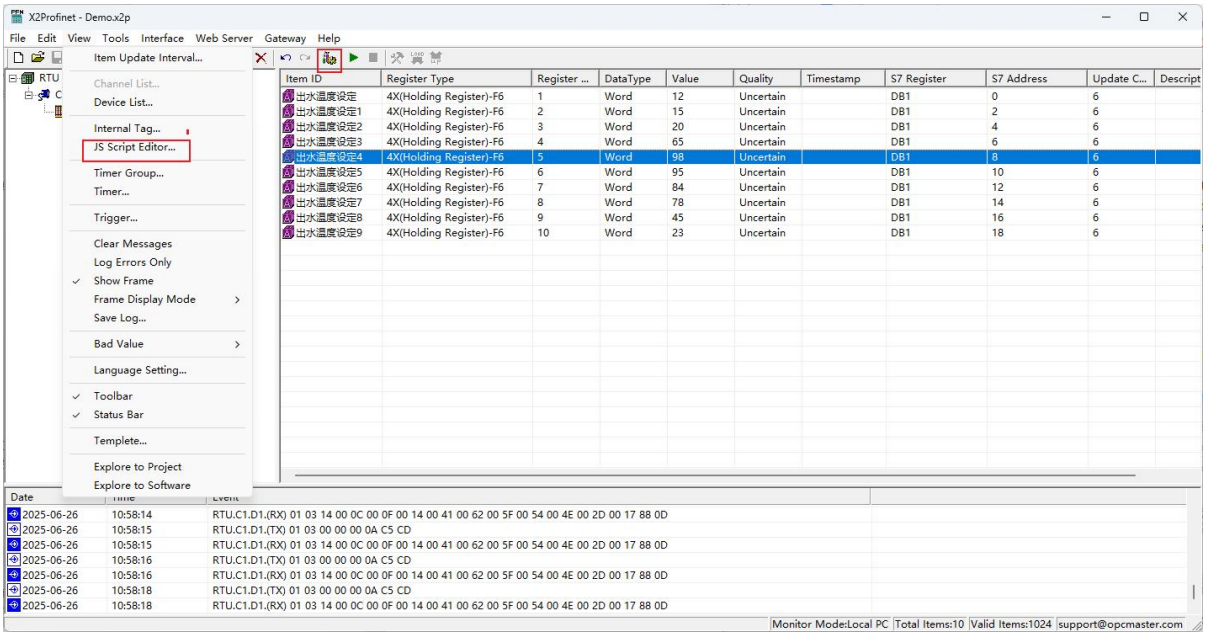

Figure 6-1-1 Open JS Script editor

Right click on the script editor to choose “New JS Script”, as shown in figure 5-1-2.

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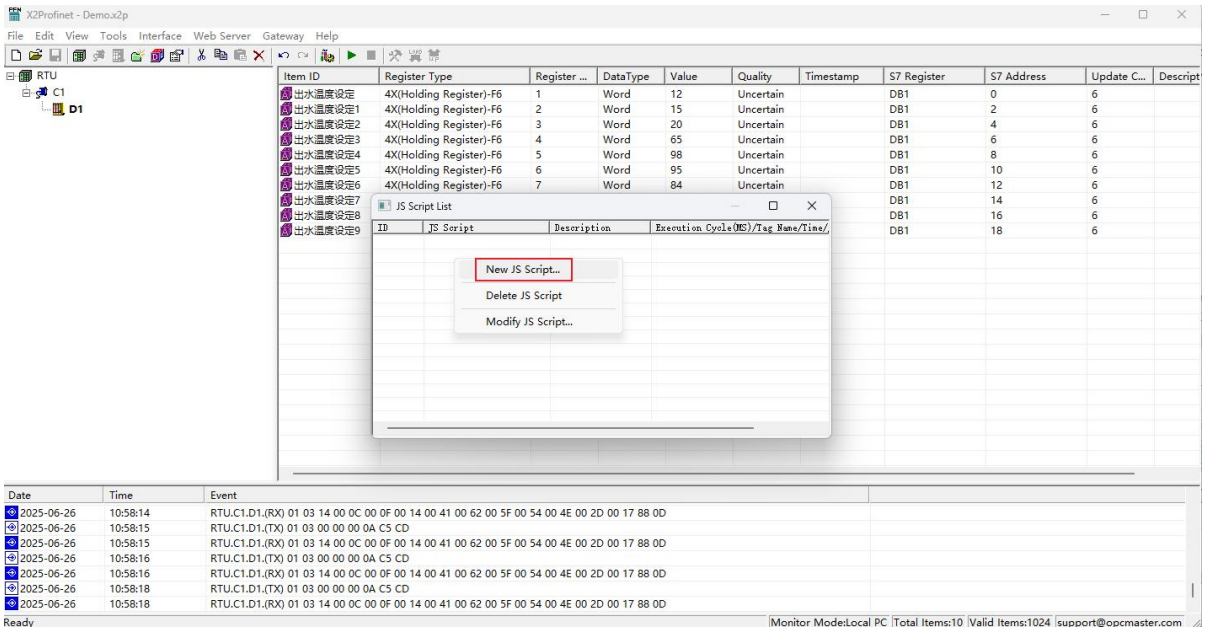

Figure 6-1-2 New JS Script

Open to see JS editing script, as shown in figure 6-1-3 below.

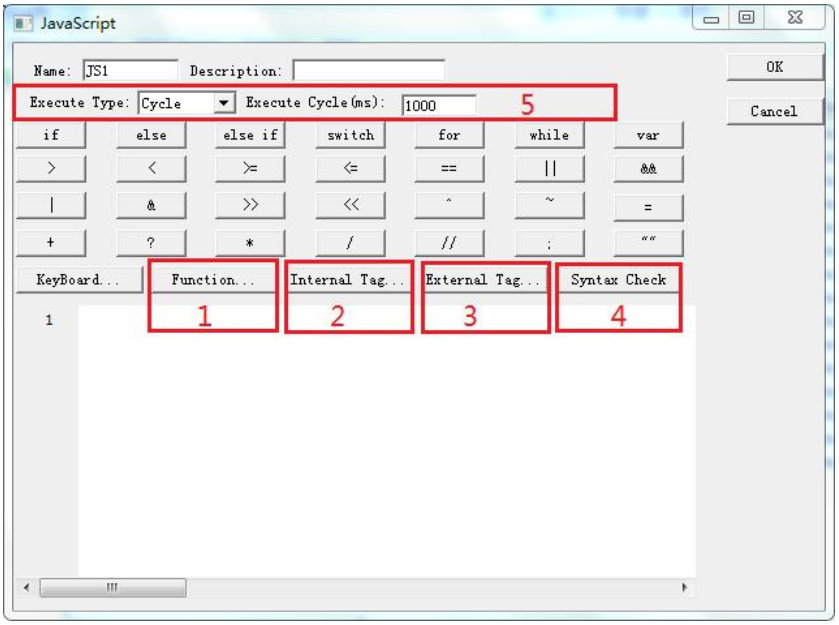

Figure 6-1-3 JS Script Editor

For detailed operation steps, please refer to the JavaScriptEditor-Ch.pdf manual in the Help folder of the software.

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7 Common Problems

7.1 Hint ” Failed to call ‘http://192.168.1.88/soap’ WEB server!”

When starting monitor in the Local PC monitor mode, the error message is constantly prompted in the print message bar ” Failed to call ‘http://192.168.1.88/soap’ WEB server!”. There are three main reasons for this situation:

- The first possibility is that the current monitoring mode is gateway mode, which needs to be adjusted to Local PC monitor mode.
- The second possibility is that the port number of the current WEB server is occupied by other applications on the local computer.
- The third possibility is that the X2ProfinetRuntime program is closed, and only needs to restart the monitor.

7.2 Pay attention to the difference of “Upload” and “Download”

It is particularly reminded that after the completion of the project configuration on PC, the project will be uploaded to the gateway through the button "Upload project". When you look at the project in the gateway, you download the project inside the gateway to the configuration software through the button "download project" .

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