# USR-M100 Connects to PUSR Platform

1. Introduction of the application

When the M100 is used with the PUSR cloud, there are generally two situations: Cloud polling and edge computing. The specific block diagram of the function is illustrated in the picture below. In this case, we will explain how these two situations are achieved.

1.1 Cloud polling

PUSR cloud actively sends polling query command, and the M100 forwards the data to the serial device intact. The response data will be sent back to PUSR cloud and analyzed and visualized by the platform.
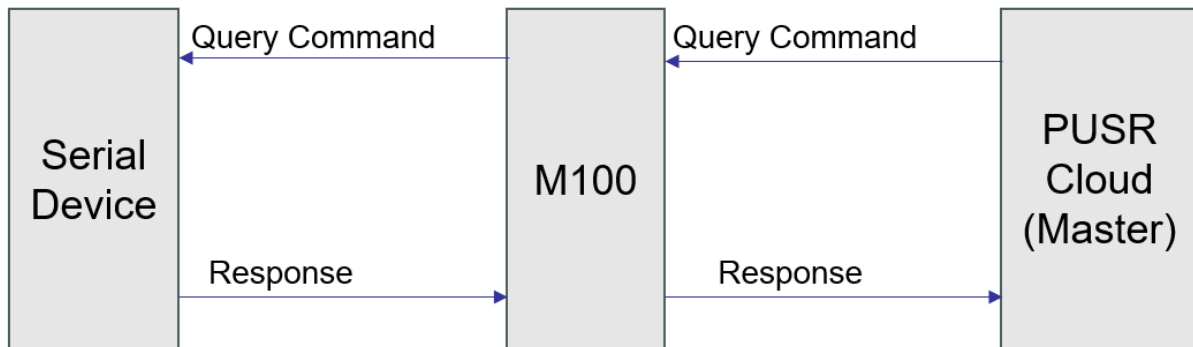
1.2 Edge computing

The PUSR platform sends the collection rules and reporting rules to the M100, which actively polls the terminal device at high speed. The M100 reports data to the cloud only when the data meets the reporting conditions. Edge computing can achieve a response speed of milliseconds. It's very fast speed.
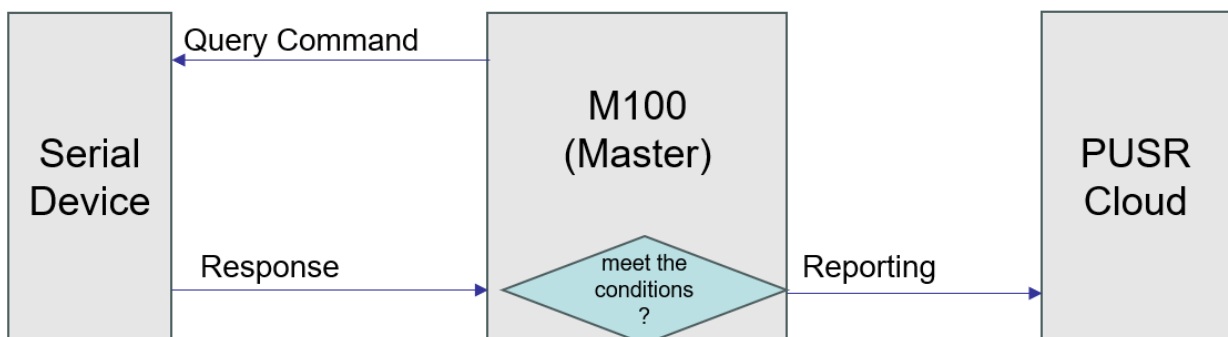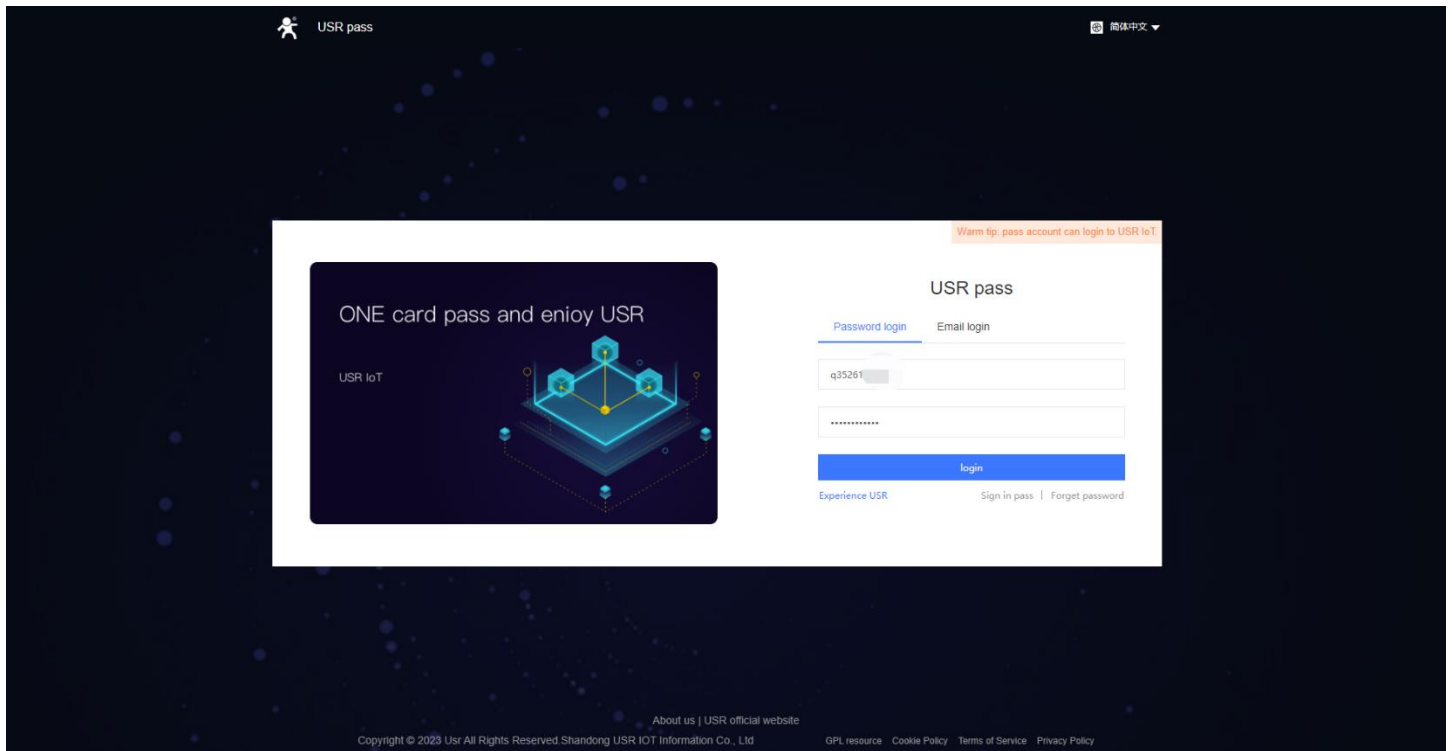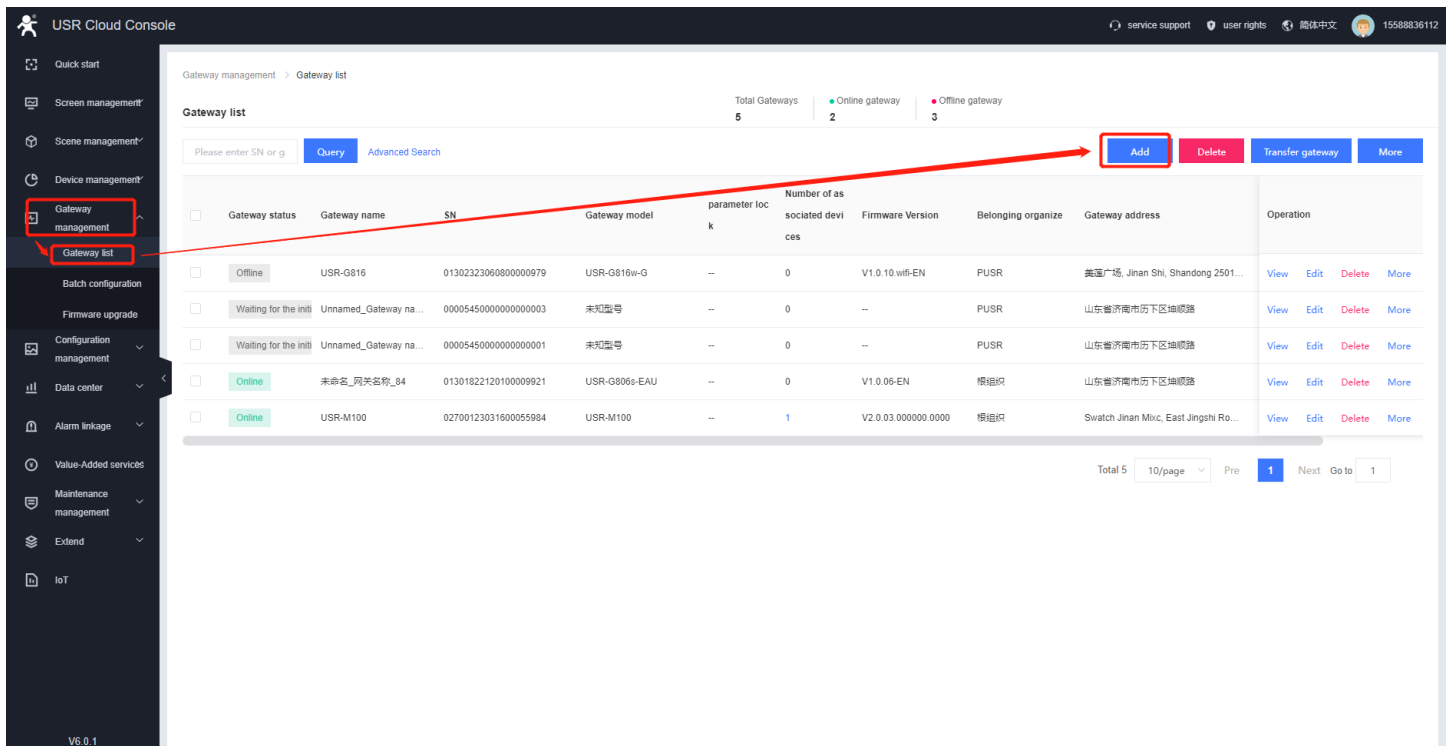

2. Preparation Work

USR-M100 * 1
USB to RS485 converter * 1
Network cable * 1
Power supply 12V/1A * 1

Modbus slave software

3. Settings of PUSR

1> Log into the platform: https://mp.usriot.com

2> Add Gateway

3> Edit the device, the SN and MAC/IMEI can be found in webpage.

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Status

- ∨ Status
  - Overview
- › Network
- › Port
- › Gateway
- › Cloud Service
- › System

Status

System

Model Name	USR-M100
Firmware Version	V2.0.04
Type	H7
Run Time	0day: 2hour: 2min
OS	RT-Thread
MAC Address	D4-AD-20-38-A4-5C
IMEI	86005905957
SN	0040342207150014
Current Network Card Type	EtherNET
System Time	2023-07-13 19:21:41

USR Cloud Console

🎧 service support   🛡 user rights   🌐 简体中文   15588836112

Device > Networking devices > Add device

Add Device   Add Devices In Bulk

- Screen management
- Product / scene management
- Device ∧
  - Networking devices
  - Variable template
- Configuration management
- Gateway management
- Alarm linkage ∨
- Data center ∨
- Value-Added services
- Maintenance management
- Extend ∨
- IoT

Basic Information

* Device name   USR-M100

* Belonging organize   根组织

* SN   0270012303160

SN does not support, click here

* MAC / IMEI   0270012303160

Upload Pictures   Select the File

Only support JPG, GIF, PNG format, the size of 5M or less

Device Tags   Add tags

Device Configuration

Template /transparent transmission   Choose a template

Network monitoring   ⬤

Device location   ⬤ Manual positioning   ○ Automatic positioning

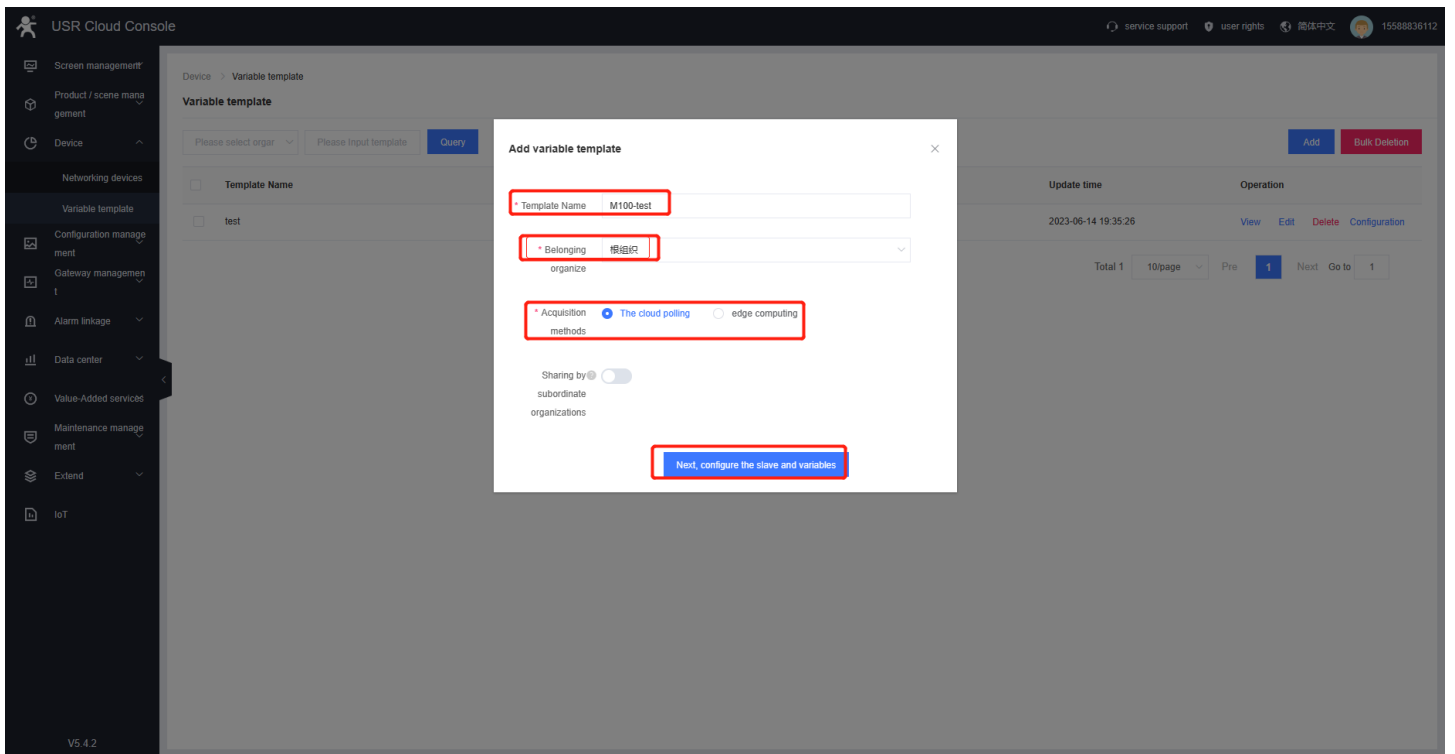Devices Map   Swatch Jinan Mixc, East Jingshi Road, Jinan Shi, Shandong 250014, China

Map

Save

V5.4.2
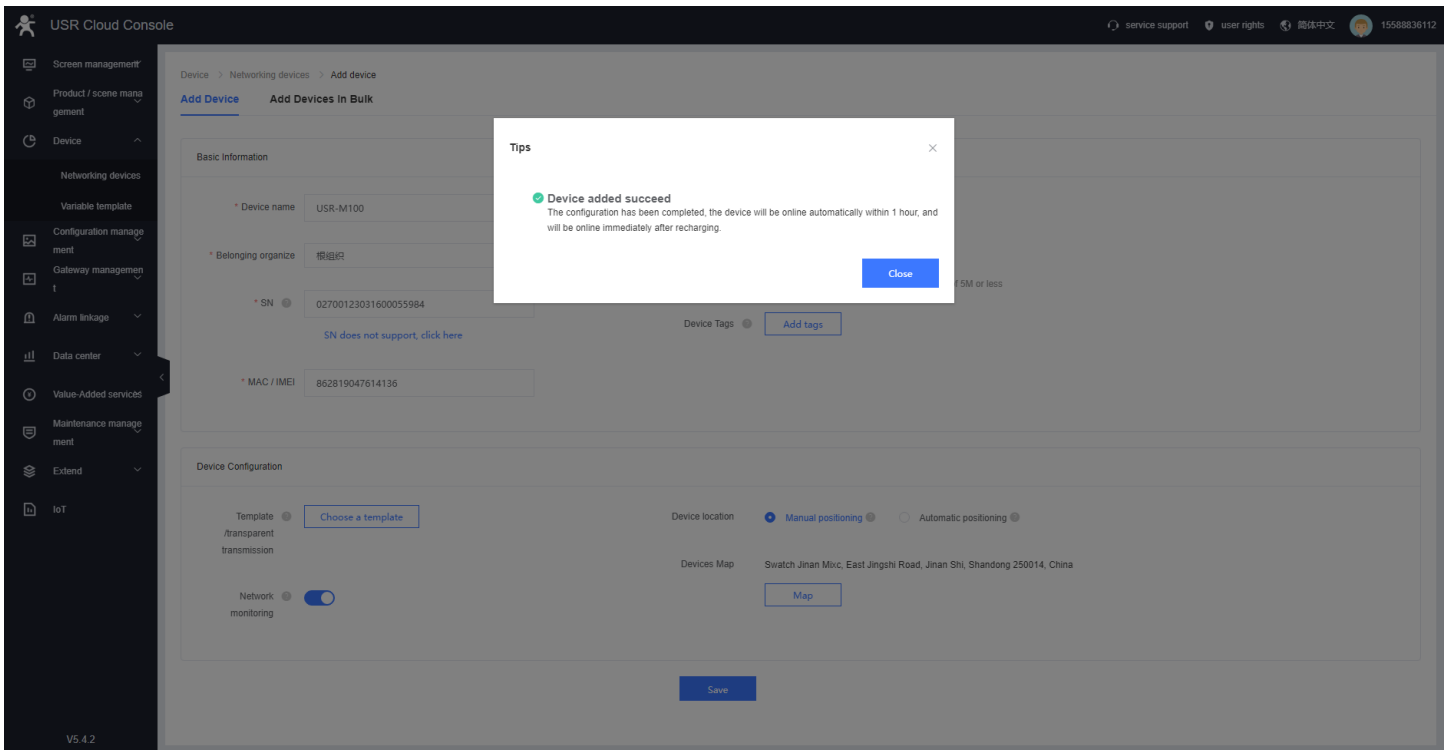
4> Add variable template
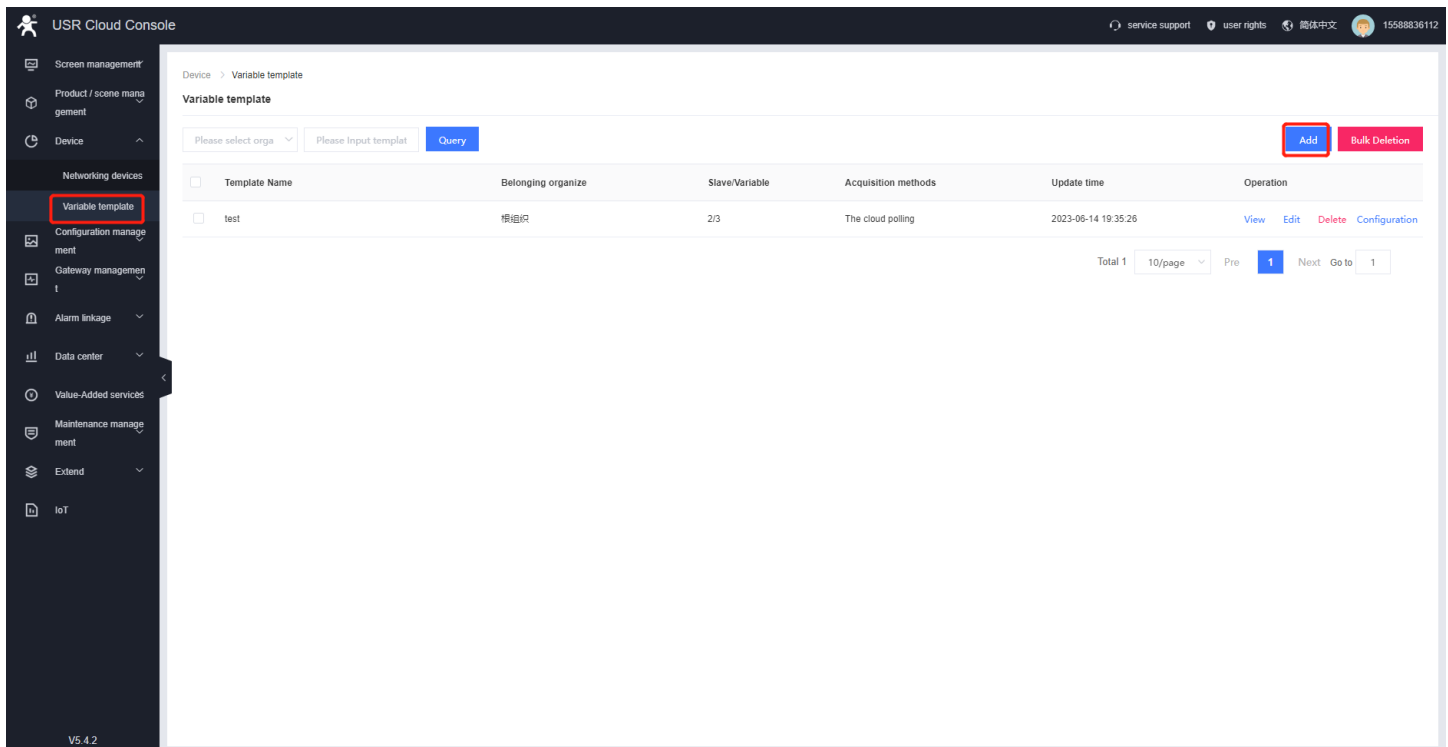
5> Edit the variable template, in this step, users need to choose use Cloud Polling or Edge Computing.

These two options correspond to the two topologies in the first chapter respectively. Here we choose Cloud polling first.
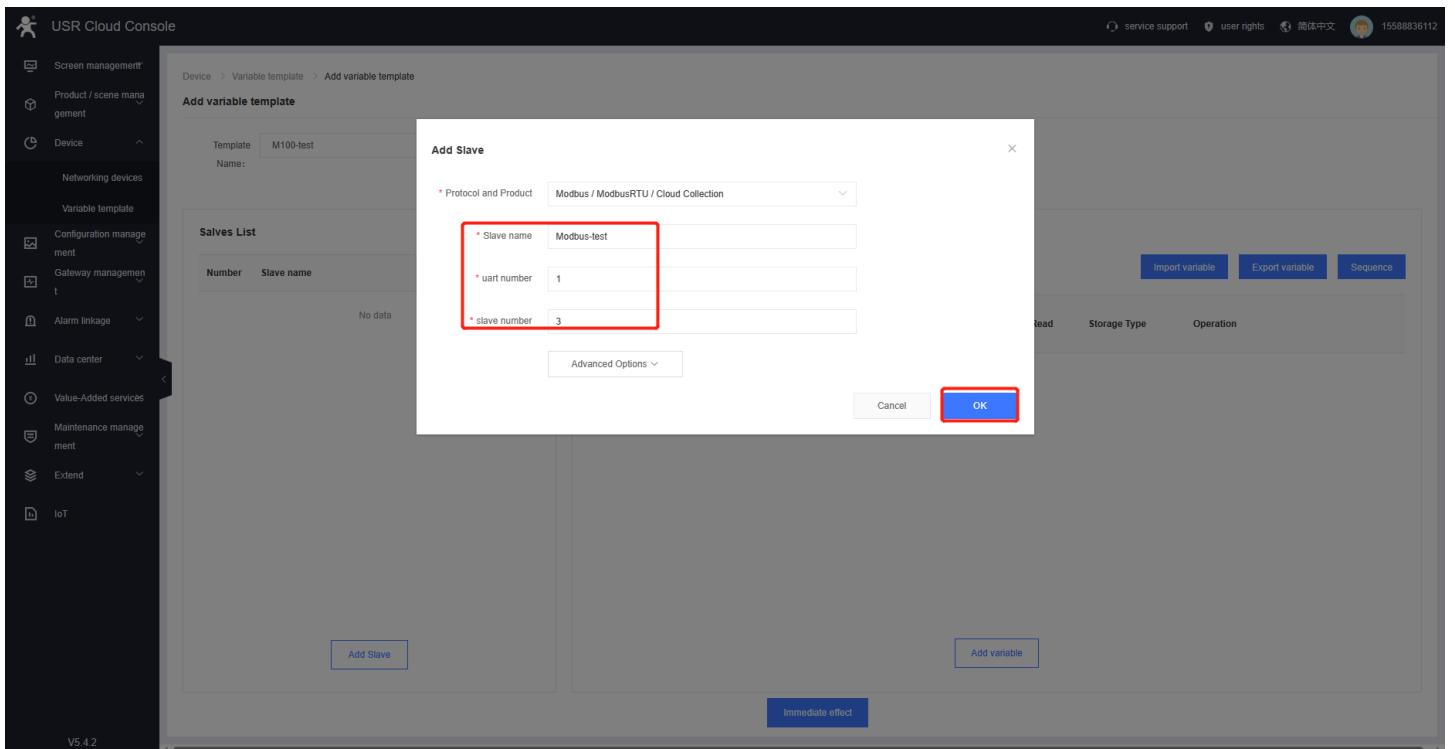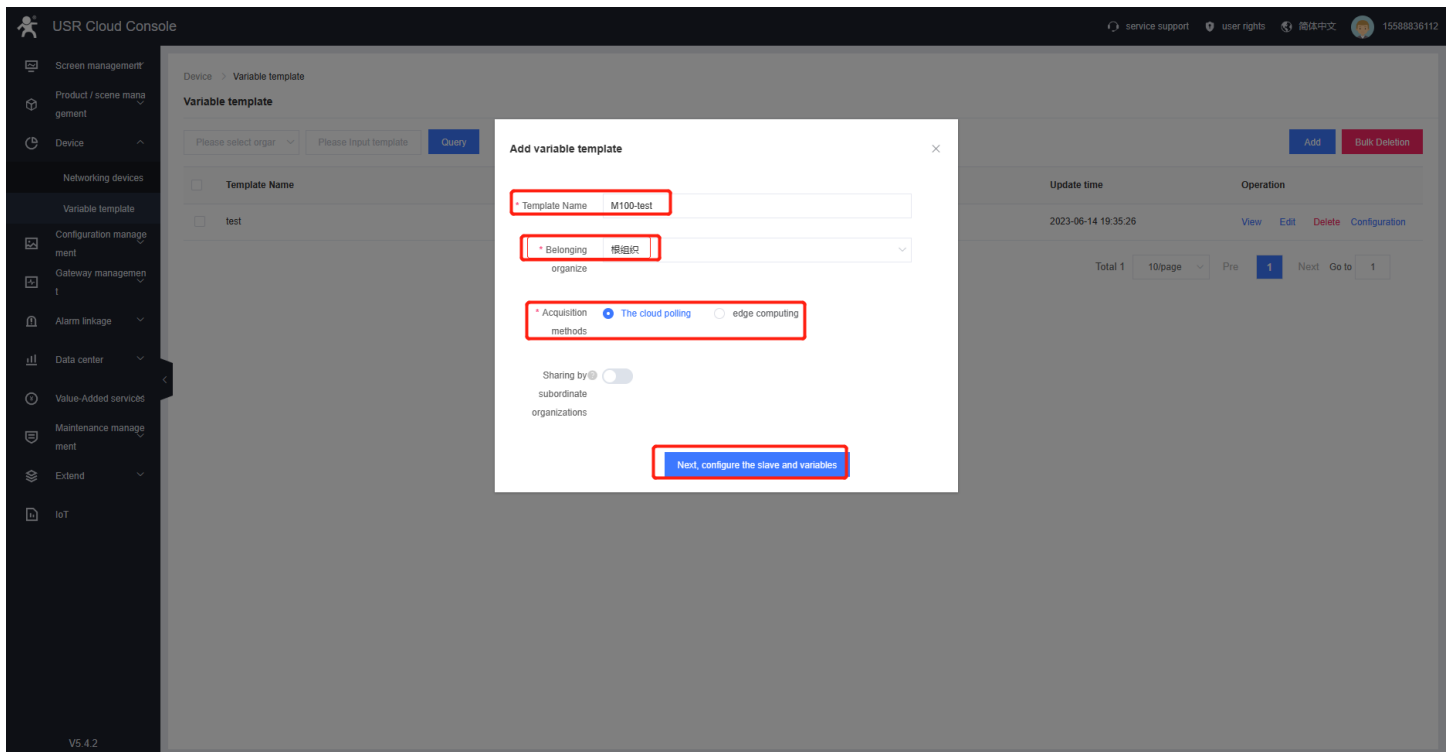
6> Add and edit the slave,

Slave name: User-defined

Uart number: 1, for Cloud Polling, the serial device can only connect to the first serial port.

Slave number: also known as Slave address which can be found in the documentation of the terminal serial device.

7> Add and edit the variable,

Variable name: User-defined

Register:

The number in the first box corresponds to the register type and function code.

The number in the second box is equal to the register address + 1, and should be decimal data.

For example: If you want to send this command 03 03 00 0A 00 05 0A 0D, select 4 in the first box and fill in 11 in the second box.

Data format: should be consistent with that of the terminal serial device.

Advanced Option:

This function is to calculate the actual collected value or sent value.

The other parameters can be set Other parameters can be set according to customer needs.
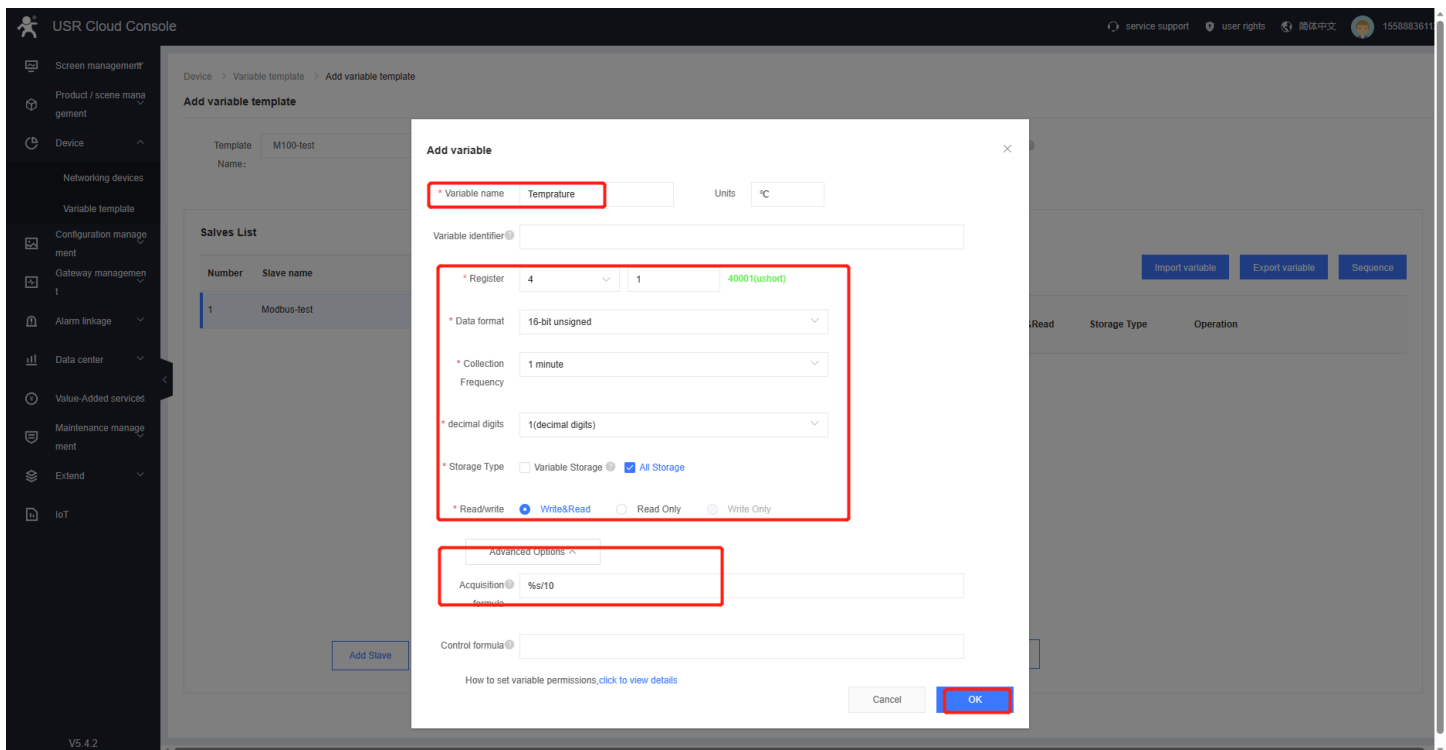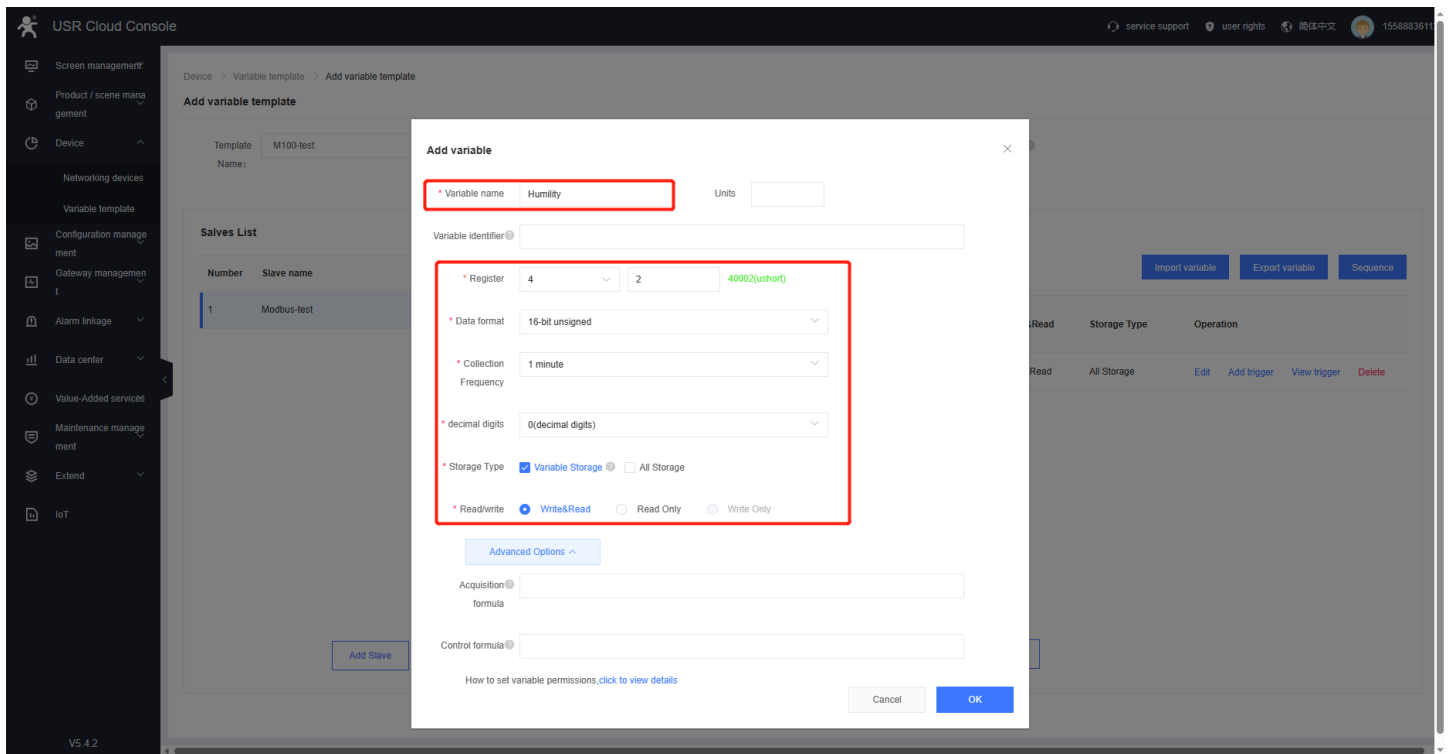
8> Enable the variable template.
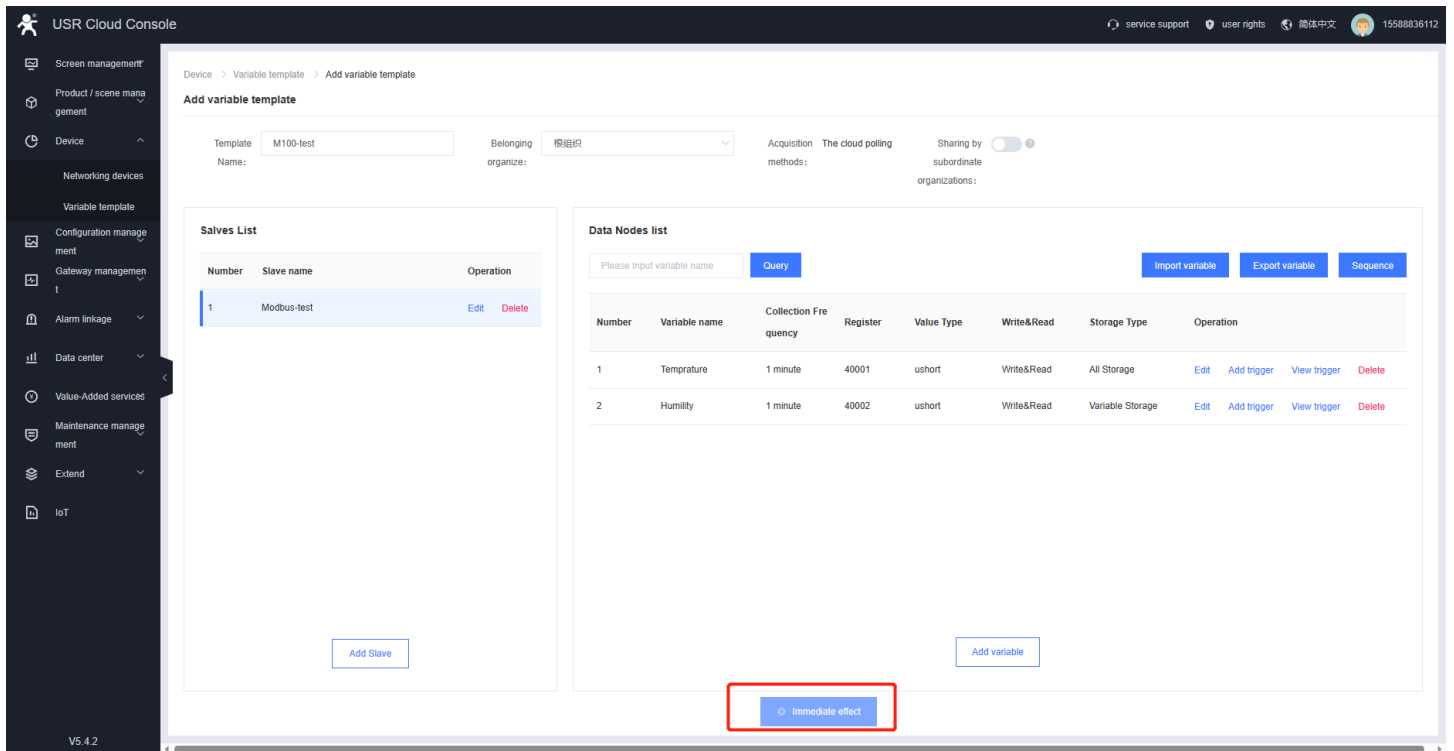
9> Bind the added device with the variable template.

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Screen management

Product / scene management

Device

Networking devices

Variable template

Configuration management

Gateway management

Alarm linkage

Data center

Value-Added services

Maintenance management

Extend

IoT

Device > Networking devices

Networking devices

Please select orga   SN or Device Name   Query   Advanced Search

Add Device   Enable device   Disable device   Bulk Deletion   Advanced Settings

	Device status	Device Name	SN	Device Model	Belonging organize	Device Location	Enable status	Tag	Operation
	Offline	USR-M100	02700123031600055984	USR-M100	根组织	Swatch Jinan Mixc, East Jingshi Roa...			Data view Editing device More

Total 1   10/page   1   Go to 1

V5.4.2

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Screen management

Product / scene management

Device

Networking devices

Variable template

Configuration management

Gateway management

Alarm linkage

Data center

Value-Added services

Maintenance management

Extend

IoT

Device > Networking devices > Editing device

Edit Device

Basic Information

* Device name   USR-M100

Upload Pictures   Select the File

Only support JPG, GIF, PNG format, the size of 5M or less

* Belonging organize   根组织

SN   02700123031600055984

Device Tags   Add tags

Device Configuration

Template /transparent transmission   Choose a template

Device location   ● Manual positioning   ○ Automatic positioning

Devices Map   Swatch Jinan Mixc, East Jingshi Road, Jinan Shi, S   Map

Network monitoring   ●

Save

V5.4.2
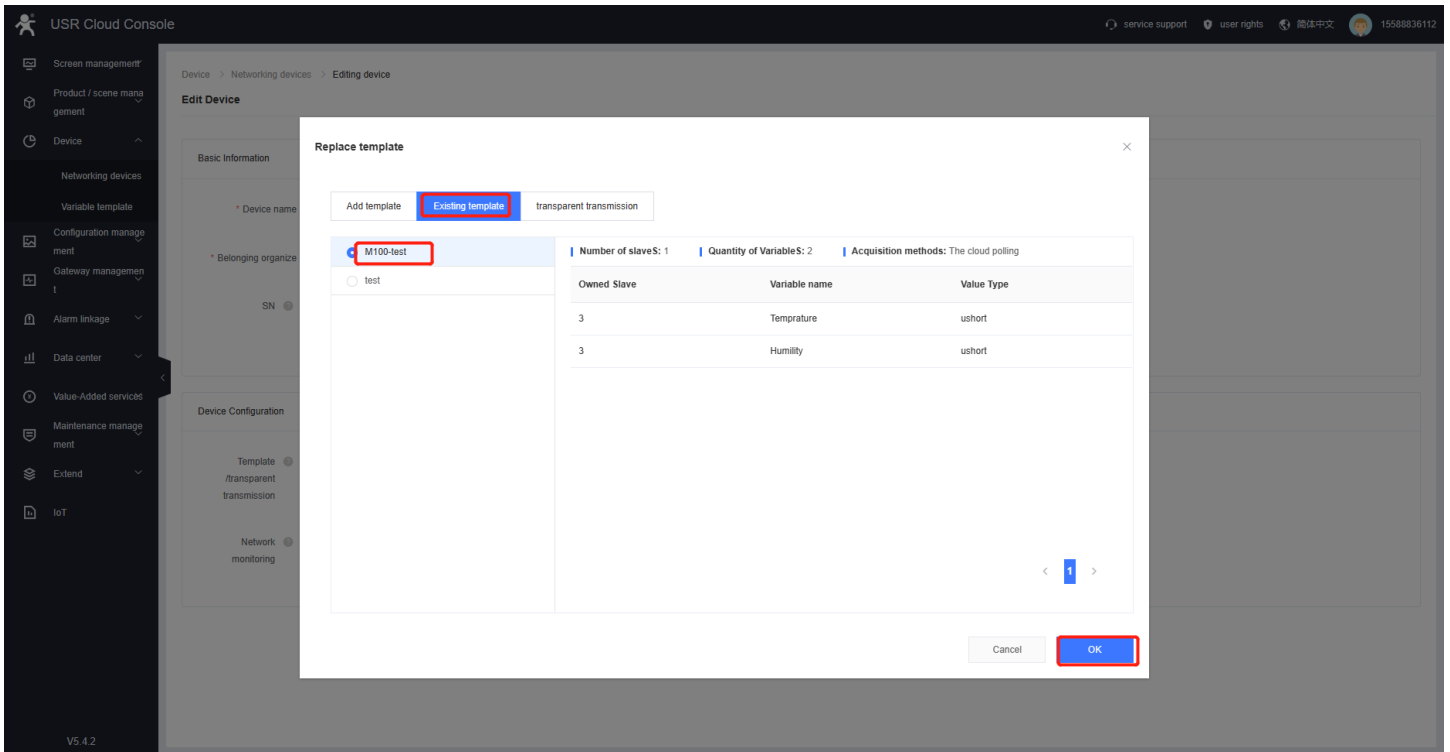
10> Check the variable, it has no data yet.
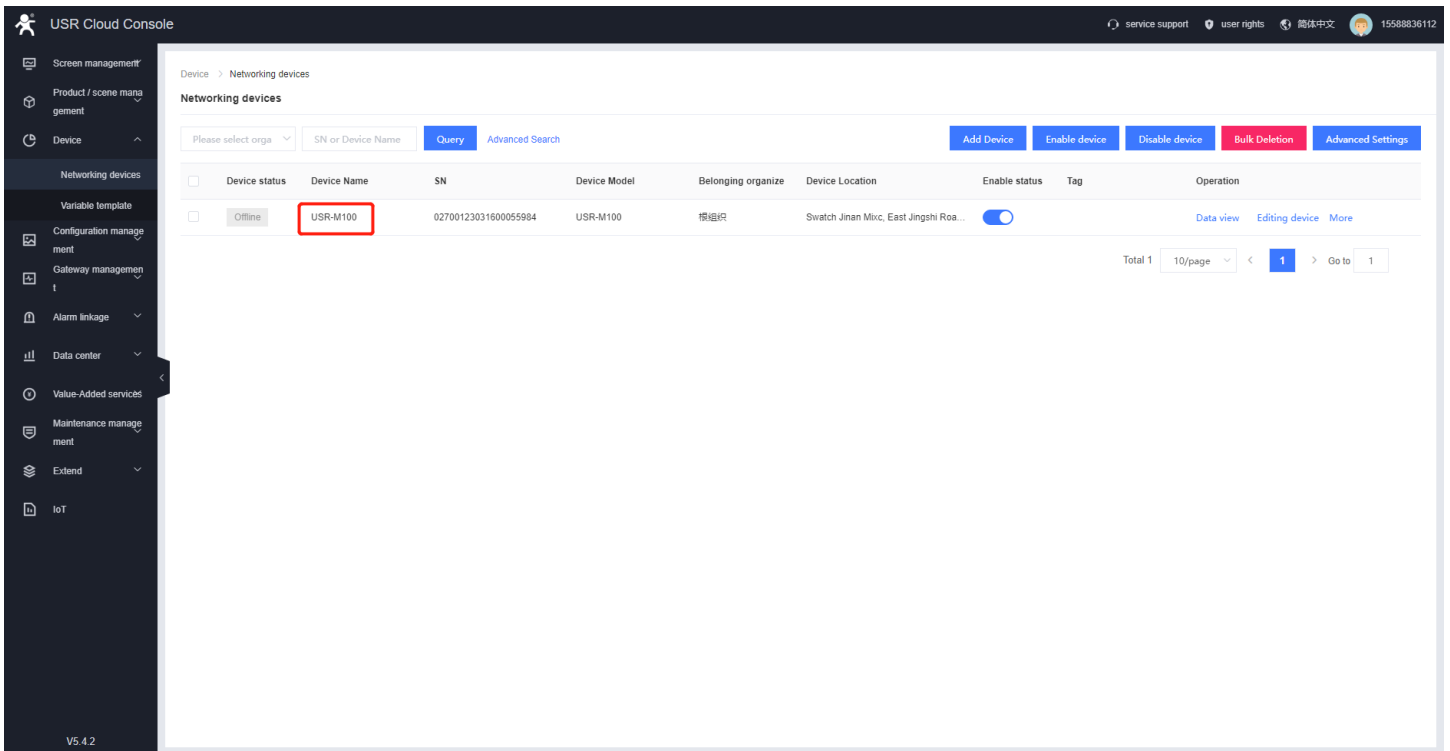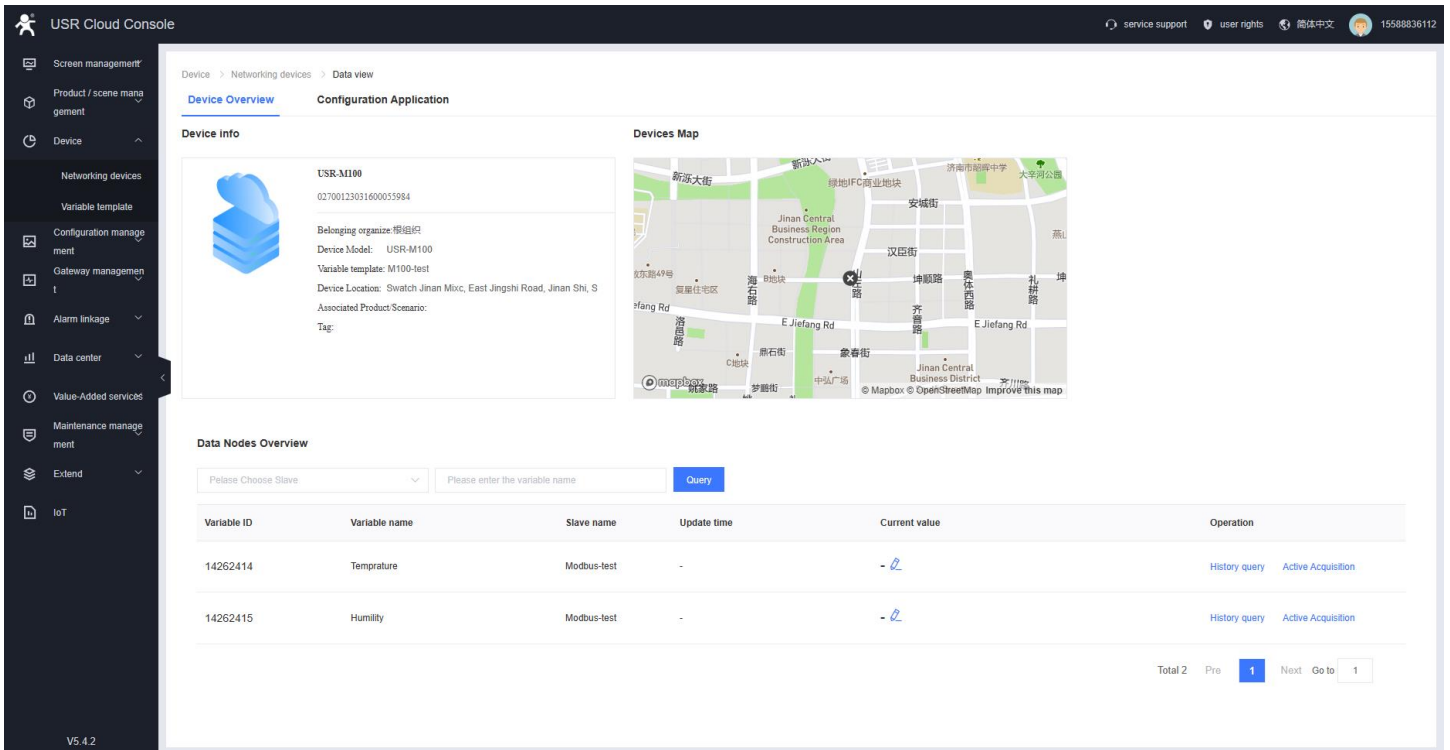
4. Cloud polling

4.1. Select Cloud Polling

4.2. Settings of USR-M100

4.3.　　Device online

4.4. Settings of Modbus slave

4.5. Test result
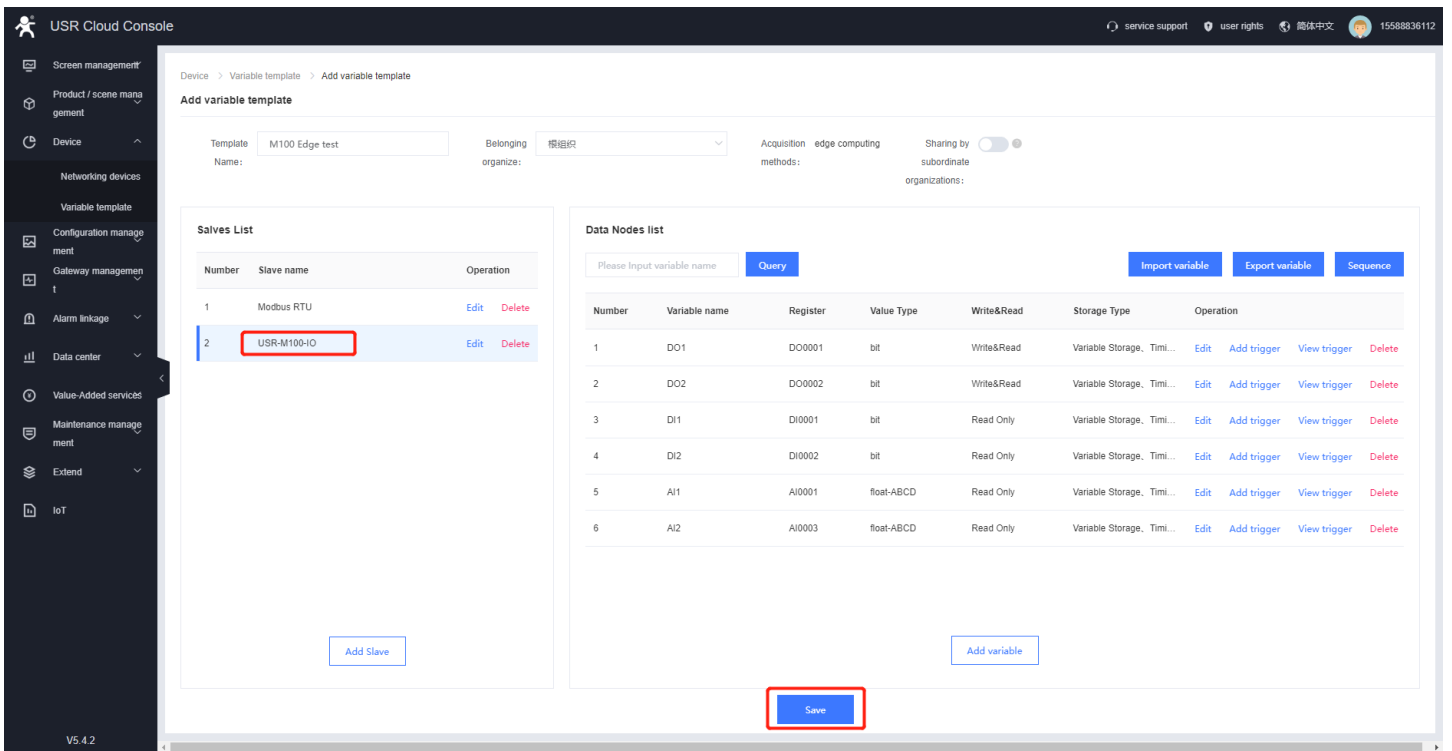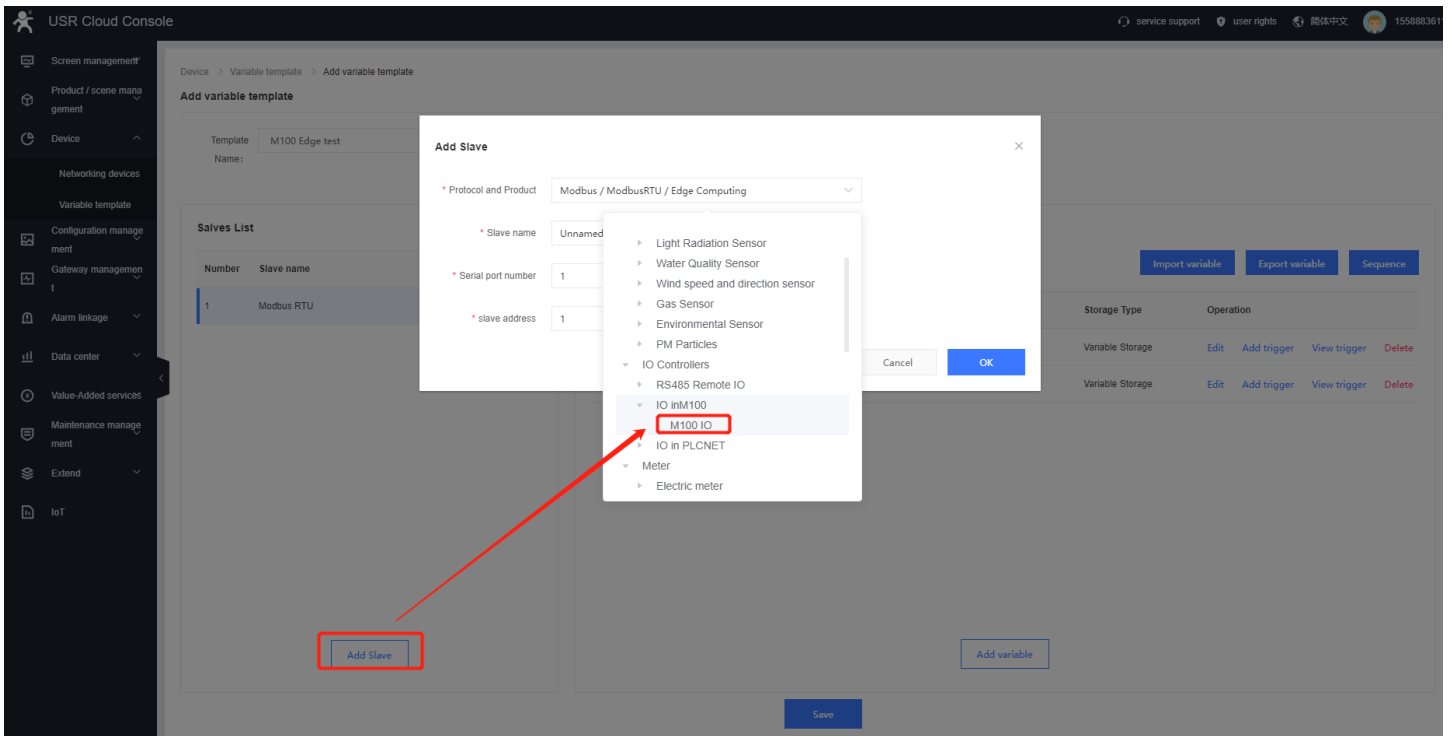

5. Edge computing

5.1 Select Edge Computing

1> **Add** variable template, here we can add 2 slave, one about Modbus RTU(Refer to the settings in Chapter 3), another one is about the built-in IO of M100.

Note: If select Edge Computing option, the terminal serial device can connect to both the 2 serial port of M 100

2> Bind the added device with the variable template

5.2 Settings of M100

5.3 The test result

6. Device monitoring on PUSR platform

6.1 Checking gateway details
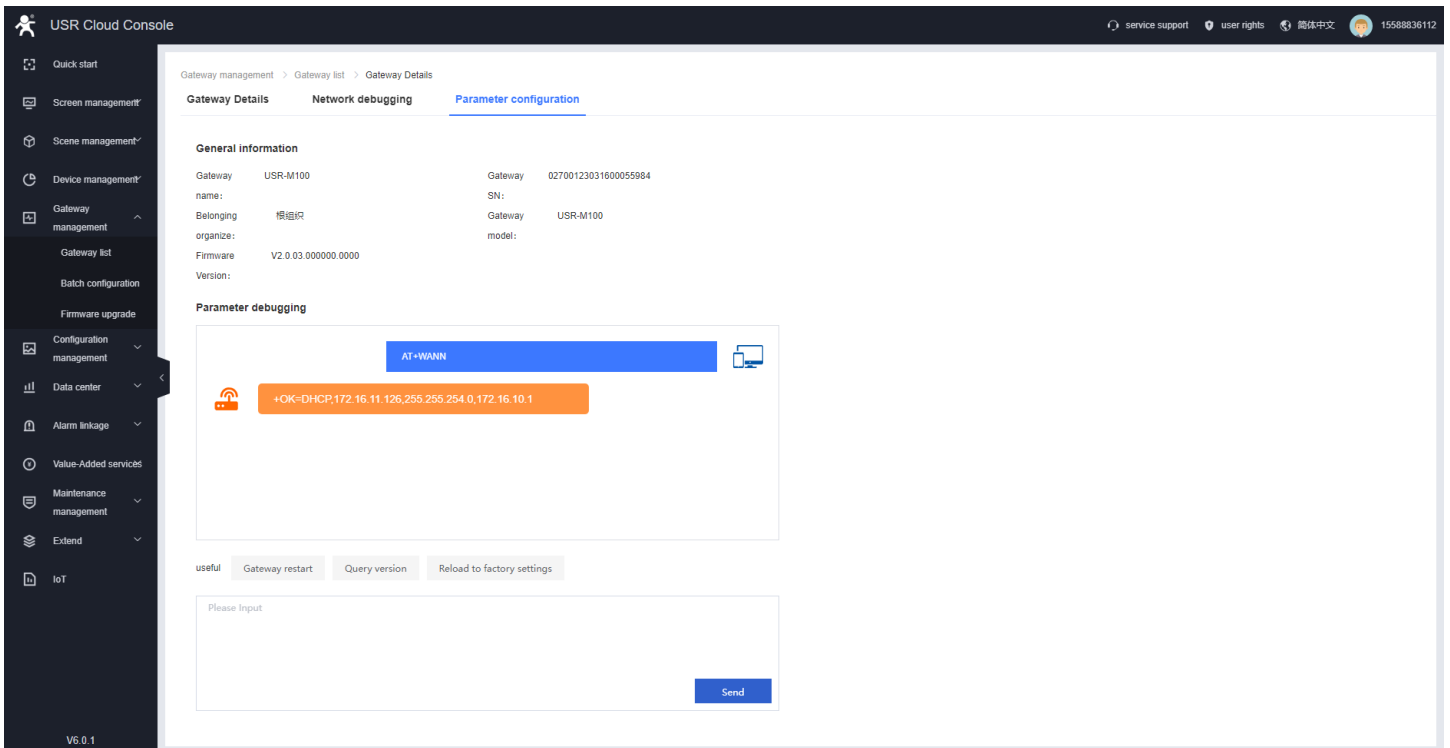
1> Click the gateway name

2> Users can check gateway details of M100, like basic information and traffic monitoring.
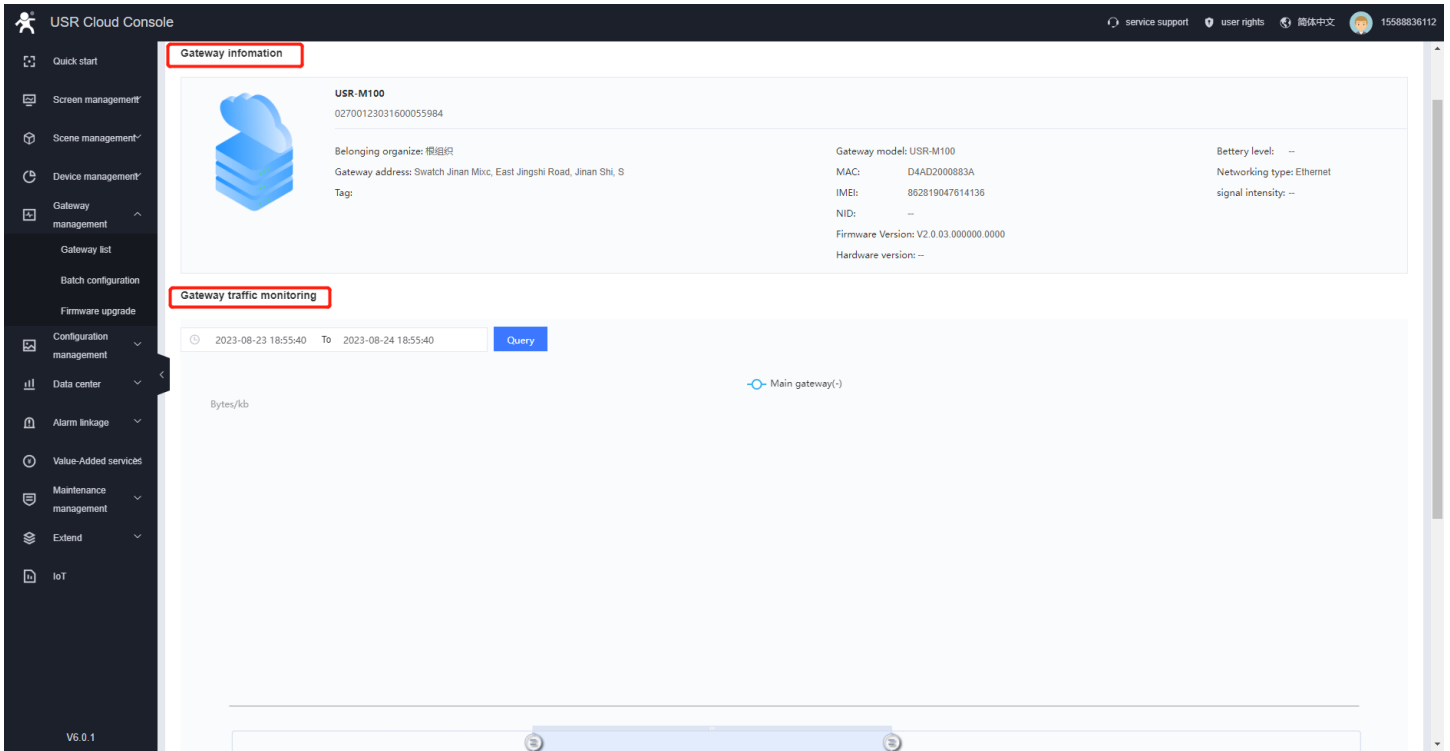
6.2 Parameters configuration

1> On parameter configuration page, uses can send AT command to set and check parameters of USR-M100.

6.3 Firmware upgrade

1> Click "More" button on the following figure.

2>Set firmware upgrade parameters

3>To check firmware upgrade task

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Quick start

Screen management

Scene management

Device management

Gateway management
  Gateway list
  Batch configuration
  Firmware upgrade

Configuration management

Data center

Alarm linkage

Value-Added services

Maintenance management

Extend

IoT

V6.0.1

Gateway management > Firmware upgrade

Firmware upgrade

Please select orga	All status	Start Date	To	End Date	Please Input Task Na	Query		AddUpgrade Task

Status	Belonging organize	Task Name	Upgrade Progress	Gateway model	Upgraded Version	Task Time	Operation
Waiting	恨组织	Firmware upgrade	0/1	USR-M100	V2.0.03.000000.0000	2023-08-24 18:58:34 - 2023-08-25 18:58:34	Upgrade Details Terminate the task Delete

Total 1   10/page   Pre   1   Next   Go to   1