Heyi Meter Reading System

User manual

V1.0

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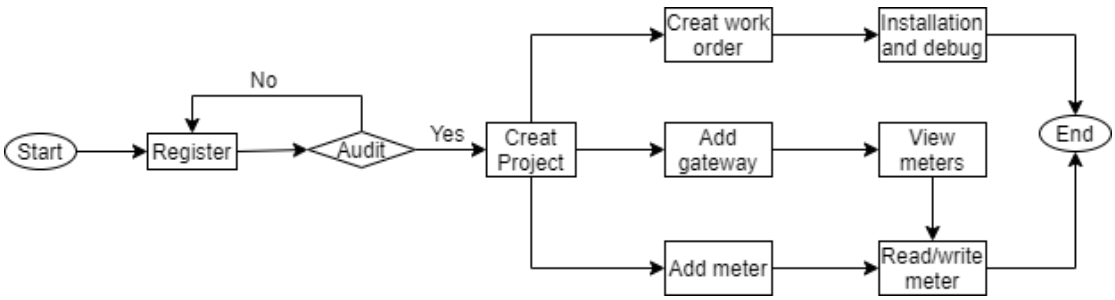
1. General description

Heyi meter reading system aims to provide customers with better metering services and operating experience. A series of operations from installation and configuration, meter reading and opening/closing valves can be completed on this system. The system also provides a more streamlined API to meet the actual needs of third-party users.
Recommended browsers: Firefox, Chrome (Google)
Recommended resolution: 1920*1080

2. Roles description

Role	Description
Operators	Users who can use the system after being registered and approved. Modules such as [project], [order], [gateway], [meter], [Account] and [system] management can be used.
System administrator	The system administrator is an internal user of JOY, which owns all module permissions and is mainly responsible for whole system's products and operators management.

3. Introduction to the system usage process

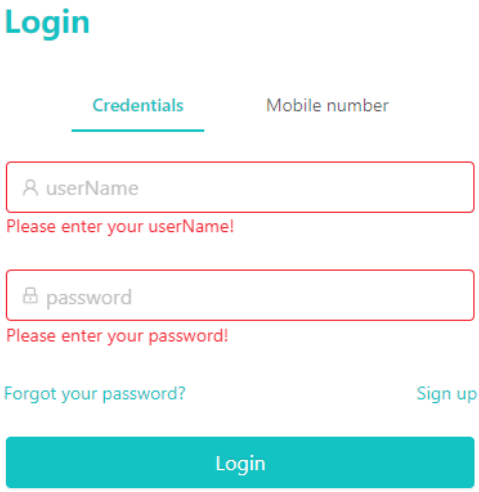


Register: apply for an account to use in the system, including account name, password etc.
Audit: audit the account that from the "register" step.

4. Function

4.1 Login

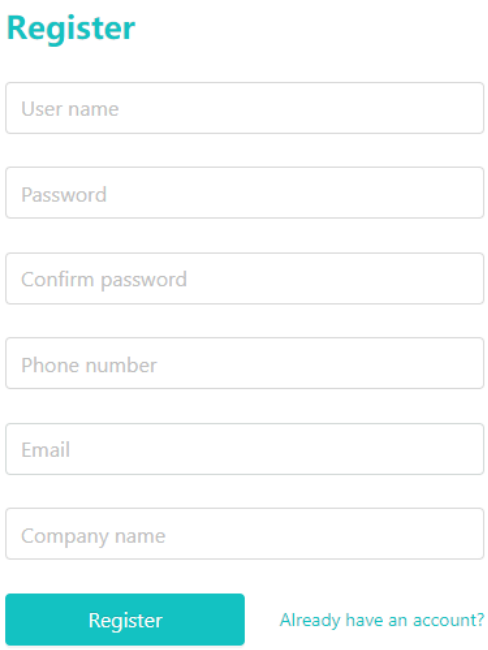
Open the browser, enter "https://amr.metx.com.cn" in the address bar and press “Enter” to enter the home page of the meter reading system, as shown in the figure below.



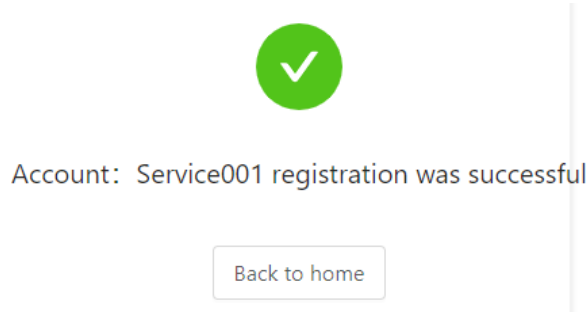
If it is the first to login, account need to apply, and go to 4.1.1 to register an account; if you already have an account, go to 4.1.2.

4.1.1 Register

A) Click [Register] in the lower right corner to enter the registration interface, as shown in the figure below.



B) Fill in the user name, password, confirm password, mobile phone number, email address, company name, and click [Register] to jump to the successful registration page.

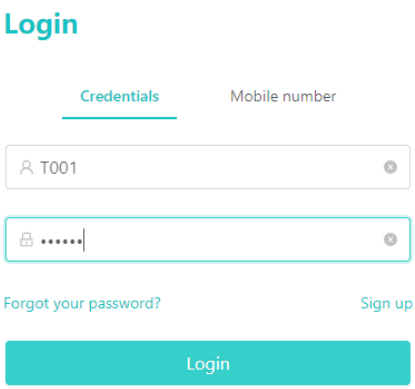


C) After the registration information is successfully submitted, we will send the review result to your email address. After the review is successful, you can log in to the system.

4.1.2 Login

1) Login with account and password

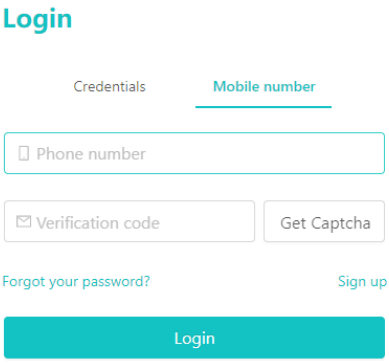
i. Open the browser, enter "https://amr.metx.com.cn" in the address bar and press “Enter” to enter the home page of the meter reading system and select “Credentials”, as shown in the figure below.



ii. Fill in the registered and approved user name and password, click [Login], the user name and password are correct to log in successfully.

2) Mobile phone number login

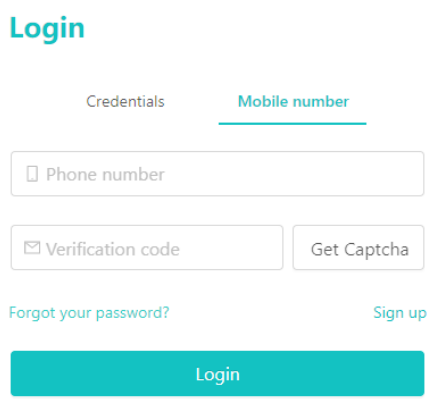
i. Open the browser, enter the URL "https://amr.metx.com.cn" in the address bar and press “Enter” to enter the home page of the meter reading system and select “Login with mobile phone number”, as shown in the figure below.



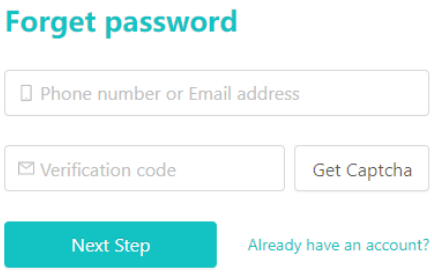
ii. Fill in the registered and approved mobile phone number, click ”Get Captcha”, enter the verification code into the “verification code” textbox after receiving the text message, and click “Login”.

4.1.3 Forget password

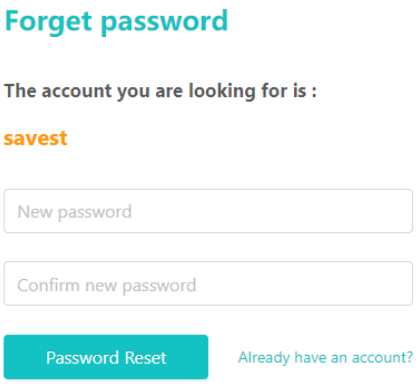
A) Open the browser, enter "https://amr.metx.com.cn" in the address bar and press “Enter” to enter the home page of the meter reading system, as shown in the figure below.



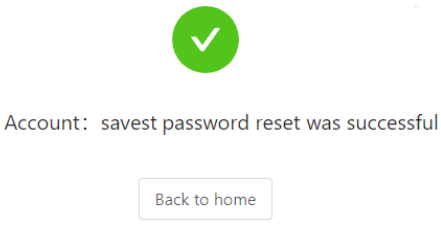
B) Click on the lower left corner “Forgot your password?”, and it will jump to the reset password page, as shown in the figure below.



C) Fill in the mobile phone number or email address used during registration, and click “Get Captcha” to receive the verification code in the email or SMS. After entering the verification code, click “Next Step” to enter the password reset interface, as shown in the figure below.



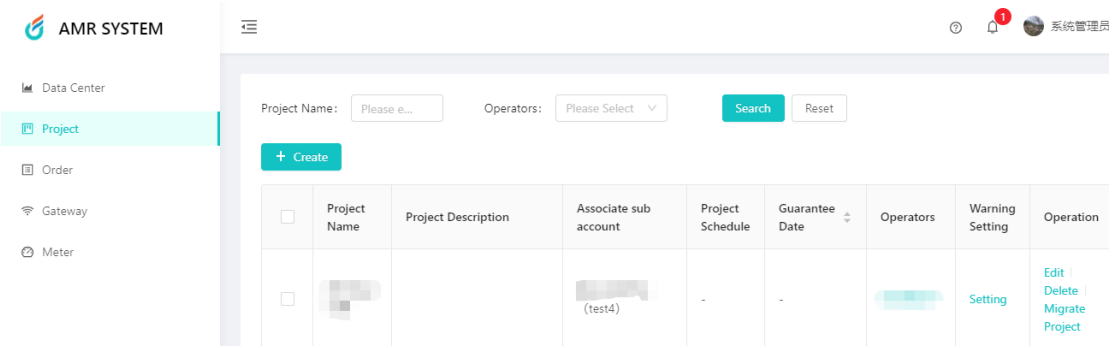
D) Enter the new password and the confirmed password. After the two passwords are the same, click [Password Reset] to enter the success interface, as shown in the figure below. Click [Back to Home Page] to log in.



4.2 Project Management

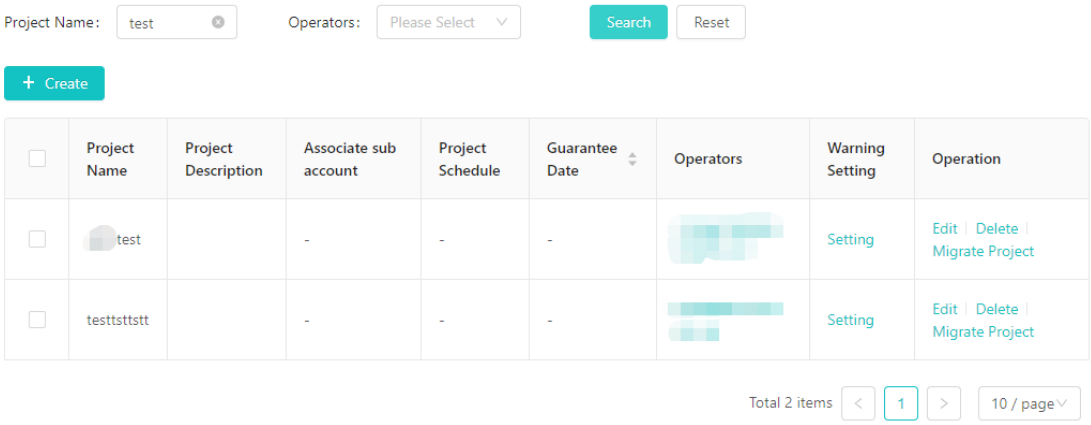
4.2.1 Project list

The project list includes project name, project description, creation time, update time, operation, etc. By default, they are sorted in descending order of creation time, and 10 pieces of data are displayed on one page.
Click [Operation-Edit] to edit the item.
Click [Operation-Delete] to delete the item.



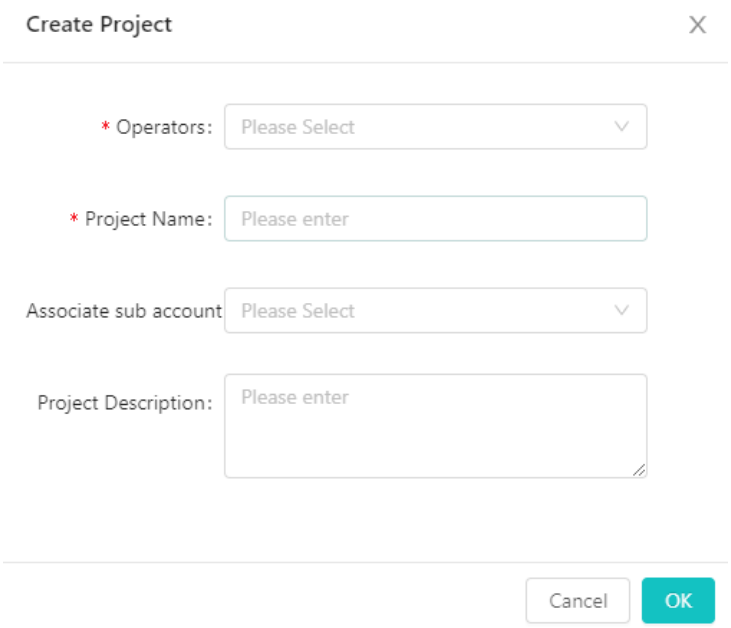
4.2.2 Search project

Query conditions: the project name contains keywords to find the results.
Enter keywords, click [Search], the search results will be displayed in the list.
Click [Reset] to clear the query conditions and display all items.



4.2.3 Create project

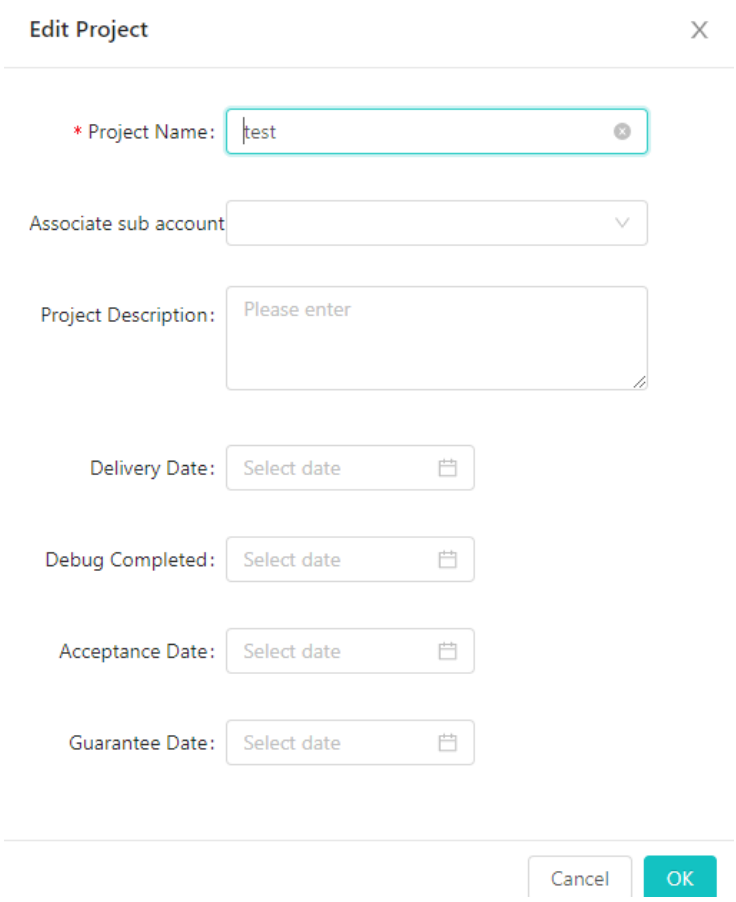
A) Click [+Create] in the project management, and the new project window will pop up, as shown in the figure below.



B) Enter the project name and project description, and click [OK] to add successfully. [Project name] is required and unique. You can enter up to 30 characters.
[Item Description] It is not required, and you can enter a maximum of 150 characters.

4.2.4 Edit project

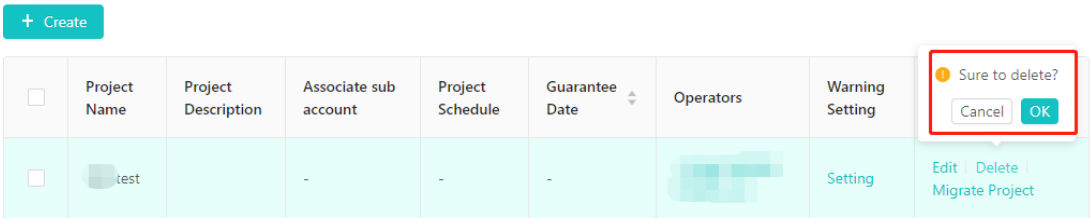
A) Click [Operation-Edit] in the item list, and the edit item window will pop up. The item name and item description will automatically fill in the known data, as shown in the figure below.



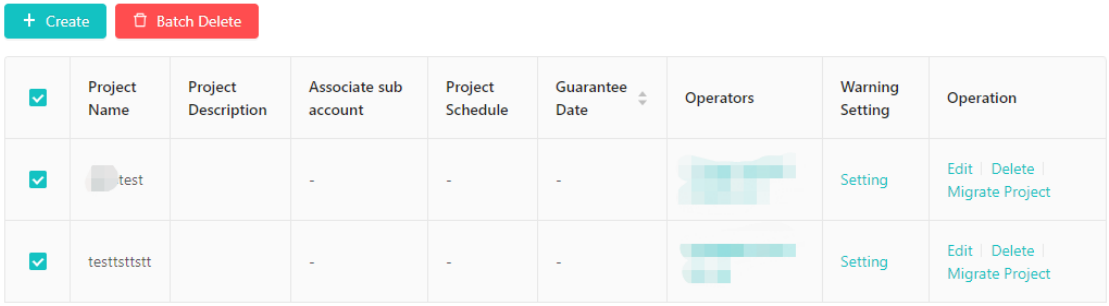
B) Modify the project name and project description, and click [OK] to modify successfully.
[Project name] is must and unique. You can enter up to 30 characters.
[Item Description] It is not must, and you can enter a maximum of 150 characters.

4.2.5 Delete projects

A) Delete single project
Click [Operation-Delete] in the item list, and a confirmation window will pop up. Click [OK] in the confirmation window to delete the item. However, it cannot be deleted when there are devices bound under the project.



B) Batch delete
Select multiple items, click [Batch Delete], and click [OK] in the pop-up confirmation window to delete the selected items. Note: The items bound to the device cannot be deleted.



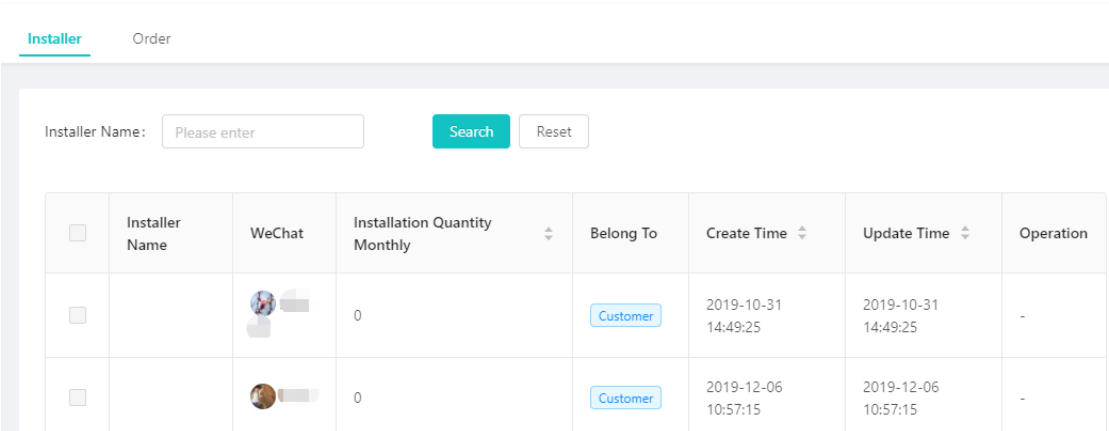
4.3 Work Order Management

4.3.1 Installer

1) Installer list

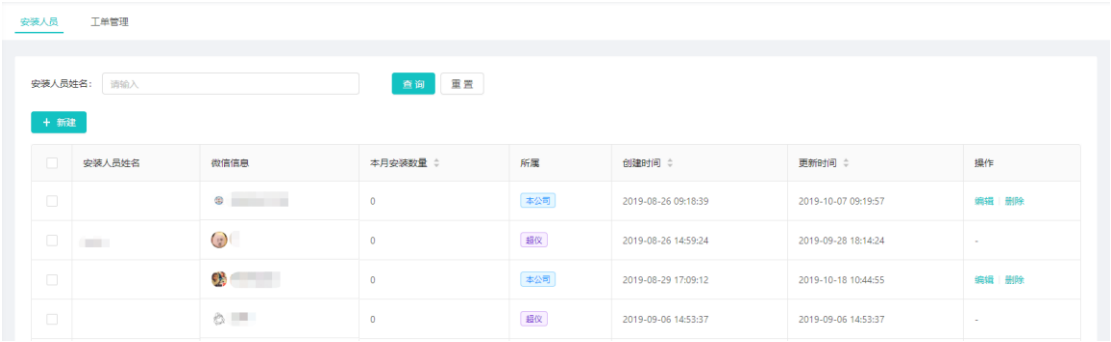
The installer list shows the name of the installer, WeChat information (including avatar and WeChat nickname), the installed quantity of this month, their affiliation (JOY/Other company), creation time, update time, and executable operations.

- Click [Number of Installations in This Month] to change the sort order, and sort them in descending or ascending order according to the number of installations this month. "Number of installations this month" is the total number of devices and gateways installed in the completed work order.
- Click [Creation Time] to change the sort order, and sort in descending or ascending order according to the creation time.
- Click [Update Time] to change the sort order, and sort them in descending or ascending order according to the update time.
- Click [Operation-Edit] to edit installer information.
- Click [Operation-Delete] to delete the installer.



2) Search installer

Query conditions: the installer's name contains keywords to find the results. Enter keywords, click [Search], the search results will be displayed in the list. Click [Reset] to clear the query conditions and display all installers.

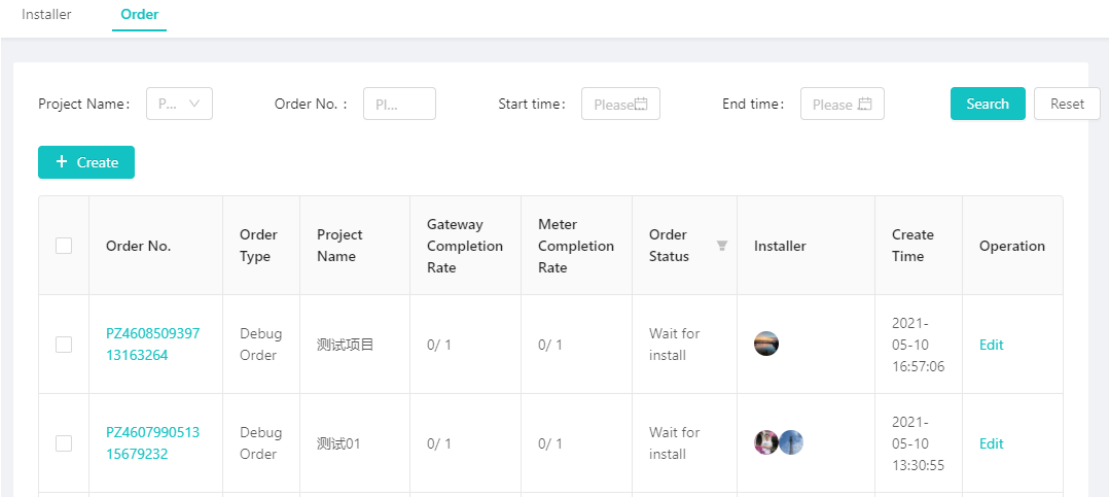


4.3.2 Order

1) Work order list

The work order list shows the work order number, work order type, project name, gateway completion rate, equipment completion rate, work order status, installer, creation time, and executable operations.

- Click [Work Order Number] to view the details of the work order.
- Click [Installer] to add installer.
- Click [Operation-Edit] to edit the details of the work order.



2) Search order

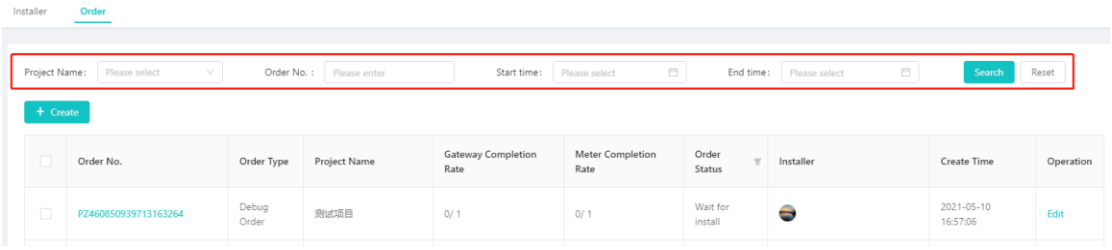
Query conditions:

- [Project Name]: Select a project name to search.
- [Order No.]: Fill in a work order No. to search.
- [Start time]: Fill in the project start time to search.
- [End time]: Fill in the project end time to search.

Click [Expand] to use more query conditions.

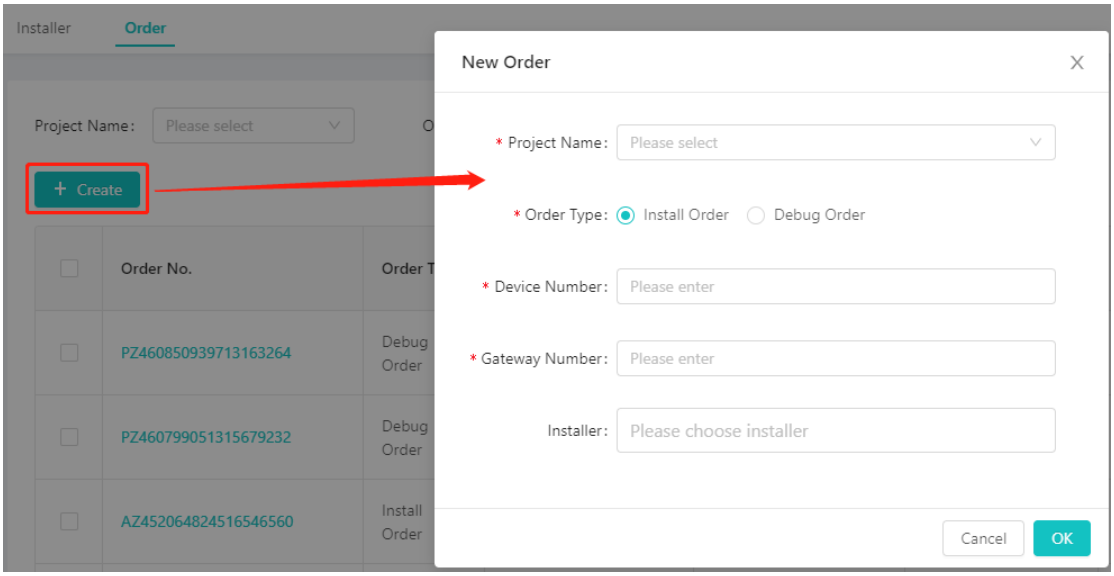
Fill in the query conditions, click [Search], and the results will be displayed in the list.

Click [Reset] to clear the query conditions and display all work orders.

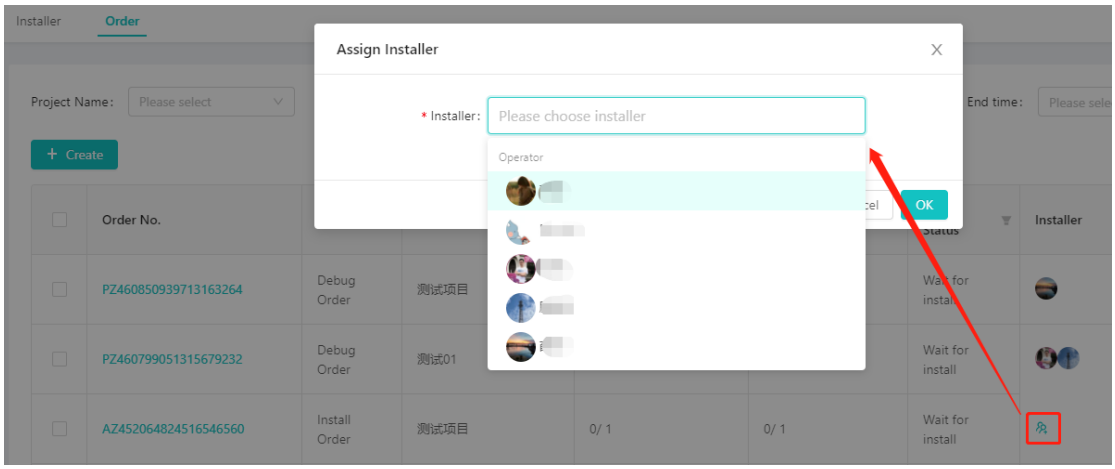


3) Create work order

- Click [+Create], and the new ticket window will pop up, as shown in the figure below.



- Select the existed [Project Name] and [order type] in turn; enter the number of devices and the number of gateways; the installer is not a necessary option, you can select it in the [list-installer]. Once selected, it cannot be modified.

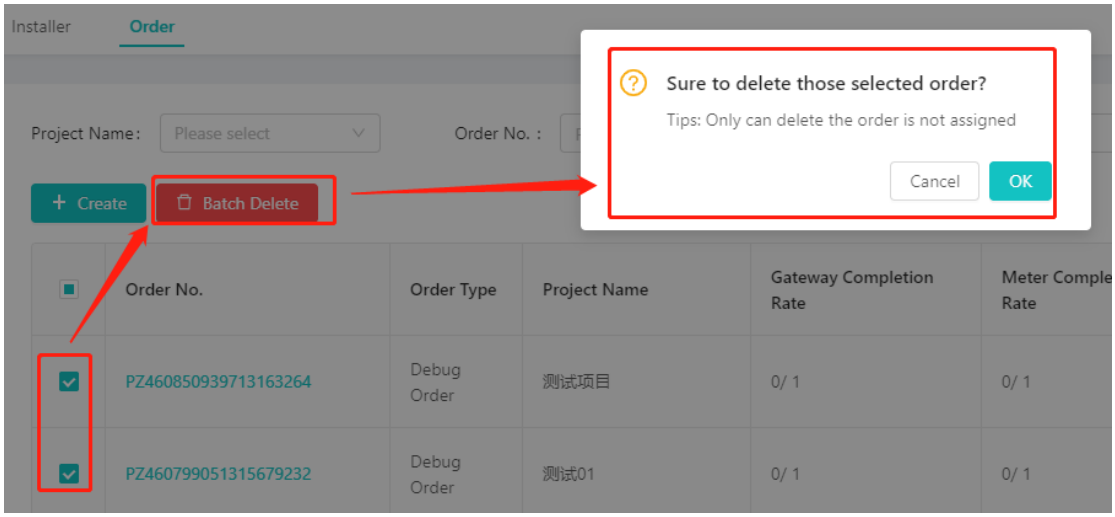


- After selecting the installer, the installer can see the work order information in the applet.

4) Delete work order

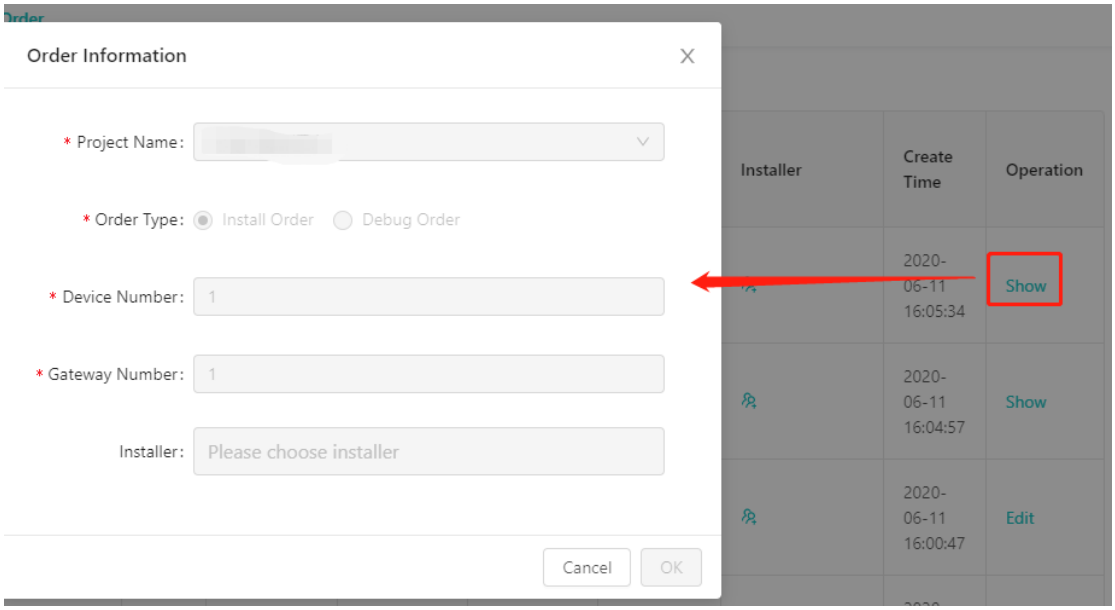
Tick the work order in the square, select [Batch Delete], and click Delete in the pop-up window to delete successfully.

Note: Work orders are completed or to be installed and cannot be deleted.



5) View work order

Click [Operation-View] to view the work order information, as shown in the figure below. The content includes project, work order type, number of equipment, number of gateways, and installer information.



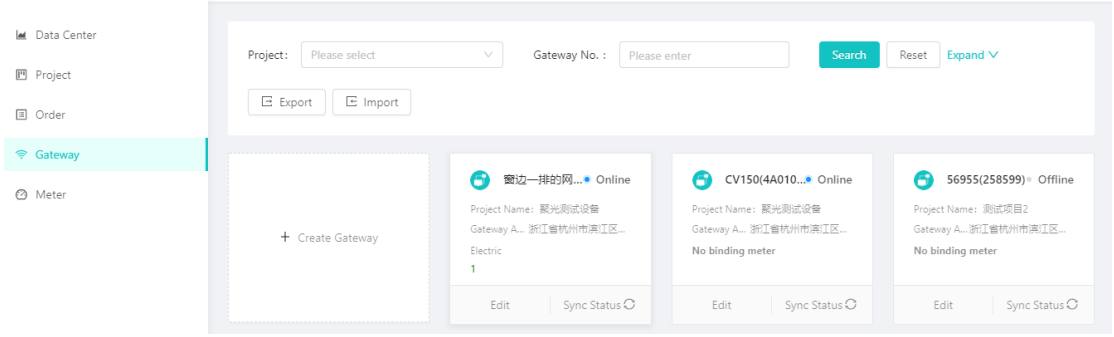
6) Work order details

Click [Order No.] to enter the work order details interface, as shown in the figure below. The content includes the work order number, the project to which it belongs, the work order type, the work order progress, the work order meter, and the work order gateway.
The work order meter includes meter number, equipment type, address, equipment status, installer information, and installation time.
Work order gateway includes gateway number, gateway type, address, gateway status, installer information, and installation time.

4.4 Gateway management

4.4.1 Gateway list

The gateway list is displayed in the form of a card, and the content includes the gateway number, status, project name, gateway name, type and quantity of the meter. You can also edit and synchronize status operations.



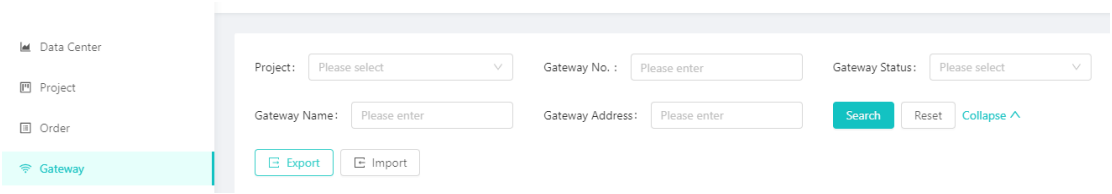
4.4.2 Search gateway

Query conditions:

- [Project]: Select a project to query all gateway information under the project if any.
- [Gateway No.]: Enter a keyword, and the gateway ID contains the keyword to find the gateway information if any.
- [Gateway No.]: Choose a gateway status online/offline if any.
- [Gateway Name]: Enter a keyword, and the gateway name contains the keyword to query the gateway information if any.
- [Gateway Address]: Enter gateway real address if any.

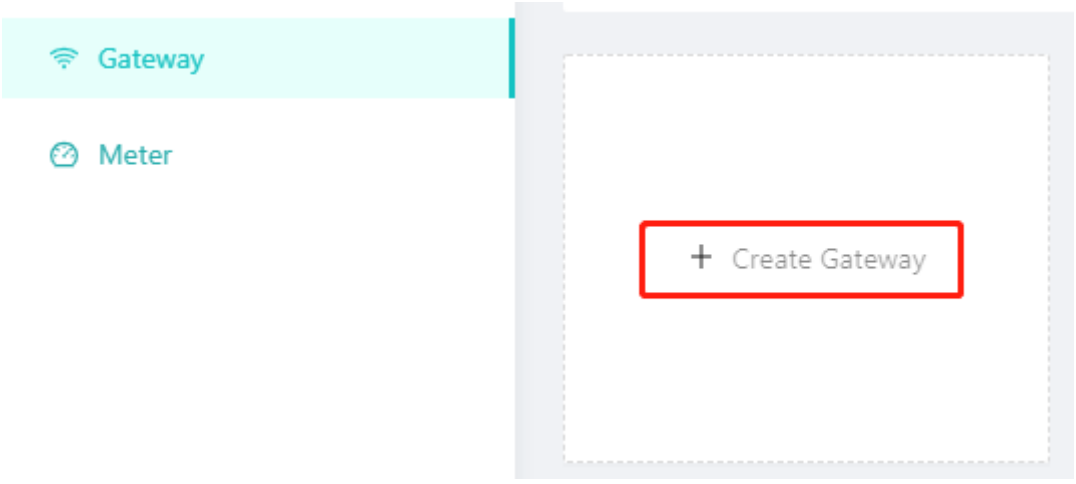
Select an item or enter a keyword, click [Search], and the search result will be displayed in the list.

Click [Reset] to clear the query conditions and display all gateways.

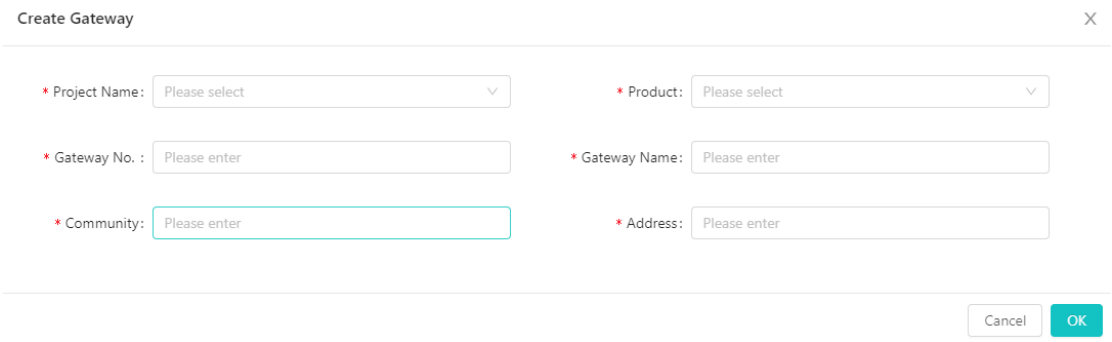


4.4.3 New gateway

Click [+Create Gateway], the new gateway window will pop up, as shown in the figure below.

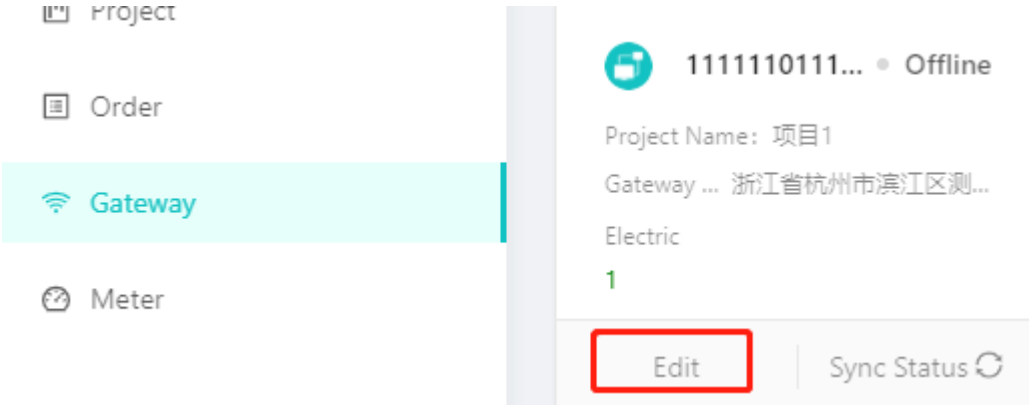


Select the project, product; enter the gateway number, gateway name; select the province, municipality, fill in the community, detailed address, and click [OK] to add successfully.



4.4.4 Edit gateway

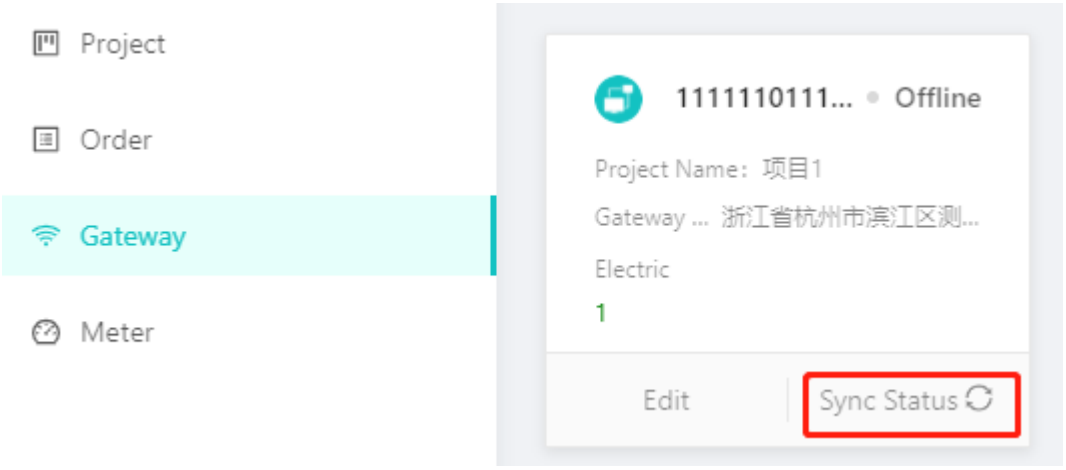
In the gateway list, select the gateway to be edited, and click [Edit] in the lower left corner of the card as below. The edit gateway window will pop up



You can modify the project, gateway name, provinces, districts, districts, and detailed addresses. Click [OK] to complete the modification.

4.4.5 Synchronization status

In the gateway list, select the gateway whose status you want to synchronize, click [Sync Status] in the lower right corner of the card, and the gateway status will be updated after success.



4.4.6 Gateway details

In the gateway list, click the gateway card to enter the gateway details, as shown in the figure below. The content includes gateway number, gateway name, gateway type, status, product information, address, and device list.

The equipment list includes equipment number, equipment type, equipment status, latest meter reading time, and valve status.

Click the device number to jump to the device details.

4.4.7 Delete gateway

In the gateway list, click the gateway card to enter the gateway details, click the [Delete] button to the right of the gateway number, and click [OK] in the pop-up prompt box to delete successfully.

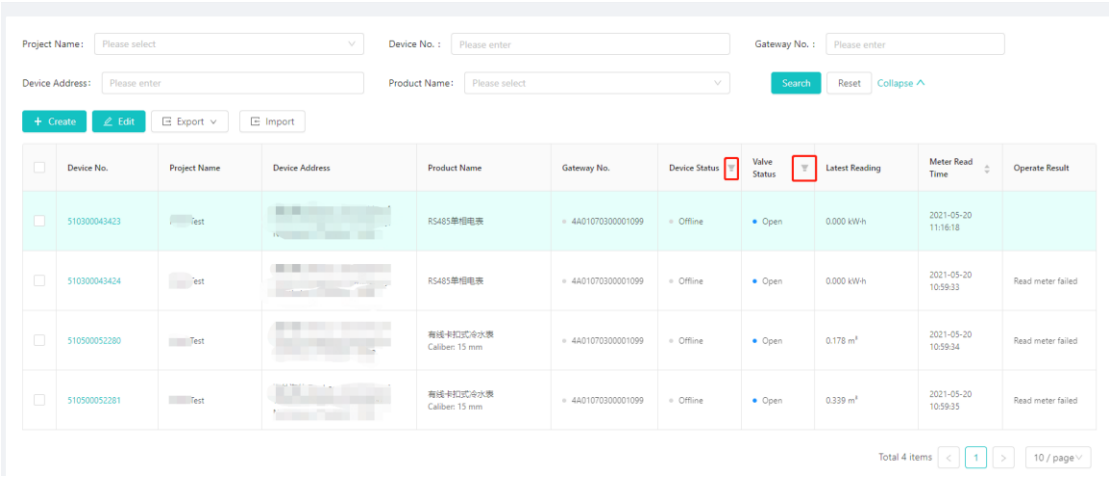
Note: If there is a device binding under the gateway, it cannot be deleted.

4.5 Meter management

Meter types are: cold water meter, hot water meter, electricity meter, heat meter, gas meter, meter reading robot

4.6.1 Device list

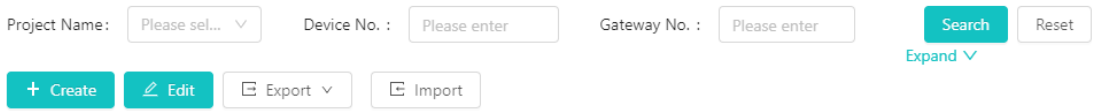
After logging in, select [meter management] in the left menu bar. The equipment list includes equipment number, project name, product name, gateway number, equipment status, valve status, latest reading, meter reading time, and operation.
Click [Device Status Filter] to select online or offline devices.
Click [valve status filter] to select the equipment whose valve status is open or closed.



4.6.2 Search device

Query conditions:

- [Project Name]: Select the project to query the meter under the project.
- [Device No.]: Enter a keyword, and you can find the equipment whose device number contains the keyword.
- [Gateway No.]: Enter a keyword, and you can find the equipment whose gateway number contains the keyword.

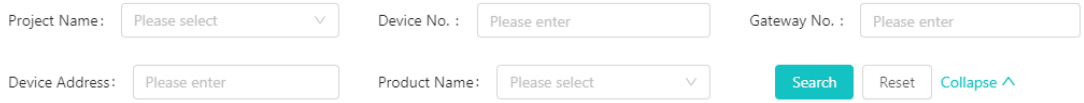


Click [Expand] to use more query conditions.

- [Device Address]: Enter a keyword, and you can find the equipment whose address contains the keyword.
- [Product Name]: Enter a keyword, and you can find the equipment whose product name contains the keyword.

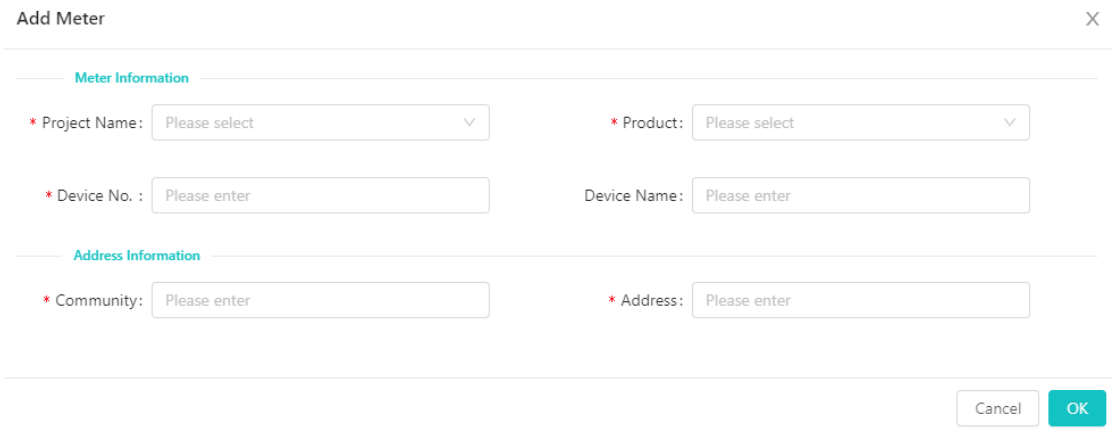
Fill in the query conditions, click [Search], and the results will be displayed in the list.

Click [Reset] to clear the query conditions and display all meters.

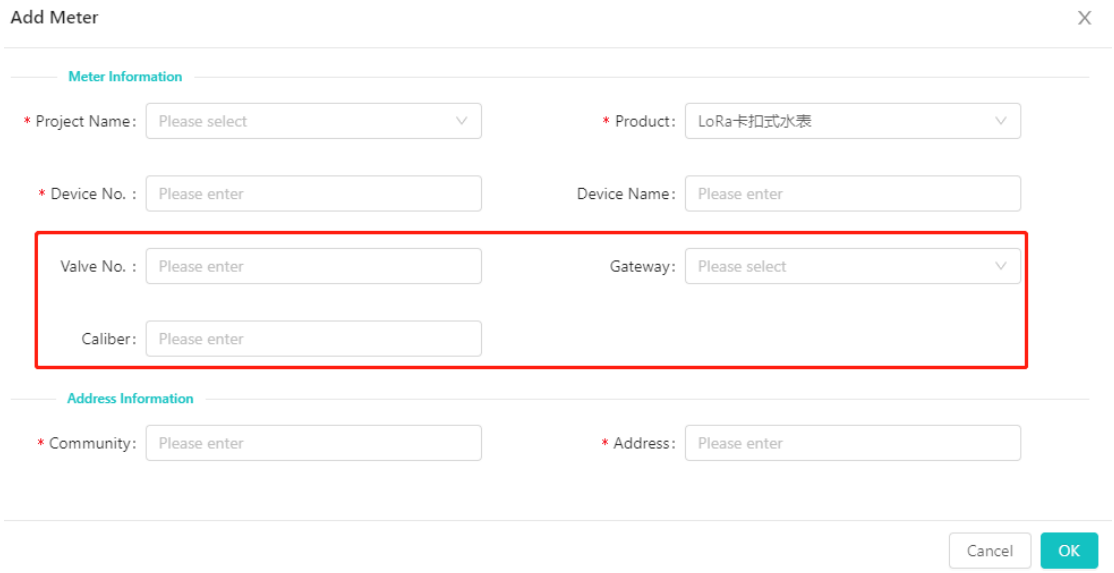


4.6.3 New device

1) After logging in, select [meter management] in the left menu bar. Click [+Creat] to pop up the new meter window, as shown in the figure below.



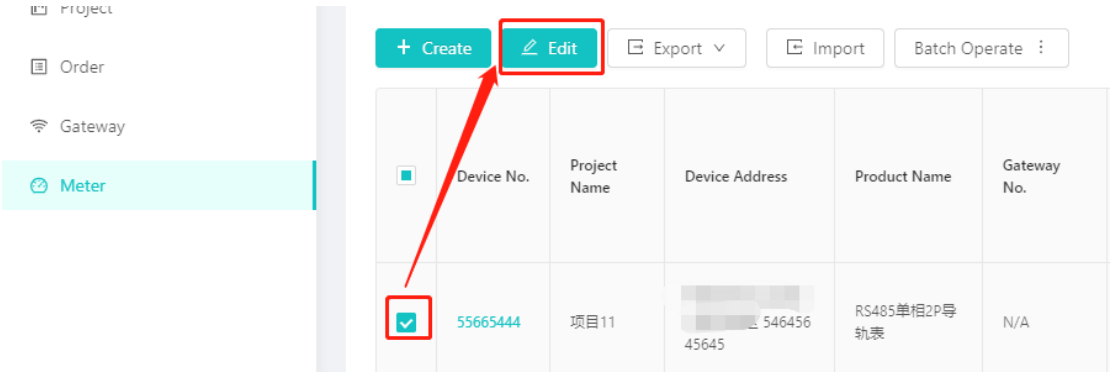
2) Fill in the project name, product, device No., device name in [Meter Information], and community and address in detailed [Address Information]. According to the selected product, you need to fill in the gateway and valve number information.



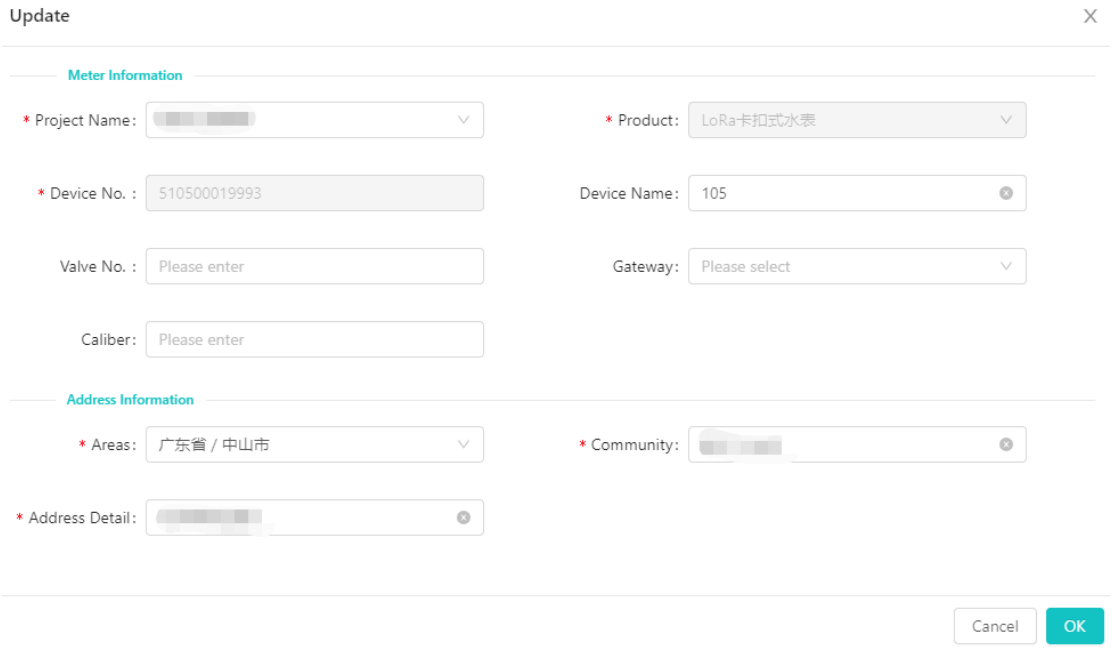
3) After filling in, click [OK] to add successfully, return to the meter list and refresh to display.

4.6.4 Edit device

Tick the correspondingly green device and click [Edit] icon.

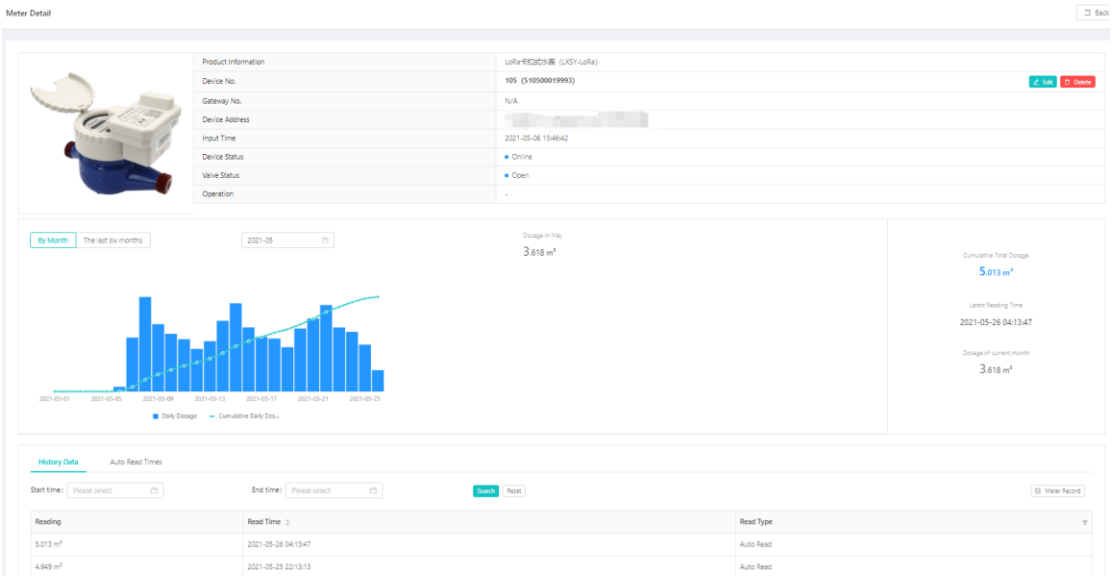


The black or empty items can be modified if necessary, while the gray ones can not be edited. After modifying the information, click [OK] to modify successfully.



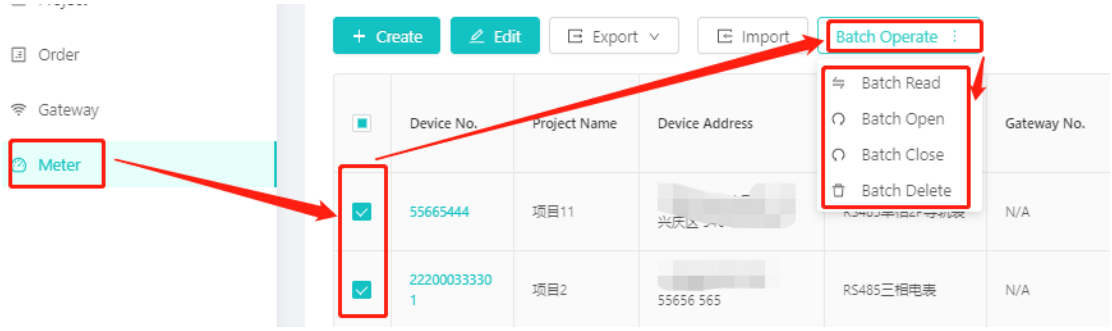
4.6.5 Meter details

Select [Meter] in the left menu bar. Click the specified [Device No.] to enter the meter details page. The content shows the product picture, product information, equipment number, equipment address, registration status, equipment status, valve status, operation, and historical readings.

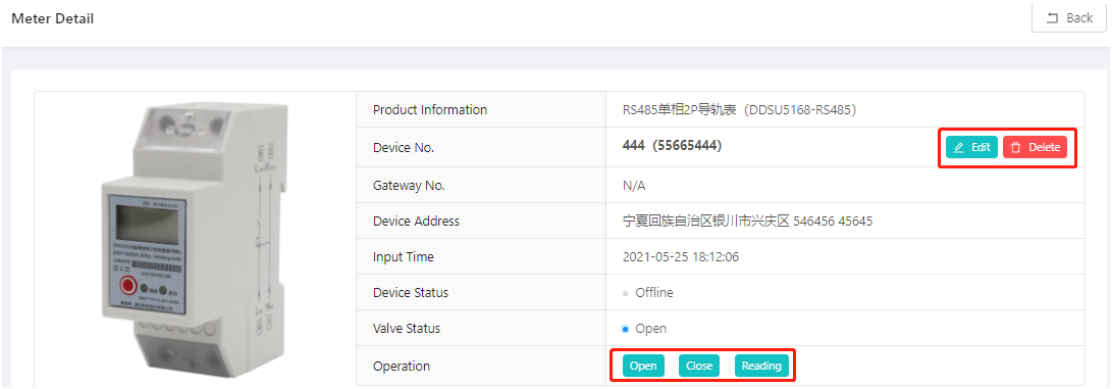


4.6.6 Operate meter

Devices could be single or batch operated. Tick the items that need to be match operated in [Meter] in the left menu bar, and click the [Batch Operate] icon to select the exact operation.



Single operation need to click the specified device No. in green. All the operation will be in below.



1) Read meter

If the product to which the meter belongs includes the "meter reading" function, the [meter reading] button will be displayed in the [meter details] column. Click to read the meter manually, and the successful meter reading will be displayed in the history record.

2) Open valve

If the product to which the meter belongs includes the "valve opening" function, the [valve opening] button will be displayed in the [meter details]-[operation] column. Click to open the valve, and the valve status will be updated if the valve is opened successfully.

3) Close valve

If the product to which the meter belongs includes the function of "closing valve", the [valve closing] button will be displayed in the column of [meter details]-[operation]. Click to close the valve. If the valve is closed successfully, the valve status will be updated.

4) Delete single device

In the meter details page, the [Delete] button is displayed on the right side of the device number. Click [Delete] and click [OK] in the pop-up confirmation prompt box to delete successfully.

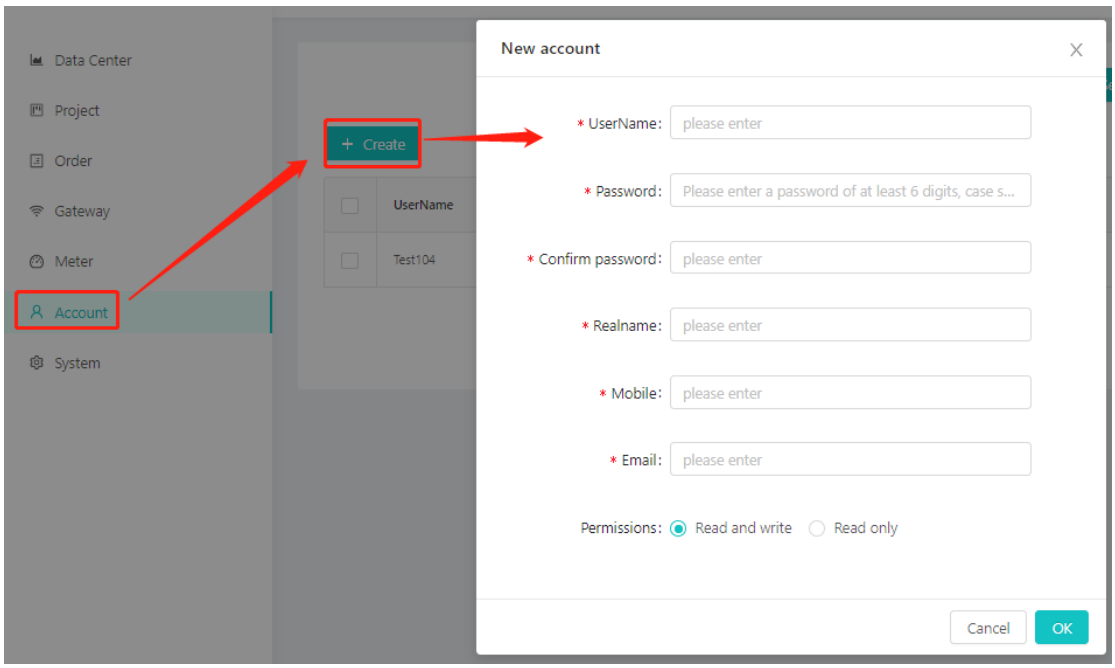
5) Delete meters in bulk

Select multiple meters in the [meter list], click the [batch delete] button, and click [OK] in the confirmation prompt box to delete successfully.

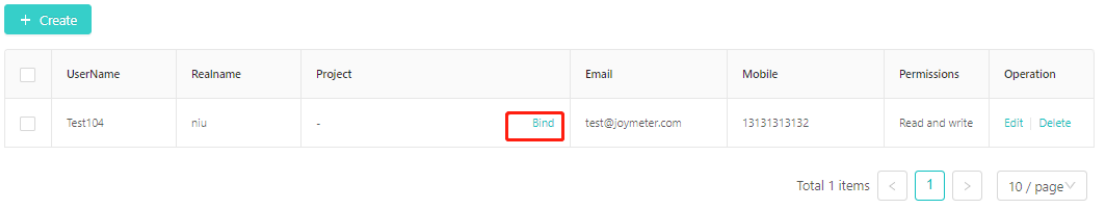
4.6 Account Management

4.6.1 New account

A new account could be create under the current master account. The new account will be created and managed by the current login account.



The new created accounts could be bound to existed projects under the current master account for task allocation.



4.6.2 Push URL

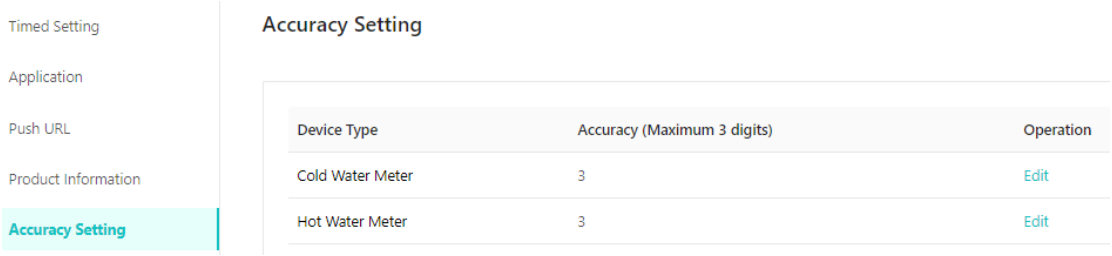
For third-party system docking, after setting the push address, the system will automatically push the data reported by the device (device status, valve status, meter reading)

4.6.3 Product information

Display the products that the operator has used, click "More Products" to view all types of devices supported by the system.

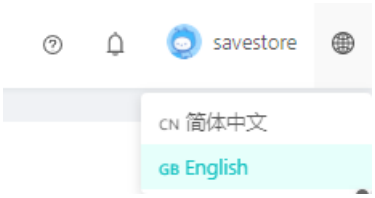
4.6.4 Accuracy setting

Meters' reading resolution ration could be set according the billing requirements. It could be set 0, 1, 2 or 3 types of decimals of the meter reading data by click the icon [Edit].



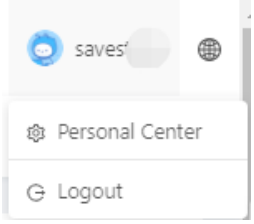
4.7 Language

The system language could be set according to the user's preference in Personal Center. Chinese and English are available to be set.



4.8 Personal Center

Log in to the system, check the upper right corner, and move the mouse to the avatar or nickname to display the personal settings.

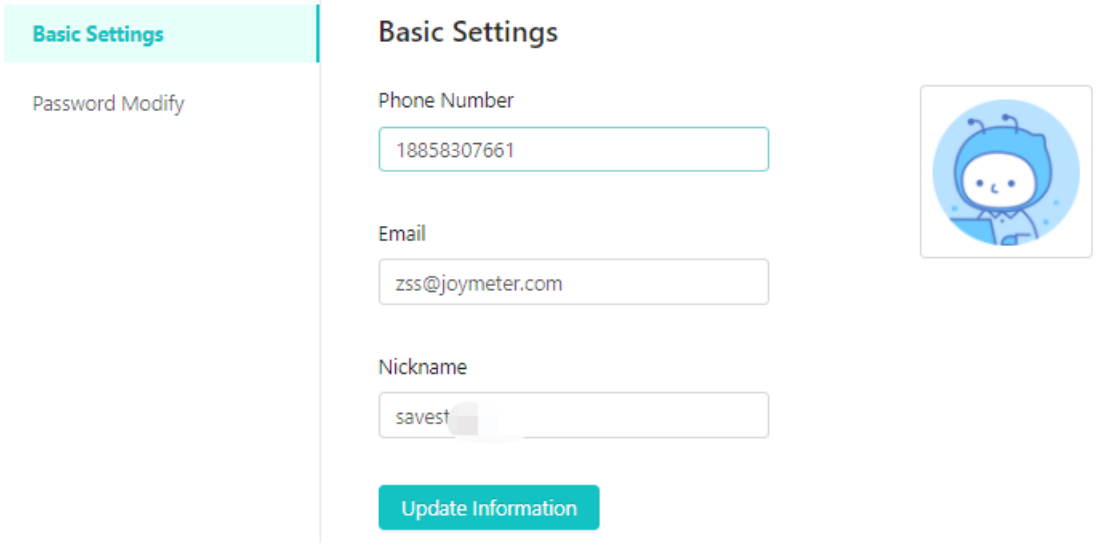


4.8.1 Account settings

Select [Personal Center] account settings to set the account information.

4.8.2 Basic settings

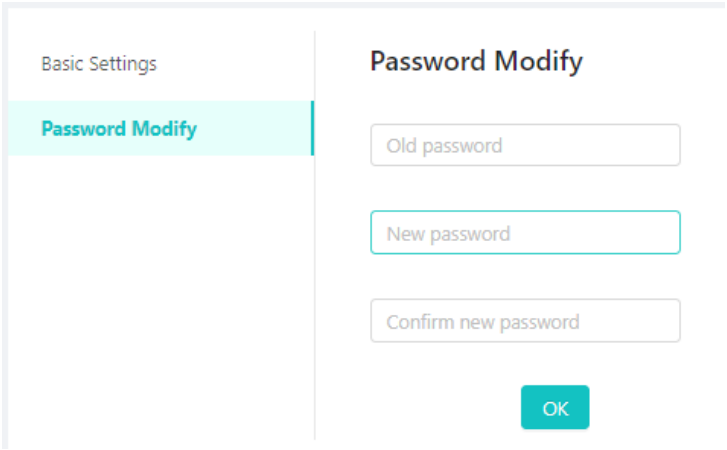
You can modify your mobile phone number, email address, nickname, and avatar. After the modification is completed, click [Update Information] to modify successfully.



4.8.3 Password

To modify the password, you need to fill in the old password, the new password, and the confirmation password. After all of them are filled in correctly, click [OK] to modify successfully.

After the modification is successful, it will automatically log out, and you need to log in again.



4.8.4 Logout

If you choose to log out in the [Personal Settings], you will automatically jump to the login interface. To ensure safe use, it is recommended to log out before closing the browser page each time.

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