Version number: Rev.1.2 Please read this instruction manual carefully before using the product

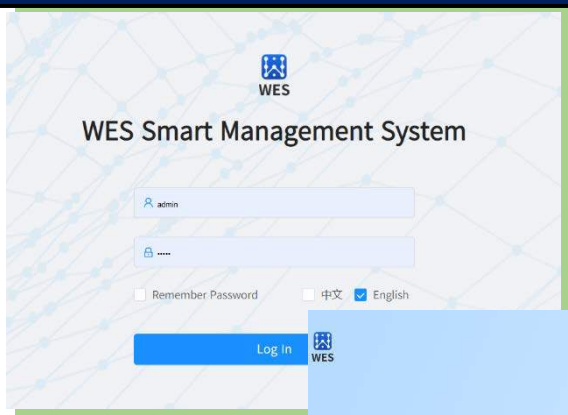
WEST

Industrial Control

Internet of Things

Application platform

WE-AIOT Cloud Platform Instruction Manual



Hainan World Electronic Science and Techology Co.,Ltd.

www.west-hn.com

WES

Chapter 1 Platform introduction

1.1 Overview

WEST AIOT platform is a comprehensive management platform focusing on the whole life cycle management of IoT devices and organizational resource coordination, with multi-dimensional system control and operation and maintenance capabilities, and can also perform specific operation and maintenance of each tenant sub-project. The system consists of two sub-platforms:

One is a thing platform for IoT hardware management;

One is a management platform for specific application projects:

1.2 Features

1.2.1 Introduction to the characteristics of the IoT platform for IoT hardware

The IoT hardware platform is a comprehensive management platform focusing on the whole life cycle management of IoT devices and the overall planning of organizational resources, with

multi-dimensional system control and operation and maintenance capabilities. The platform supports bilingual login in Chinese and English, and provides personalized system style customization functions to meet the visual style needs of different users or enterprises.

In terms of core management functions, the system covers five core modules:

- The first is system management, which can centrally view equipment information, sub-account information and project information under the administrator account to realize global resource visualization;
- The second is account management, which supports "adding, deleting, modifying, and checking", password reset, and activation/prohibition operations of sub-accounts, and dividing role permissions according to tenant administrators and ordinary users to ensure operational security.
- The third is organization management, which uses the organization as the resource container to support organization creation, name modification, administrator replacement, and the distribution and unbinding of users and devices, so as to achieve resource isolation and flexible deployment.
- Fourth, project management, which provides project creation, deletion and query functions, and clearly presents key information such as project number, type, number of equipment, and project manager.
- Fifth, IoT-related management, including device management (device query, circulation, deletion, activation/prohibition) and operation and maintenance management (device event query, custom alarm notification settings), can accurately monitor device status and event triggering, and provide all-round support for IoT device operation and maintenance.

1.2.1 Overview of the management platform for specific application projects

The management platform for specific application projects is a professional management platform for the execution and implementation of specific projects, with the project as the core unit, integrating the whole process management functions such as personnel, equipment, region, and operation and maintenance, and adapting to the full life cycle requirements of the project from construction to operation and maintenance. The platform supports convenient login and quick viewing of project lists, clearly displaying key information such as the total number of devices, total number of accounts, project addresses and status of each project, so that users can quickly grasp the overall situation of the project.

In terms of functional architecture, the platform focuses on six core application scenarios:

- The first is project detail management, providing visual display of basic project information and providing data support for subsequent operations.
- the second is personnel management, which gives the project manager the authority to add/delete project personnel to achieve precise control of the project team;
- The third is device management, which supports the addition and deletion of directly connected devices and sub-devices, can query device information and real-time status, configure device parameters (including Modbus, LORA related parameters and operation modes), and view historical status data trends;
- Fourth, regional management, which supports area creation, logical device binding and automated scene configuration, and can set automation rules such as equipment

timing actions to improve project operation efficiency;

- Fifth, operation and maintenance management, including multi-condition query of equipment events and alarm notification settings, real-time capture of abnormal events such as equipment communication signal strength;
- Sixth, point management, supports the creation and point association of southbound channels (such as Modbus RTU) and northbound channels (such as MQTT), provides standardized data reporting and delivery formats, and facilitates docking with third-party clouds and sub-devices, with strong compatibility and scalability.

1.3 Deployment instructions

In the early stage of the project, China cloud servers can be used to realize access and application operations of the two platforms through account authorization and logo customization. If the customer's application is gradually mature and the number of projects is large, the customer can deploy the cloud server in their home country to ensure data compliance and facilitate subsequent management.

Chapter 2 **Instructions for the use** of the IoT platform for hardware

2.1 Login method

2.1.1 Scan the QR code to access the login URL:

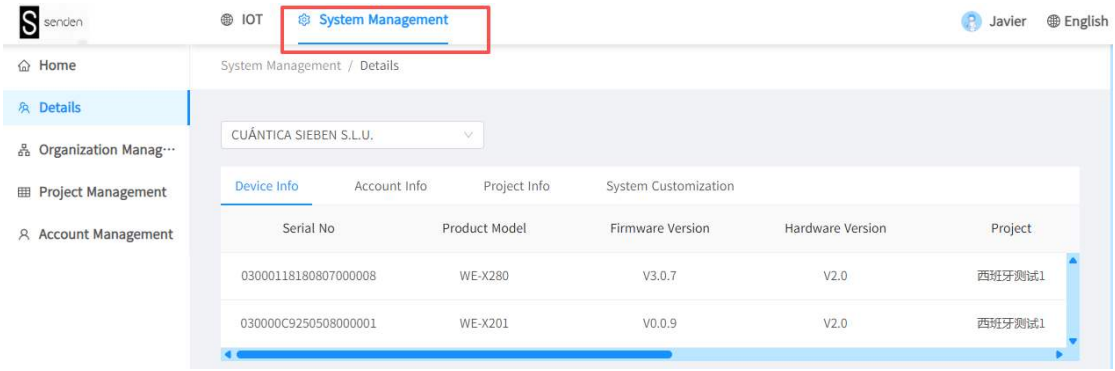
2.1.2 URL access:

https://www.west-iot.com
(Log in to your account and password, and ask for it from the account manager's email)

2.1.3 Login interface of the IoT platform

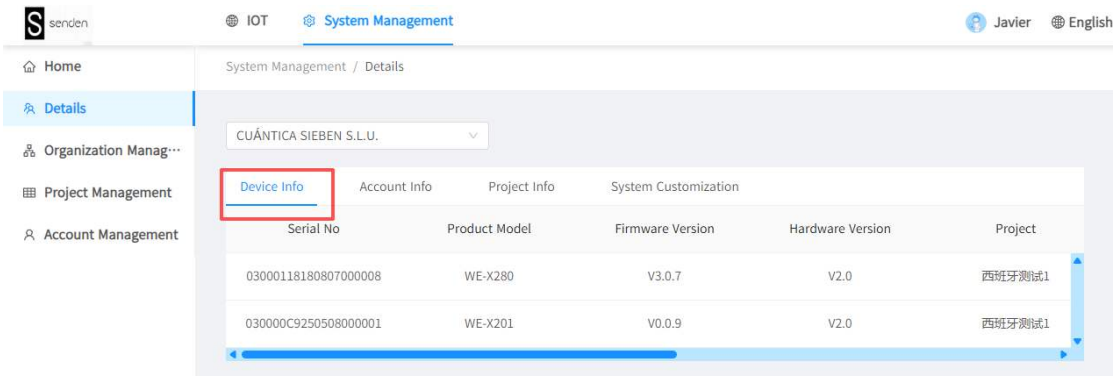
2.2 System management

2.2.1 Administrator Details



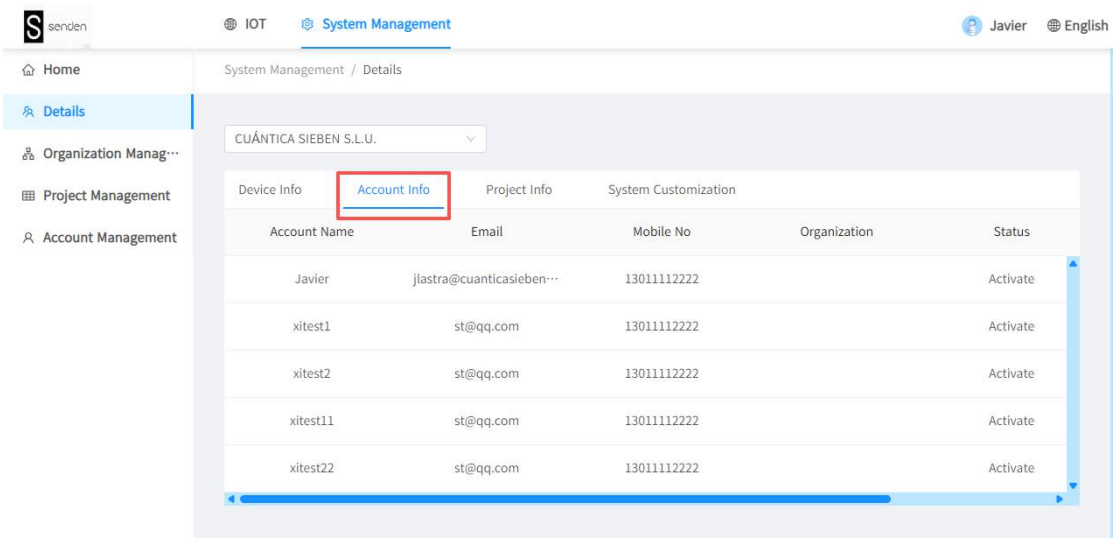
a. Device information

All device information under the admin account

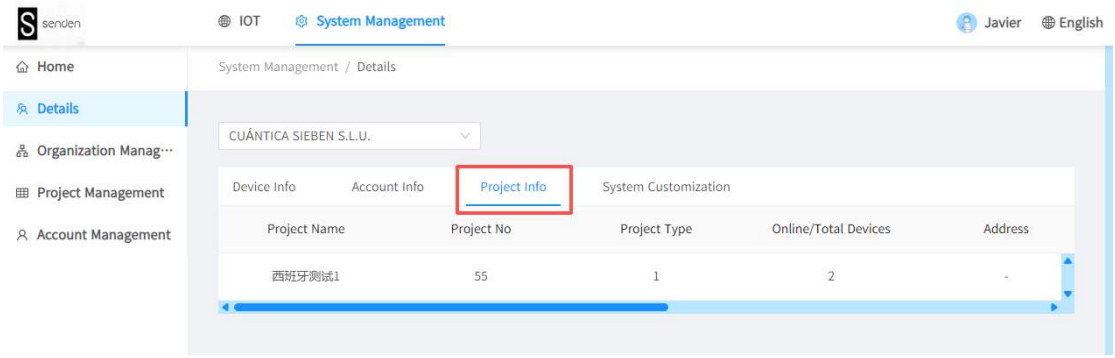


b. Account Information

All sub-account information under the manager account

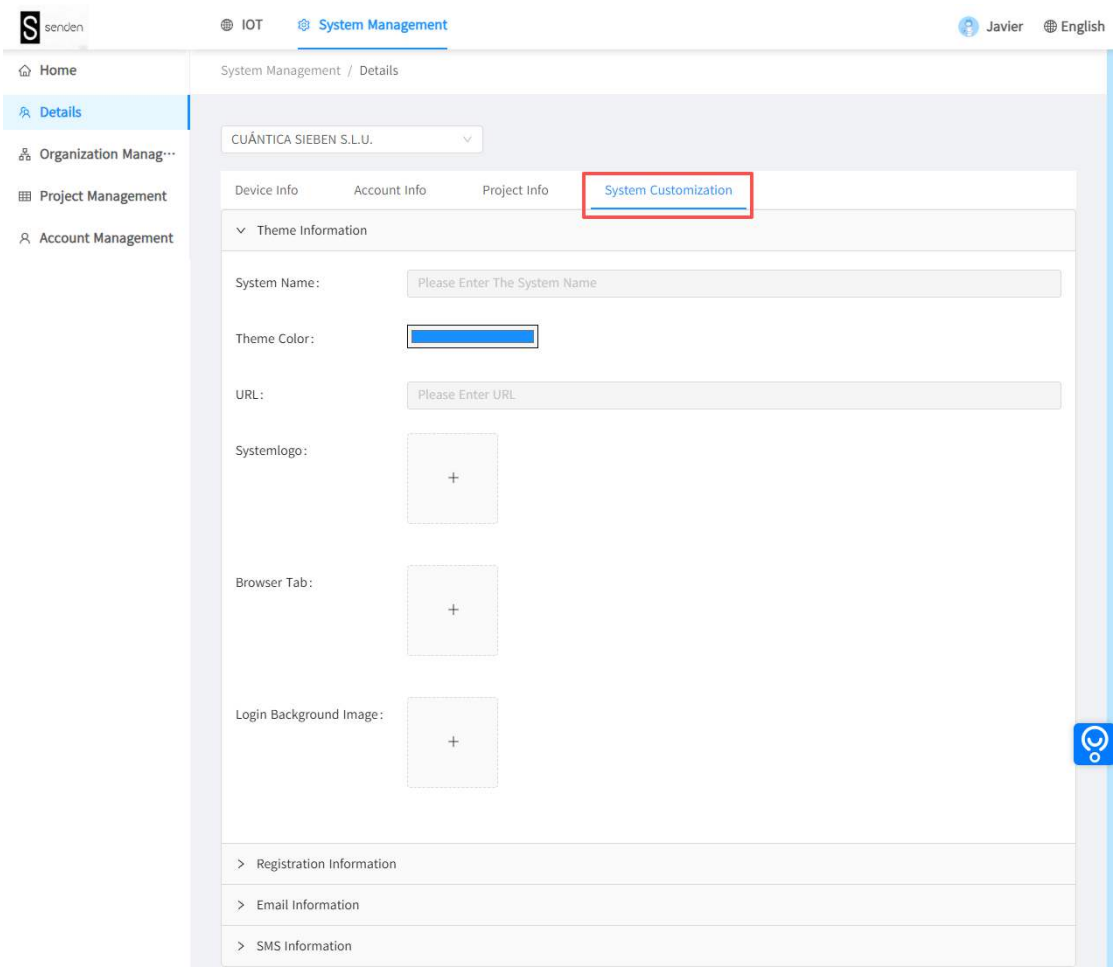


c. Project information



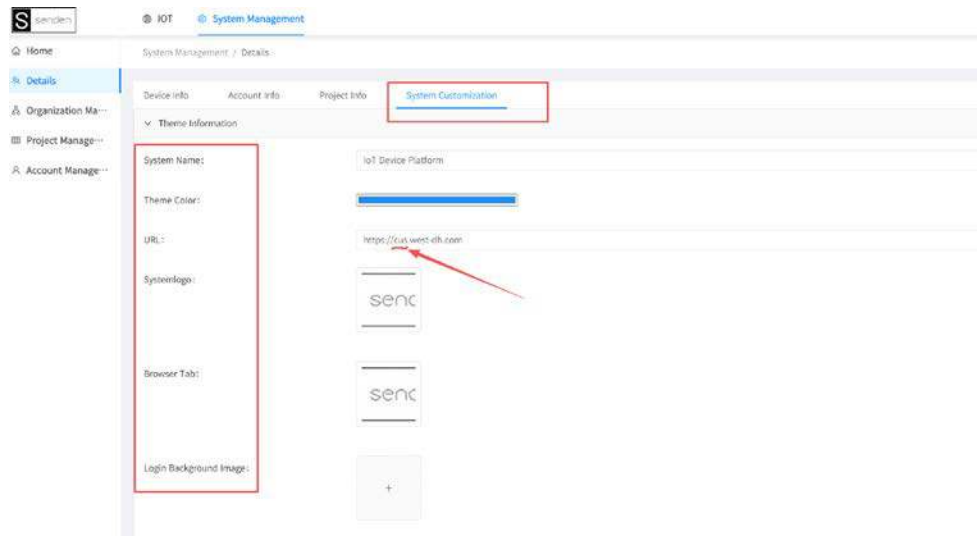
d. System customization

Depending on personal preference or company style, choose the style that suits you

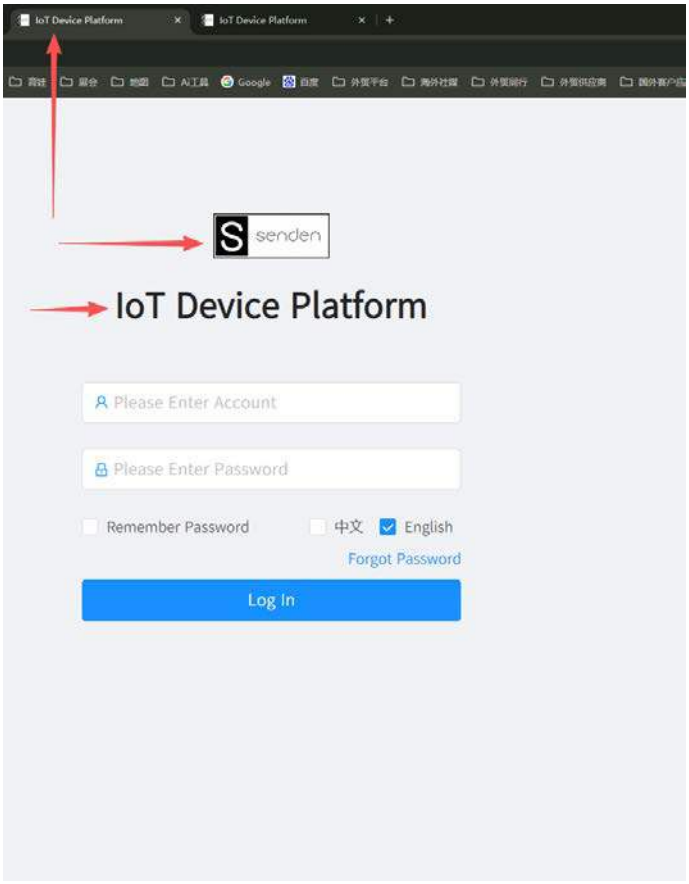


URL customization special instructions:

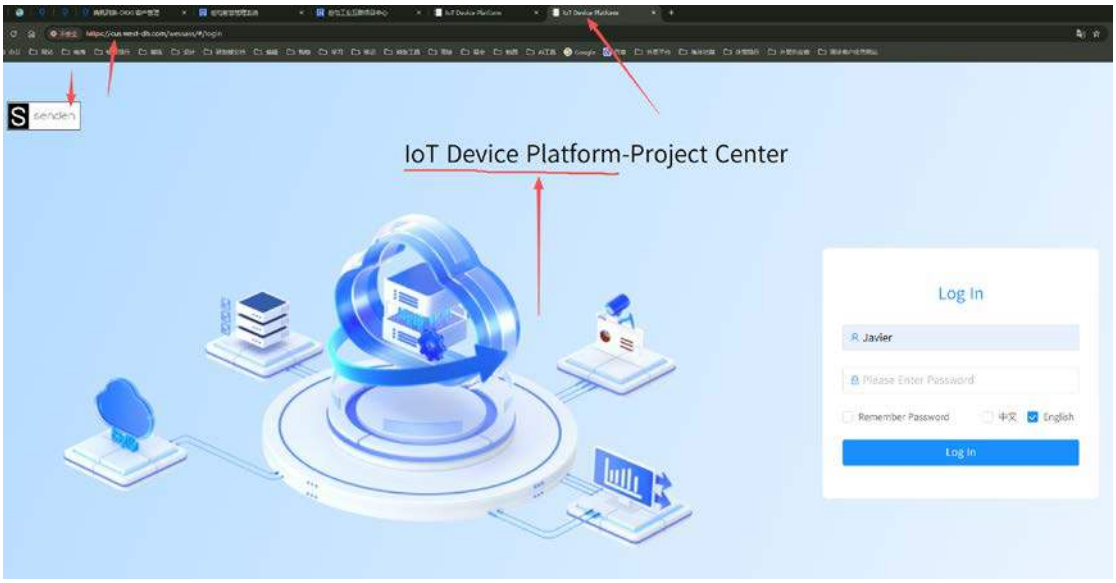
1) The original must be usedhttps://www.west-dh.comThe main domain name is customized for the second-level domain aluminum, as shown in the figure below, which can be customized ashttps://CUS.west-dh.com(material platform), after the customized preservation here, the project platform is also the same as the originalhttps://www.west-dh.com/wessassChanged to a customized https://CUS.west-dh.com/wessass



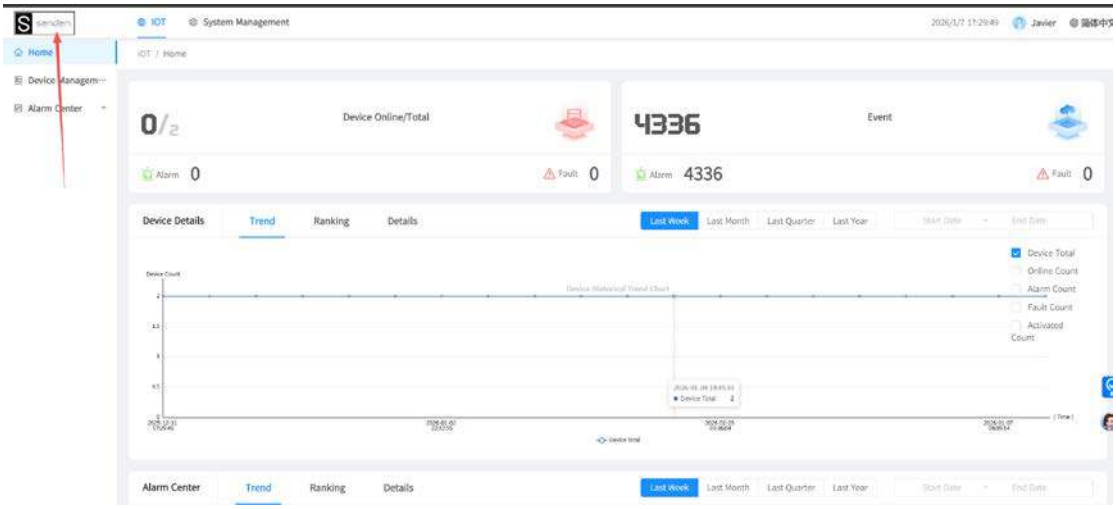
2) After the customization of the object platform is completed, the landing page of the object platform and the project platform, the L OGO in the upper left corner of the inner page, and the browser tab LOGO will be updated synchronously according to the customized content. The details are as follows:



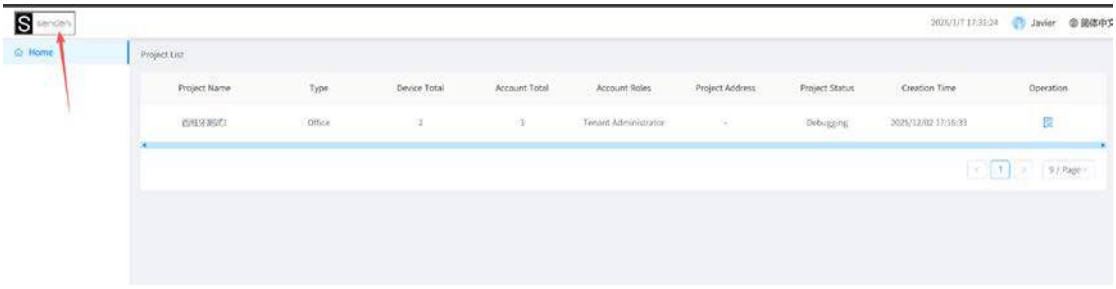
The effect of the login interface of the platform is customized



The customized effect of the project platform login interface



After logging in to the platform, the logo effect in the upper left corner of the inner page is customized

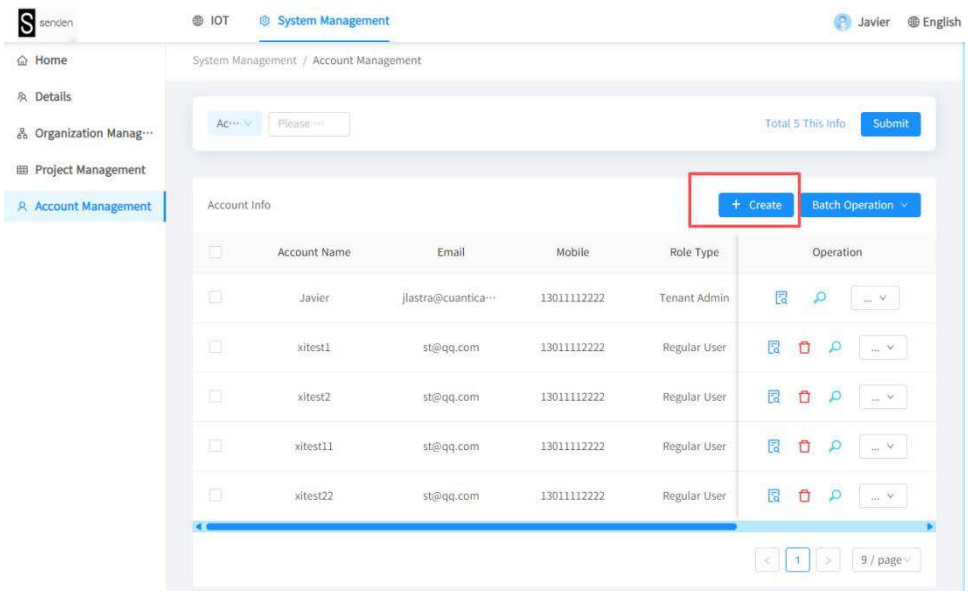


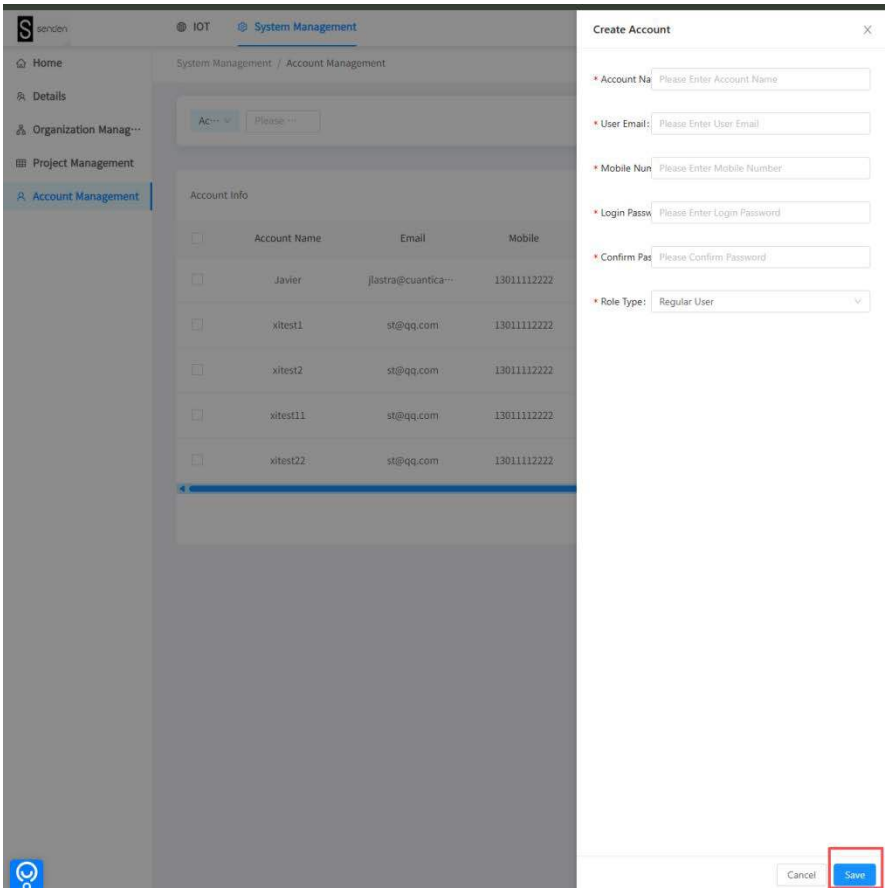
After logging in to the project platform, the logo effect in the upper left corner of the inner page is customized

2.2.2 Account management

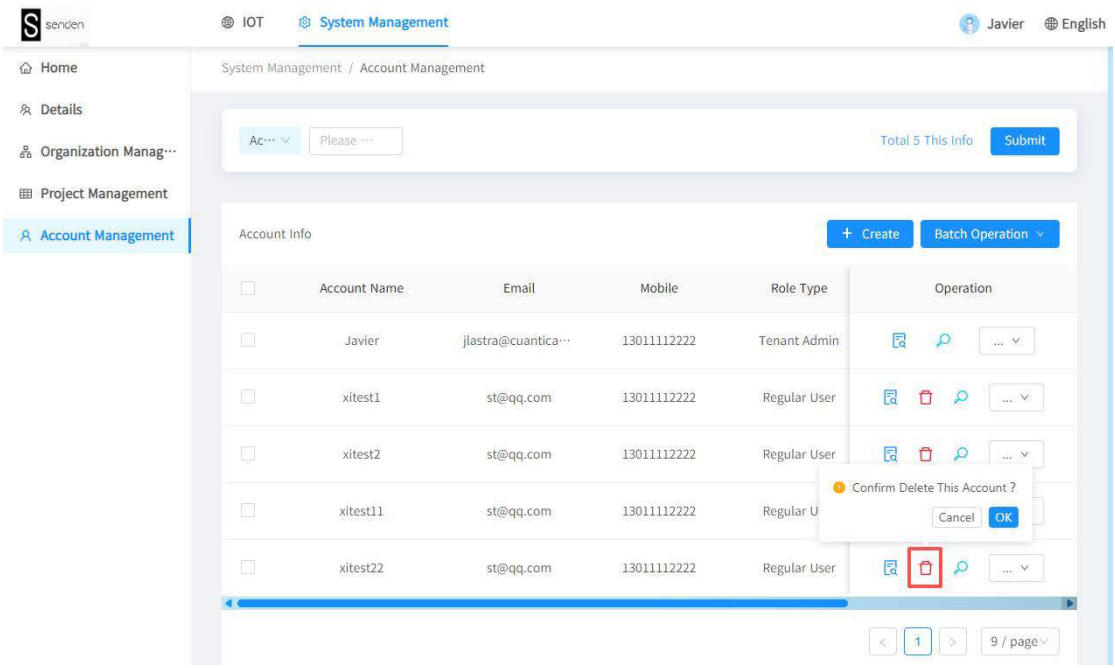
a. Overview of account management

The object of account management is sub-accounts;
Using the account management function, you can "add, delete, modify", "activate/prohibit" sub-accounts on the platform, etc.
Different levels of accounts have different permissions on the platform
3.2. Account management process
3.2.1. Add an account
After logging in to the platform with admin privileges, you can create a new regular user

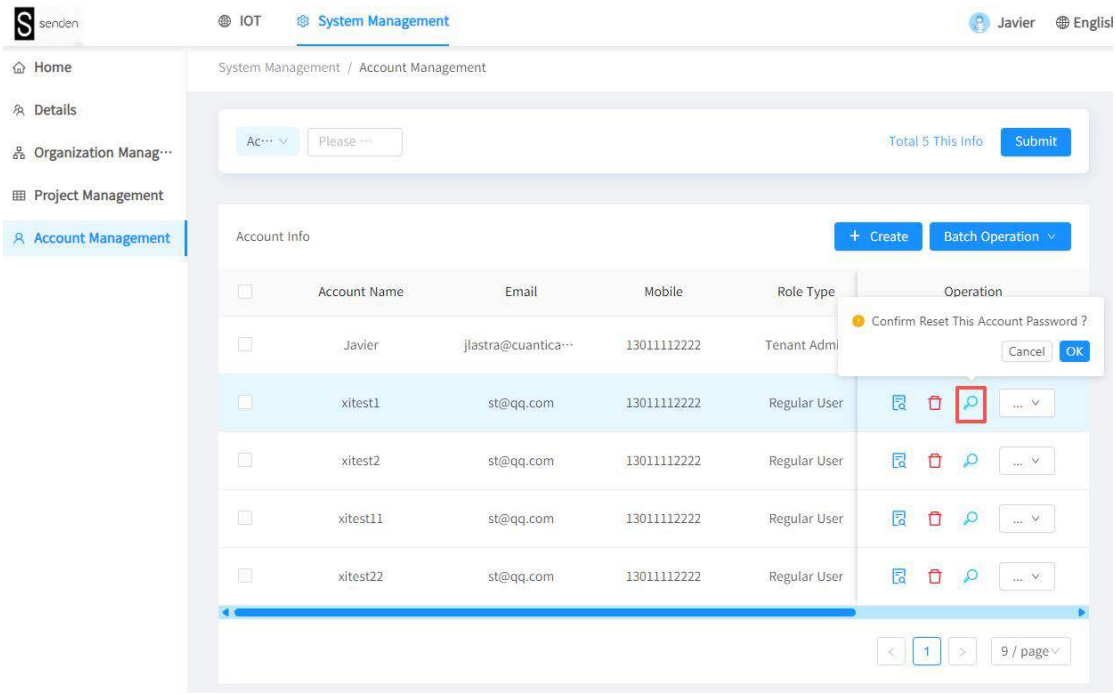




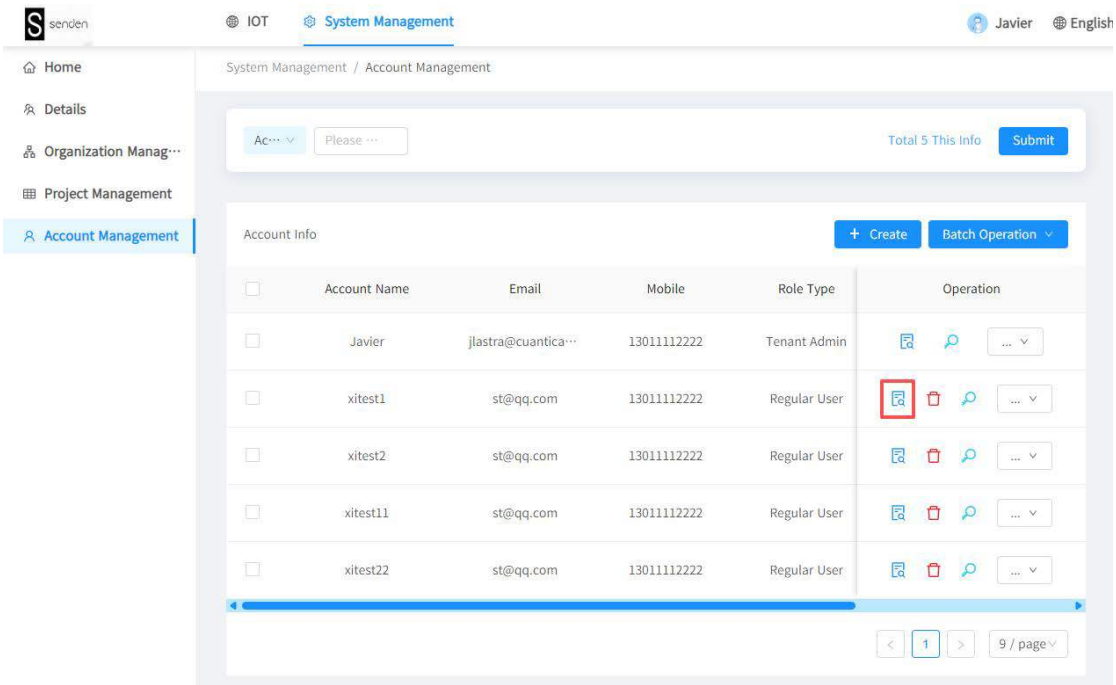
b. Delete the account



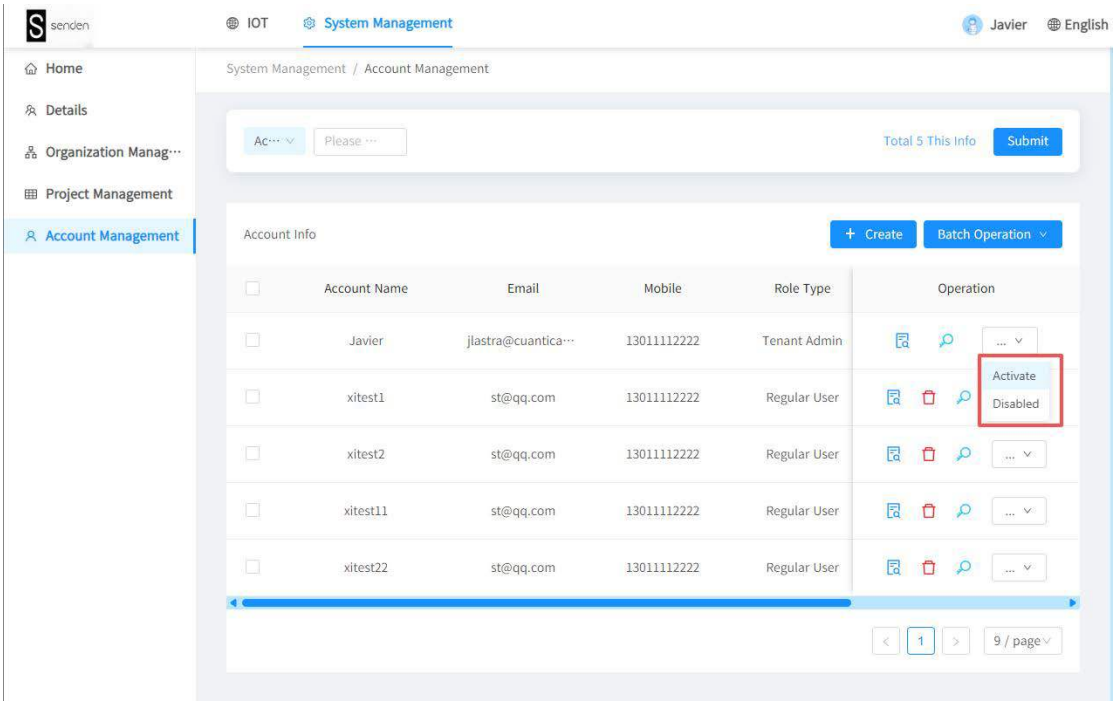
c. Reset password



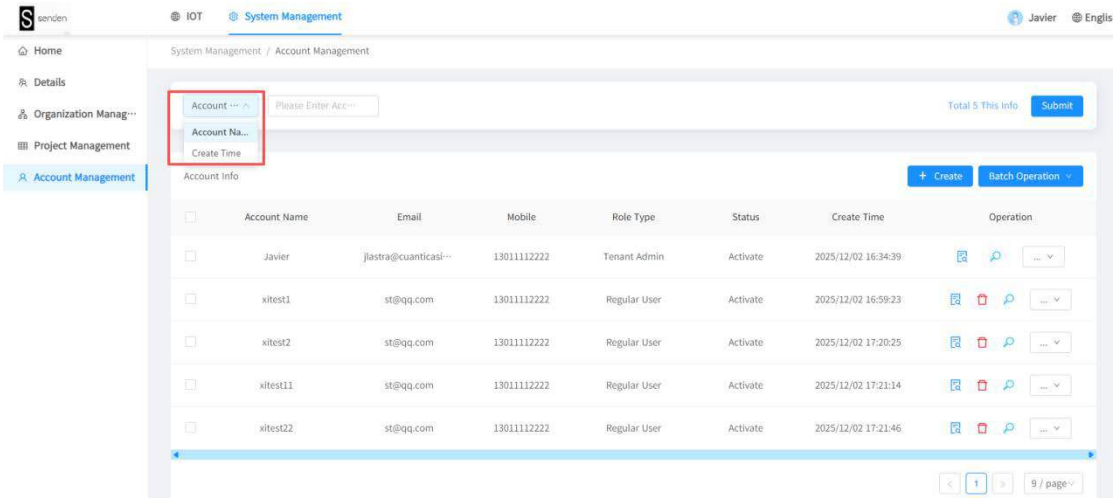
d. Modify your account information



e. Activate/Ban Accounts



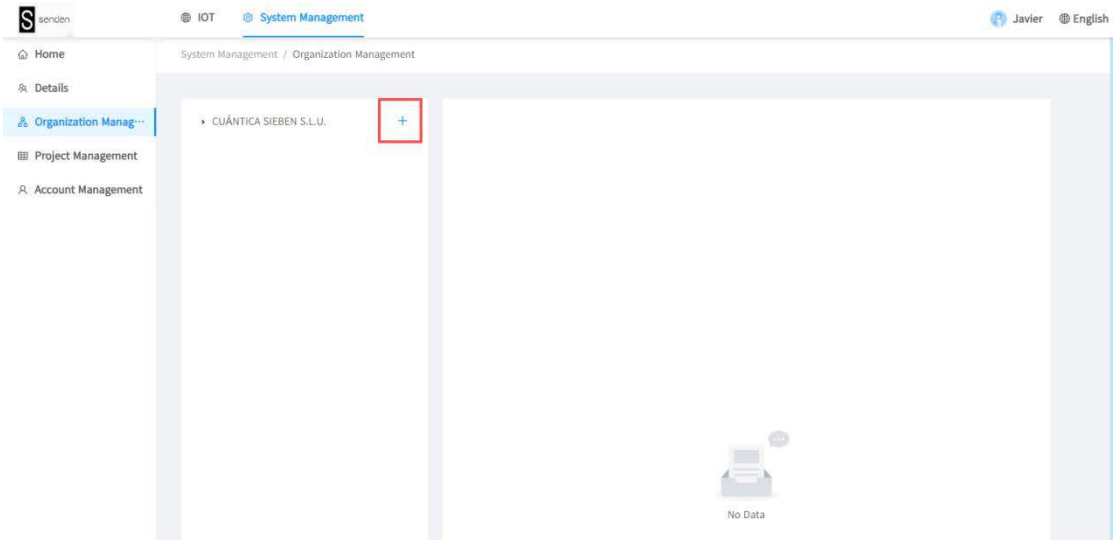
f. Account inquiry



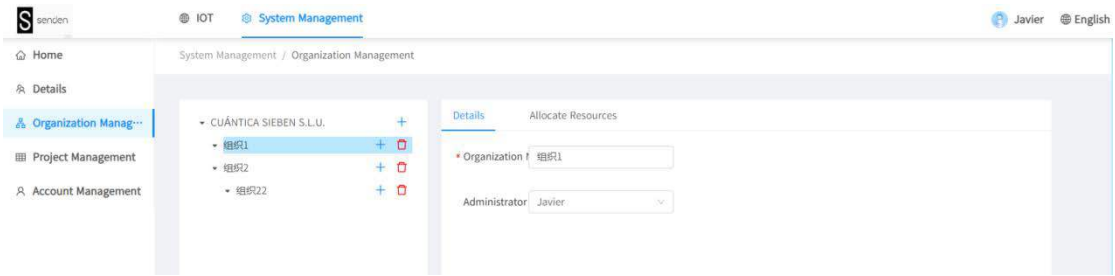
2.2.3 Organization and management

As a container for resources, the organization is used to carry the relationship between resources and divide resources, and can quietly manage and isolate resources in the organization.

a. Add organization

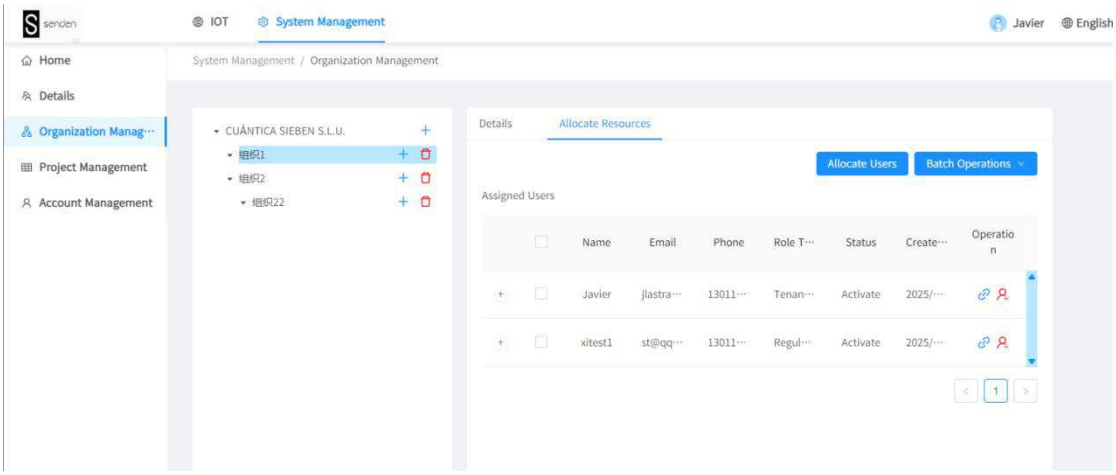


b. Organizational details



Change the organization name and change the organization administrator

c. Allocate resources

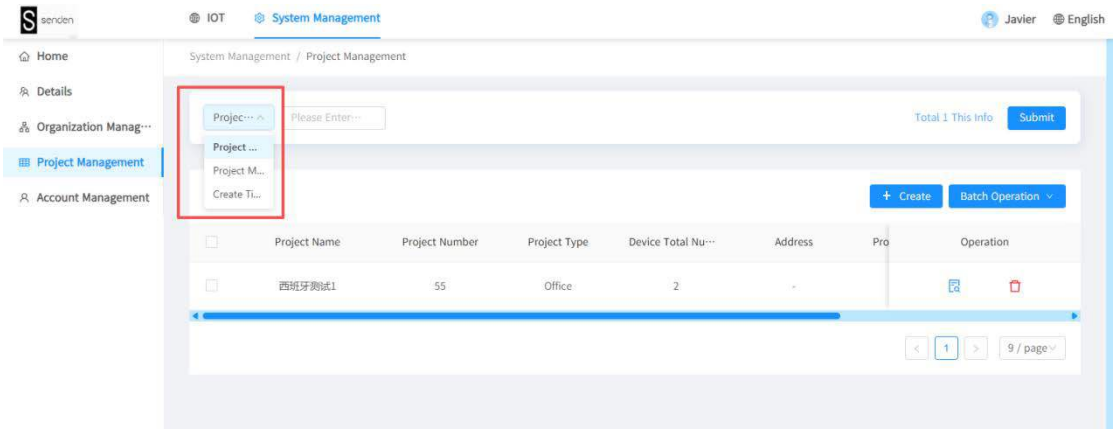


d. Users and devices can be assigned/unbound

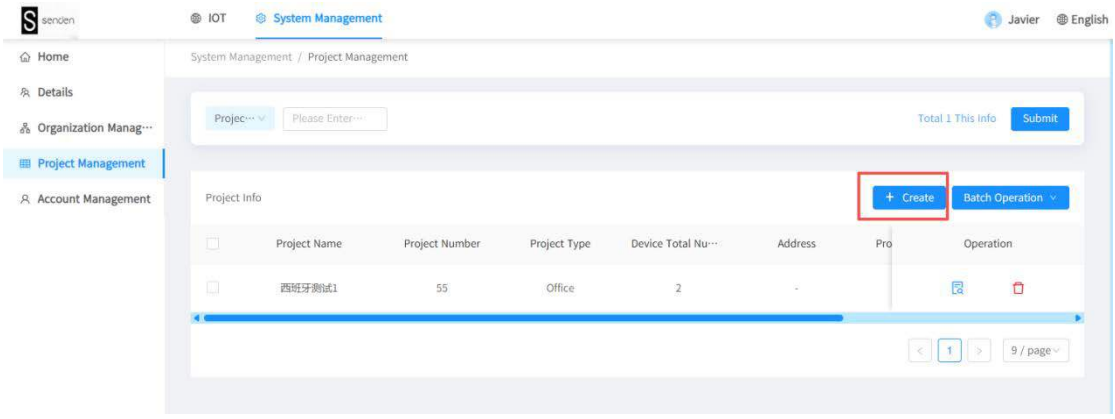
2.2.4 Project management

Create, delete projects, query projects, etc

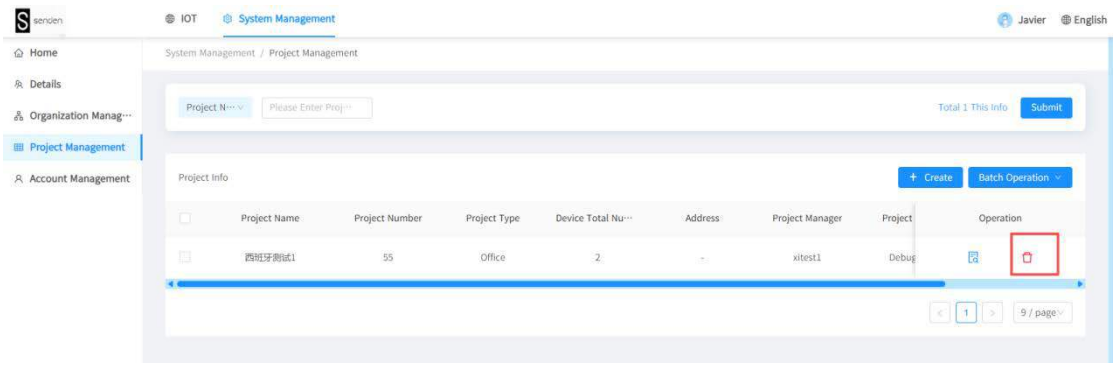
a. Query items



b. Create a project



c. Delete the item

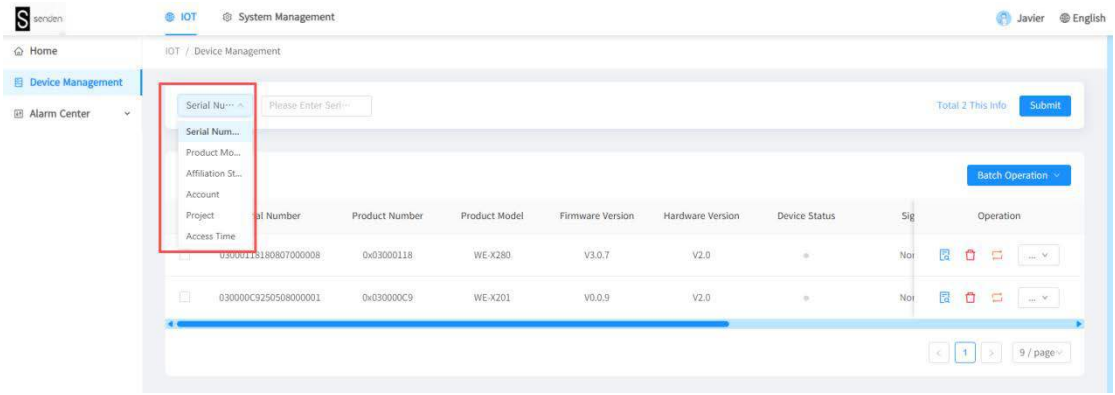


2.3 Internet of Things

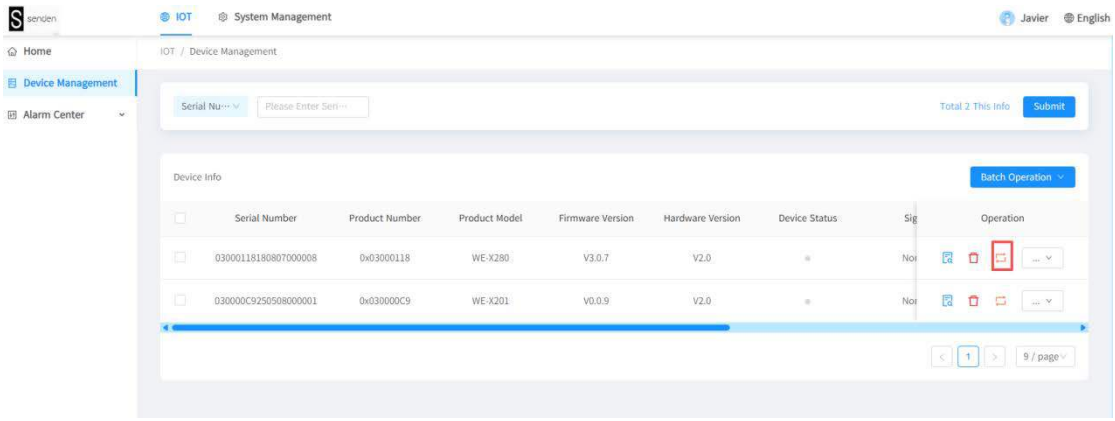
2.3.1 Equipment management

Allocation of device resources, device activation/banning, device deletion, etc

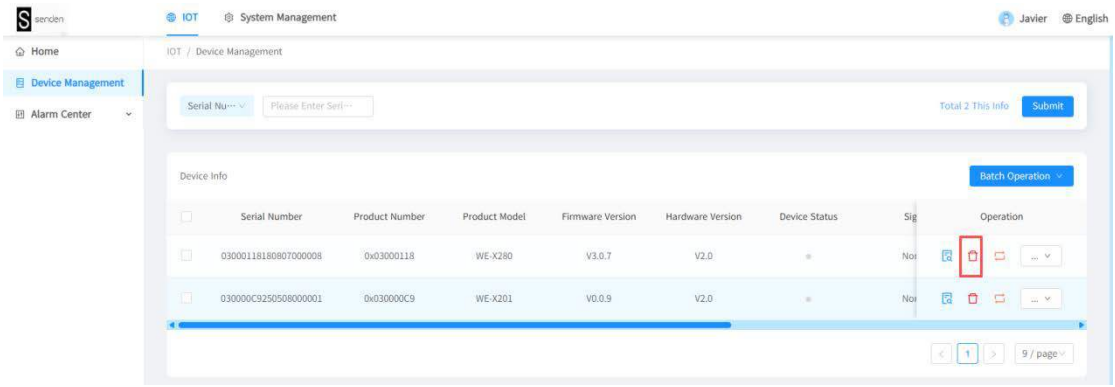
a. Equipment query



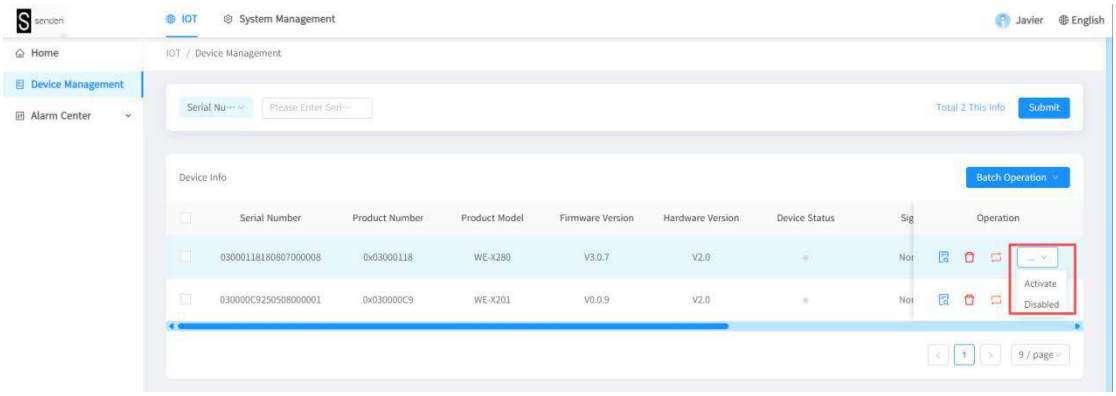
b. Equipment circulation



c. Device deletion



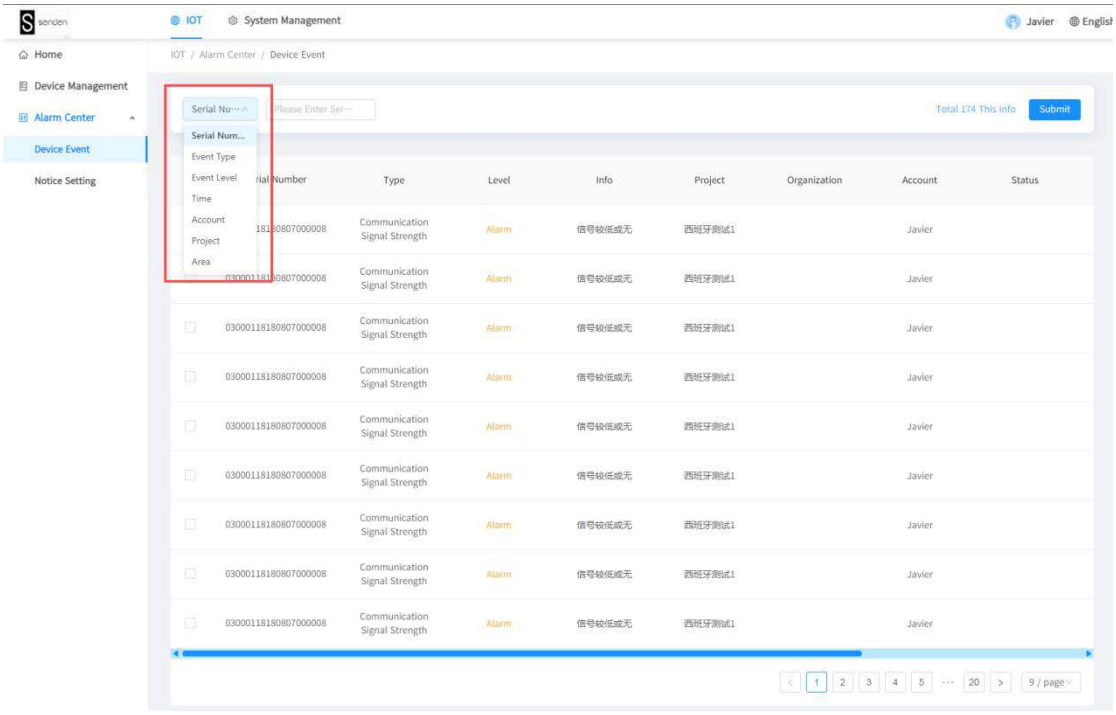
d. Activation/Disabsorption



2.3.2 O&M management

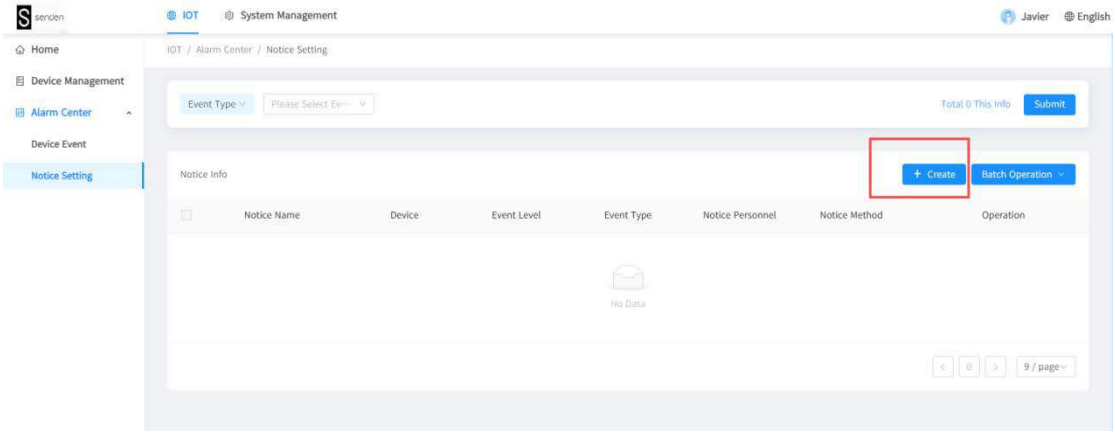
a. Device Events

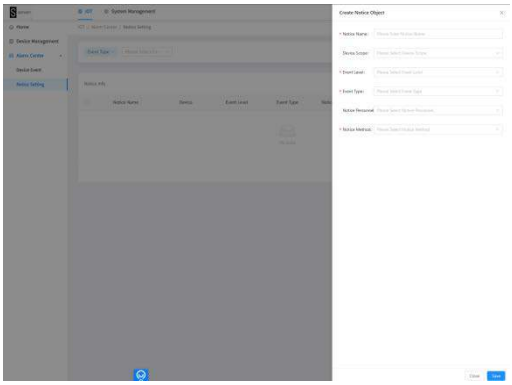
It can be queried according to different conditions



b. Notification settings

Alarm notifications are automatically triggered when conditions are met based on pre-set trigger conditions





Chapter 3 **A management platform for specific application projects**

3.1 Login method

3.1.1 Scan the QR code to access the login URL:

3.1.2 URL access:

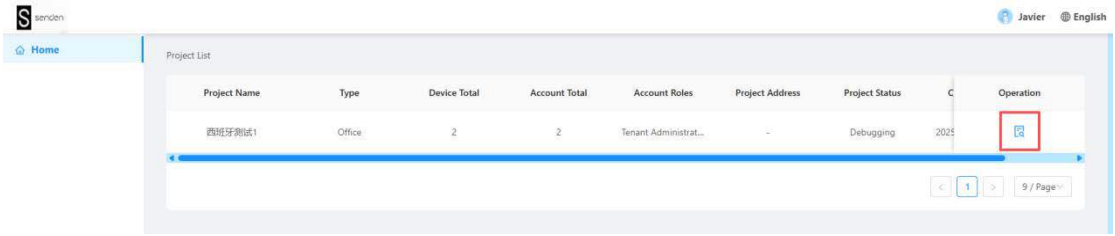
https://www.west-iot.com/wessass

(Log in to your account and password, and ask for it from the account manager's email)

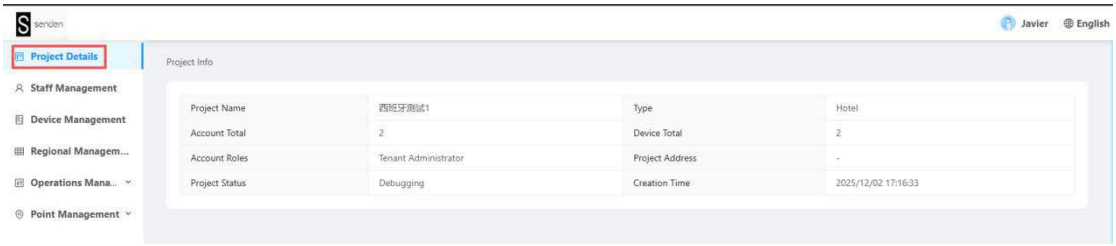
3.1.3 Management platform interface for specific application projects

3.2 System management

3.2.1 Home page

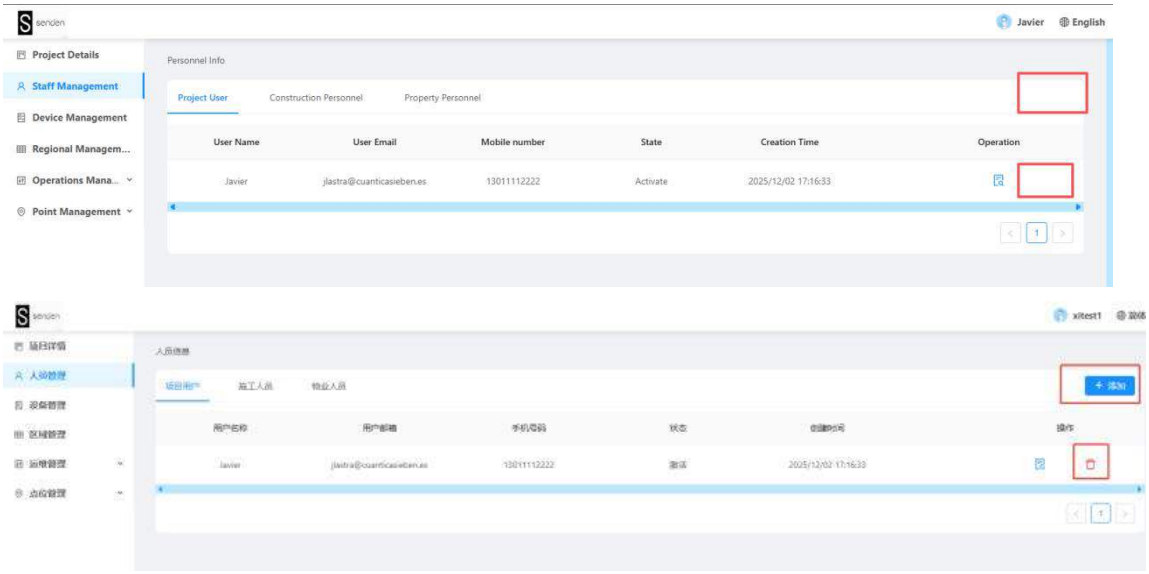


a. Project details



b. Personnel management

Project managers have permission to add/remove people, but ordinary personnel do not



Special Notes:

About the Project Platform User Roles Description

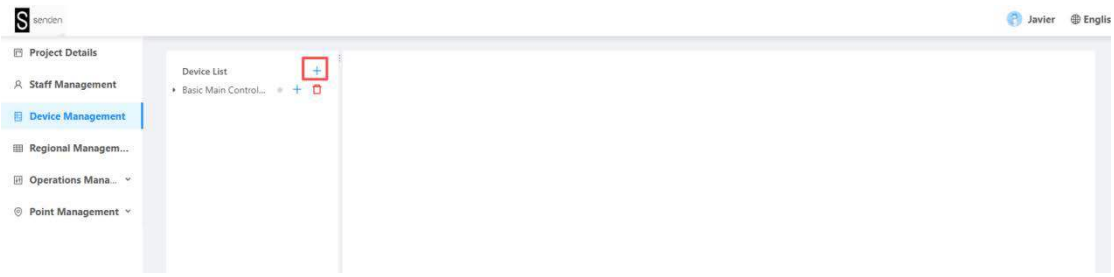
User role name	Role description
(Tenant) Administrator	1） The highest system administrator of the project platform has the authority to add, delete, and modify the project and the project manager. 2） Administrators do not have subordinate management rights for specific projects. As the highest platform management role of the system, it does not intervene in the specific business of the tenant's subordinate projects.
Project A Manager	Have all the authority of Project A: addition, deletion and modification of personnel and business elements of this project;
Project A regular user	have the business authority of ordinary users of Project A;
Project B Manager	Have all the authority of Project B: add and delete personnel and business elements of this project;
Project B regular users	have the business authority of ordinary users of Project B;
Project X Manager	Have all the permissions of Project X: add or modify personnel and business elements of this project;
Project X ordinary user	Business permissions for ordinary users of Project X;

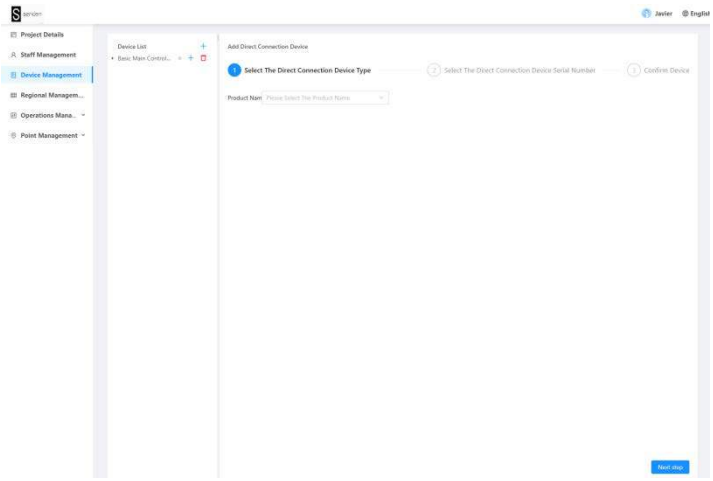
c. Device management

You can add, delete, manage, set attributes, and more

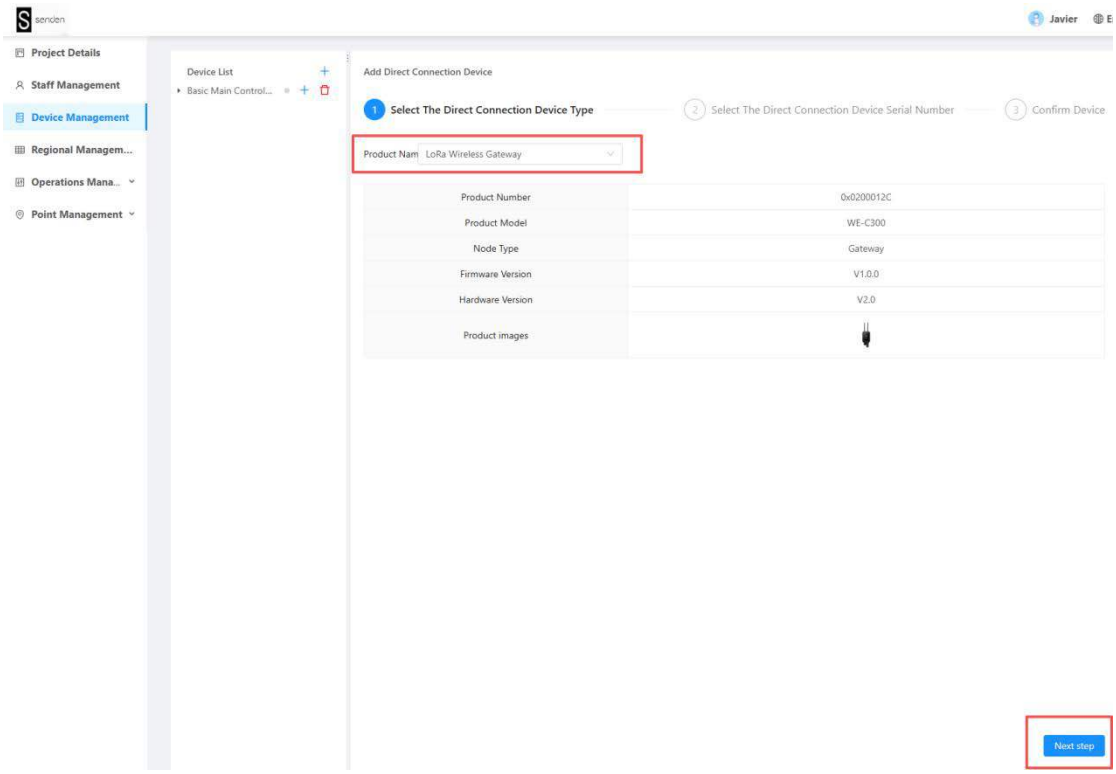
C-1 added

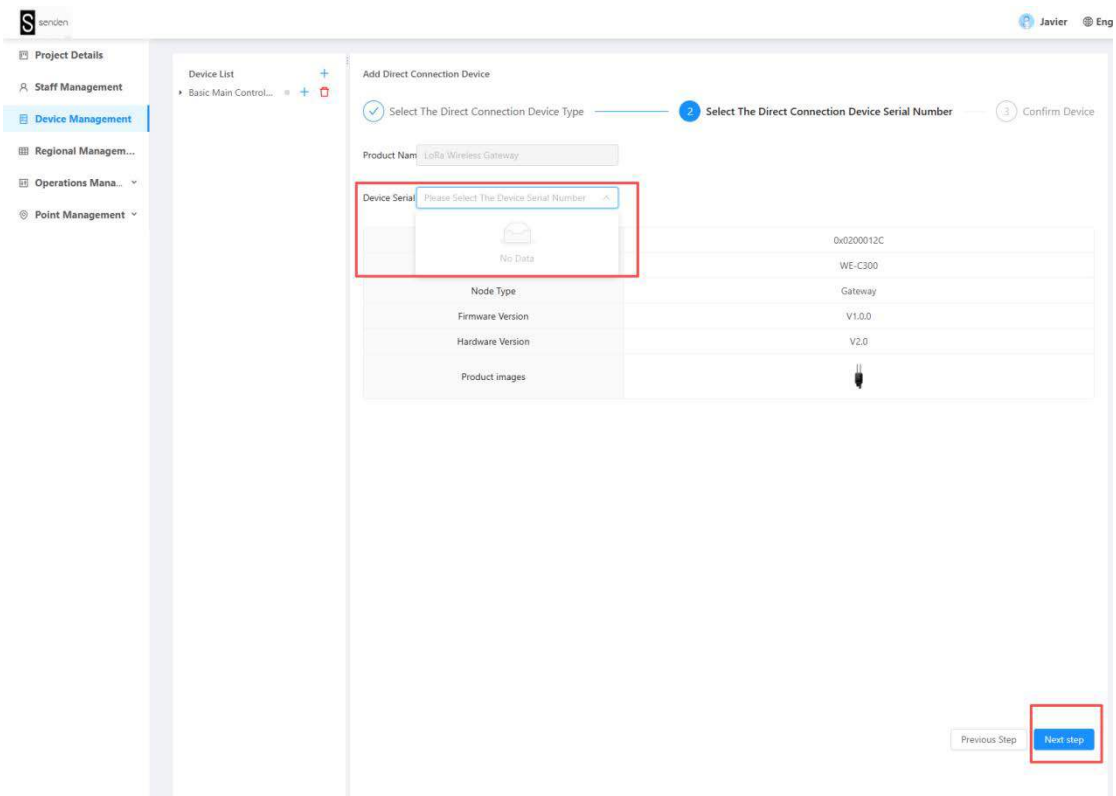
- Add a direct device



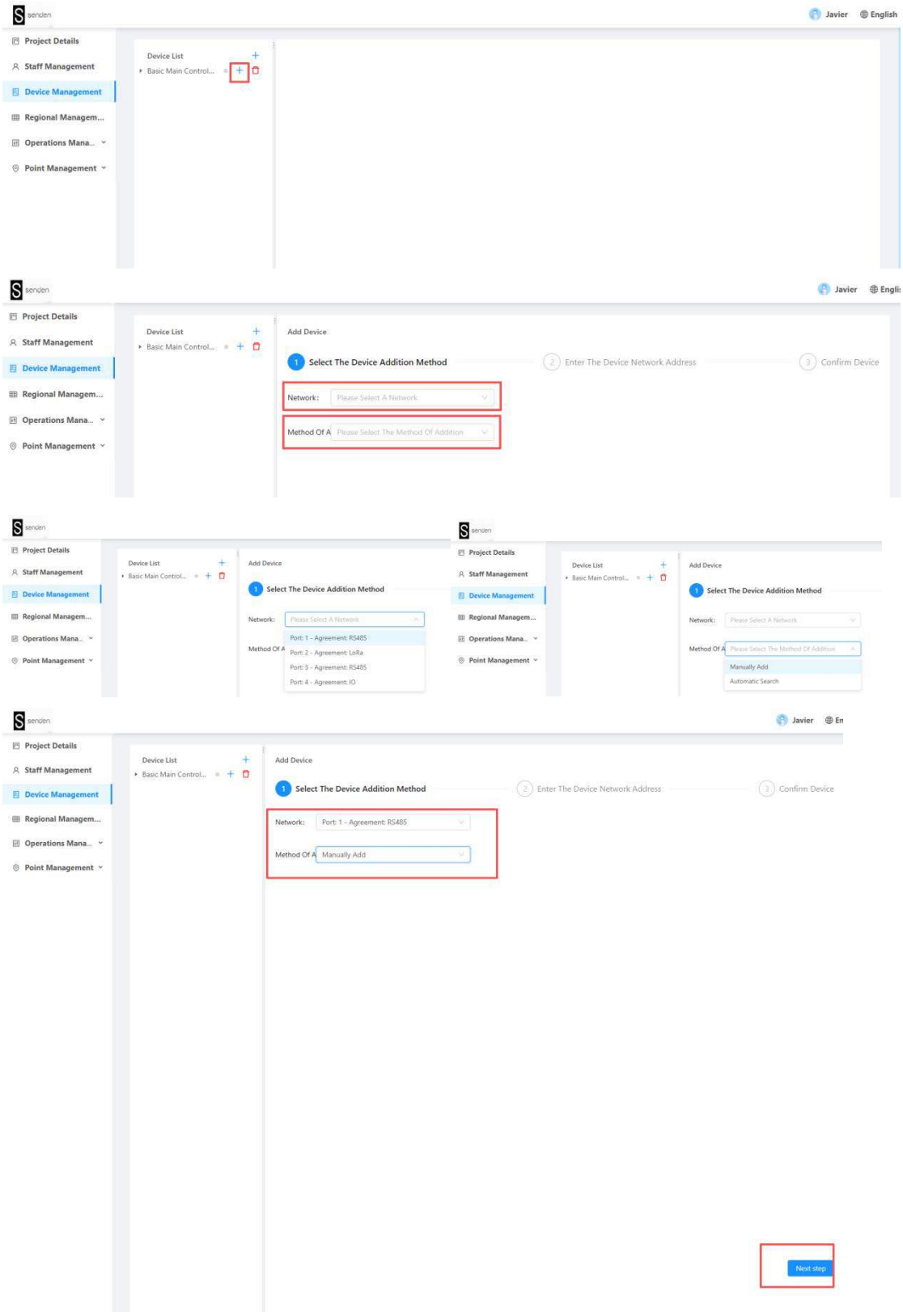


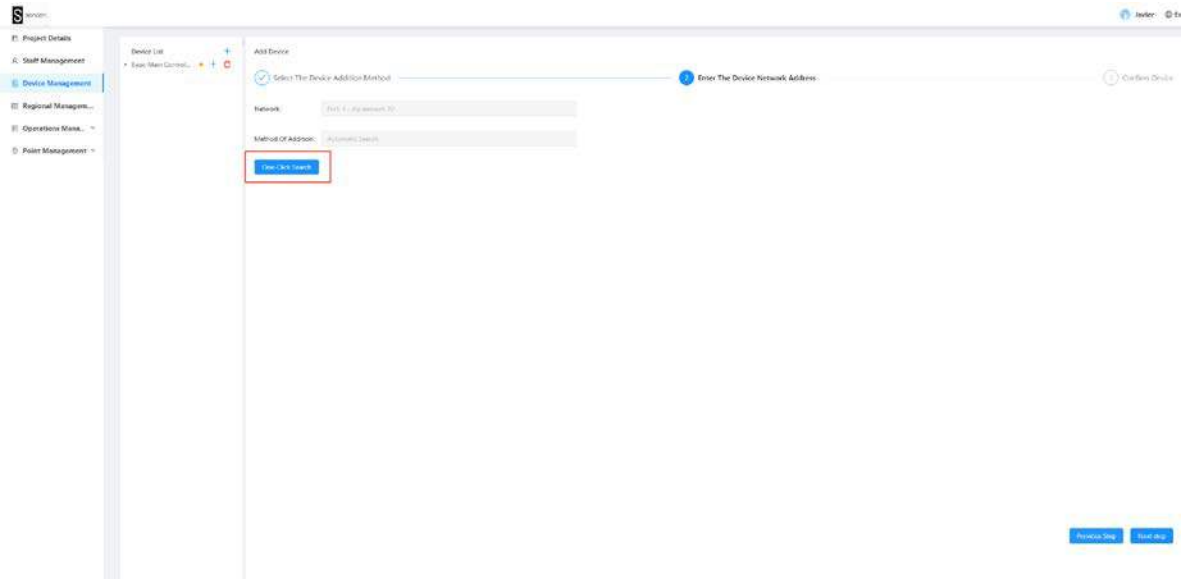
Select the device in the drop-down box, Next

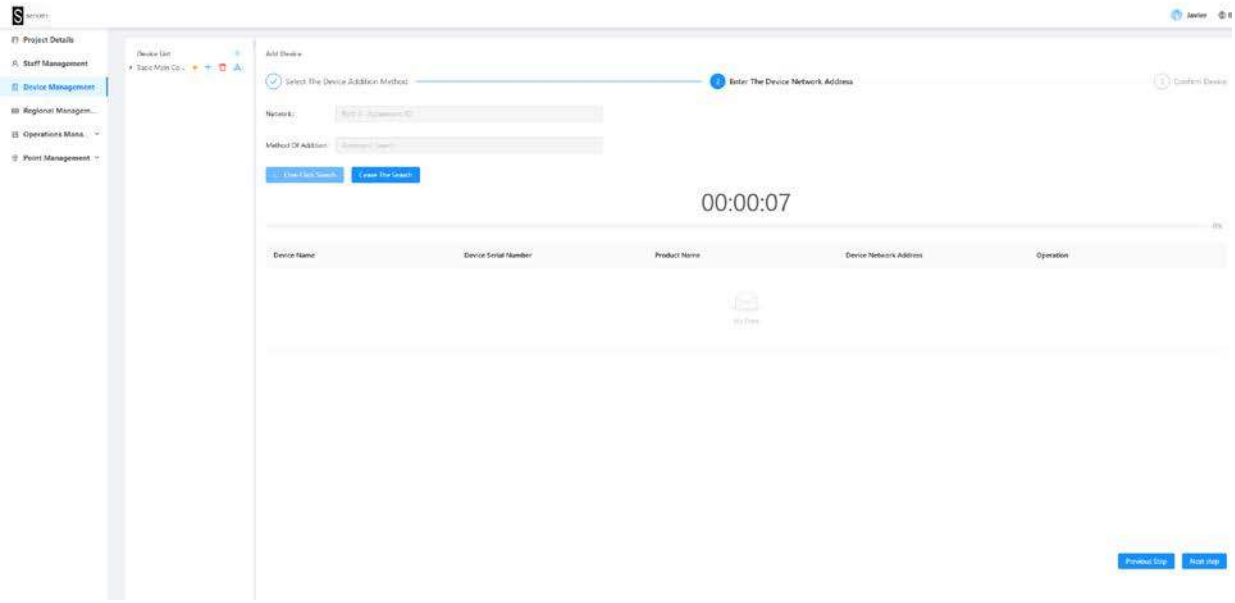


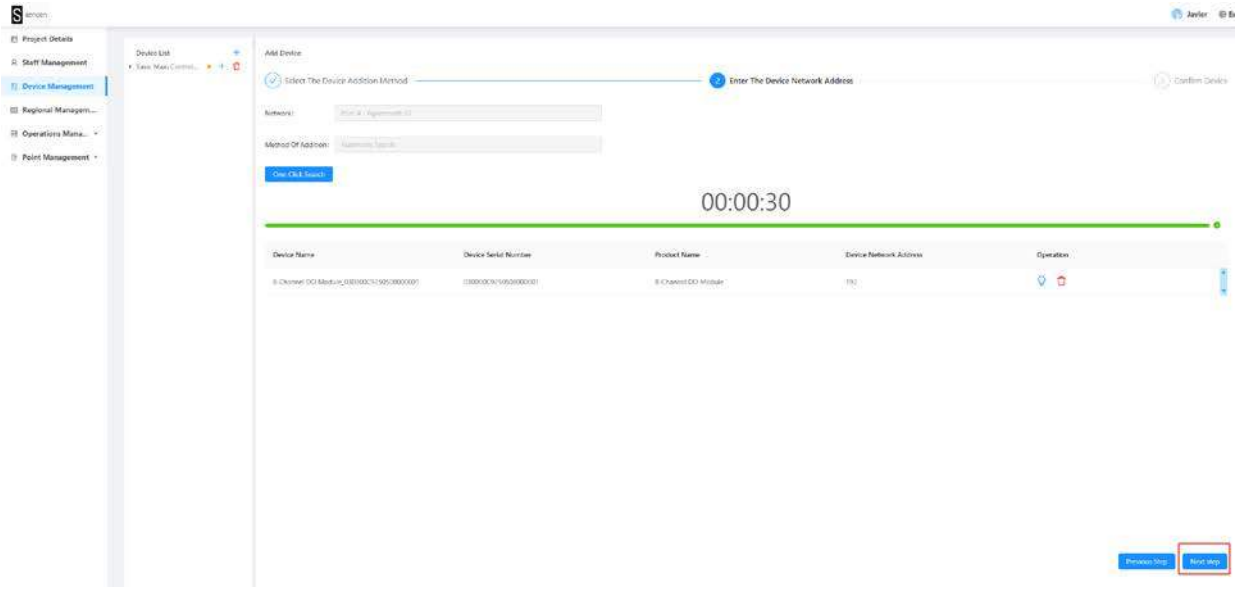


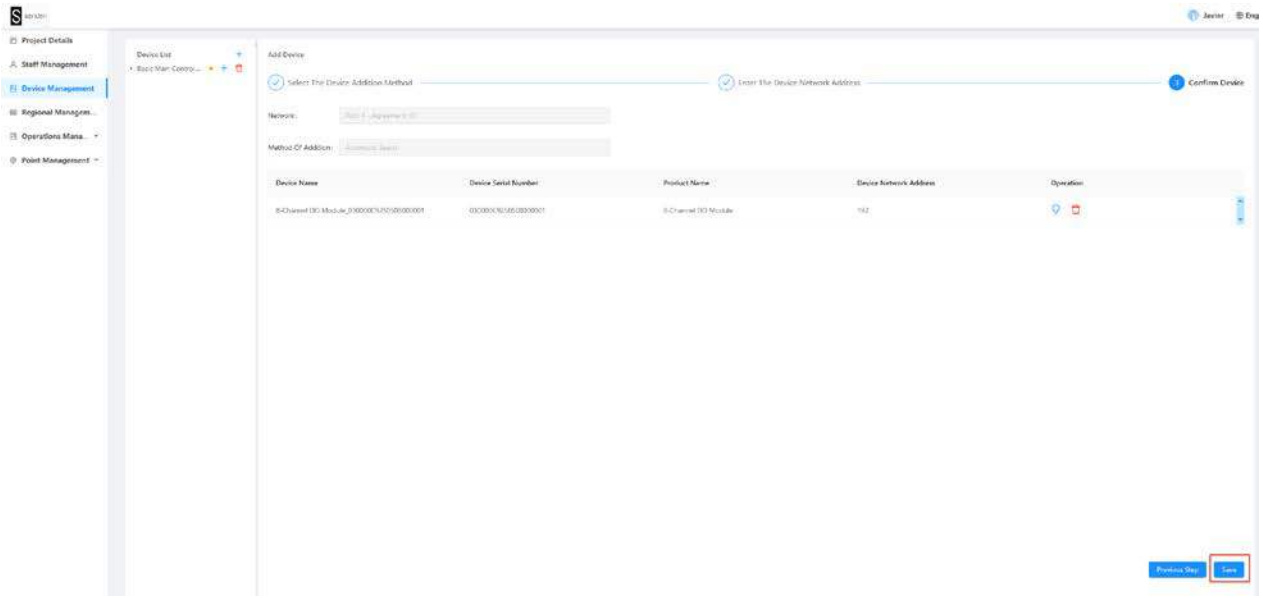
- Add sub-devices

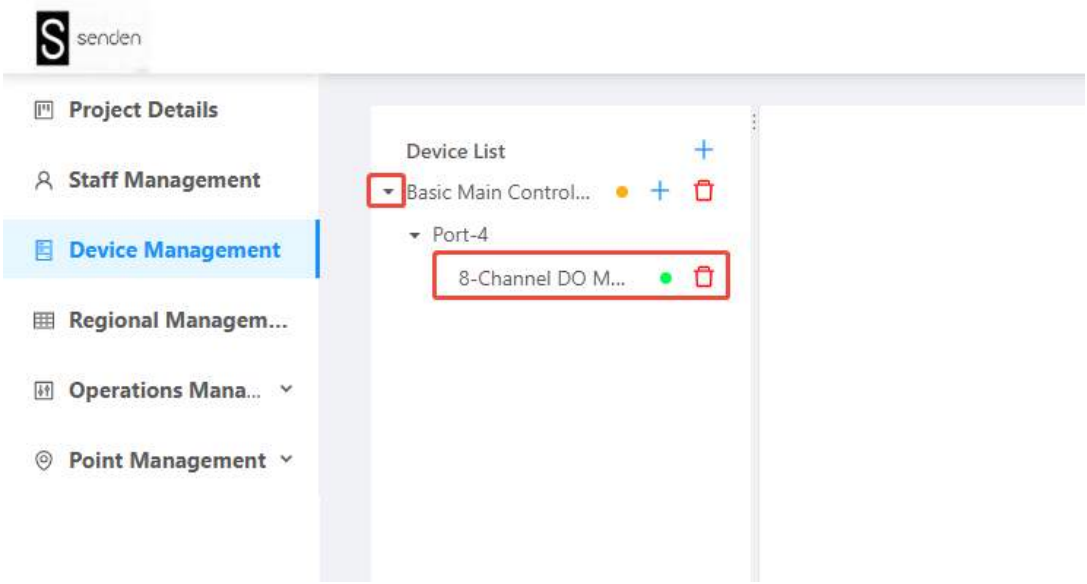

senden
Javier
English
Project Details
Staff Management
Device Management
Regional Managem...
Operations Mana...
Point Management
Device List
Basic Main Control...
Add Device
1 Select The Device Addition Method
2 Enter The Device Network Address
3 Confirm Device
Network:
Please Select A Network
Method Of A
Please Select The Method Of Addition
Port: 1 - Agreement: RS485
Port: 2 - Agreement: LoRa
Port: 3 - Agreement: RS485
Port: 4 - Agreement: IO
Manually Add
Automatic Search
Next step




00:00:07

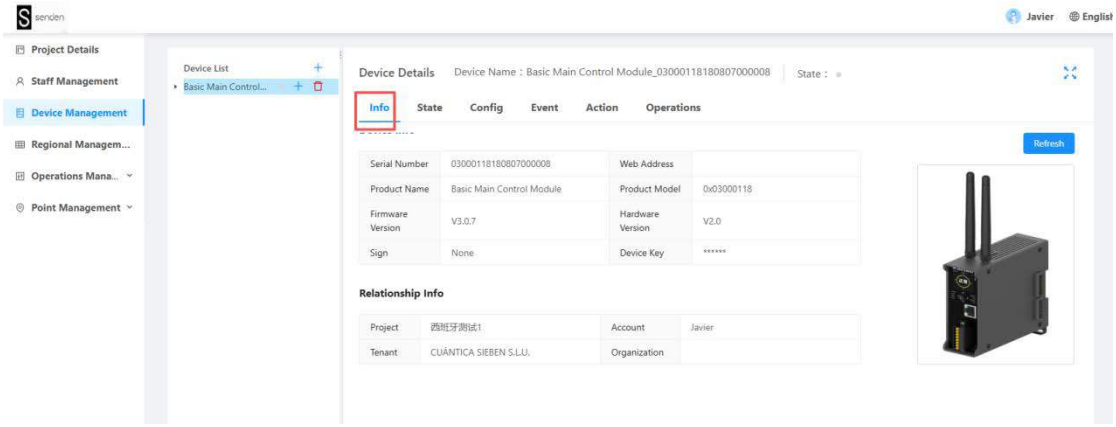

Project Details
Staff Management
Device Management
Regional Managem...
Operations Mana...
Point Management
Device List
Add Device
Select The Device Addition Method
Enter The Device Network Address
Confirm Device
Network:
Method Of Addition:
One-Click Search
00:00:30
Device Name
Device Serial Number
Product Name
Device Network Address
Operation
Previous Step
Next step

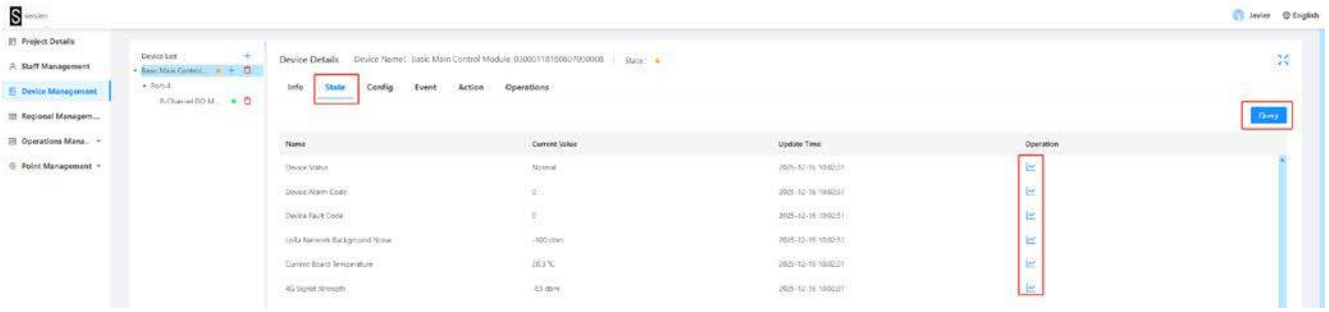

Project Details
Staff Management
Device Management
Regional Managem...
Operations Mana...
Point Management
Device List
Add Device
Select The Device Addition Method
Enter The Device Network Address
Confirm Device
Network:
Method Of Addition:
Device Name
Device Serial Number
Product Name
Device Network Address
Operation
Previous Step
Save



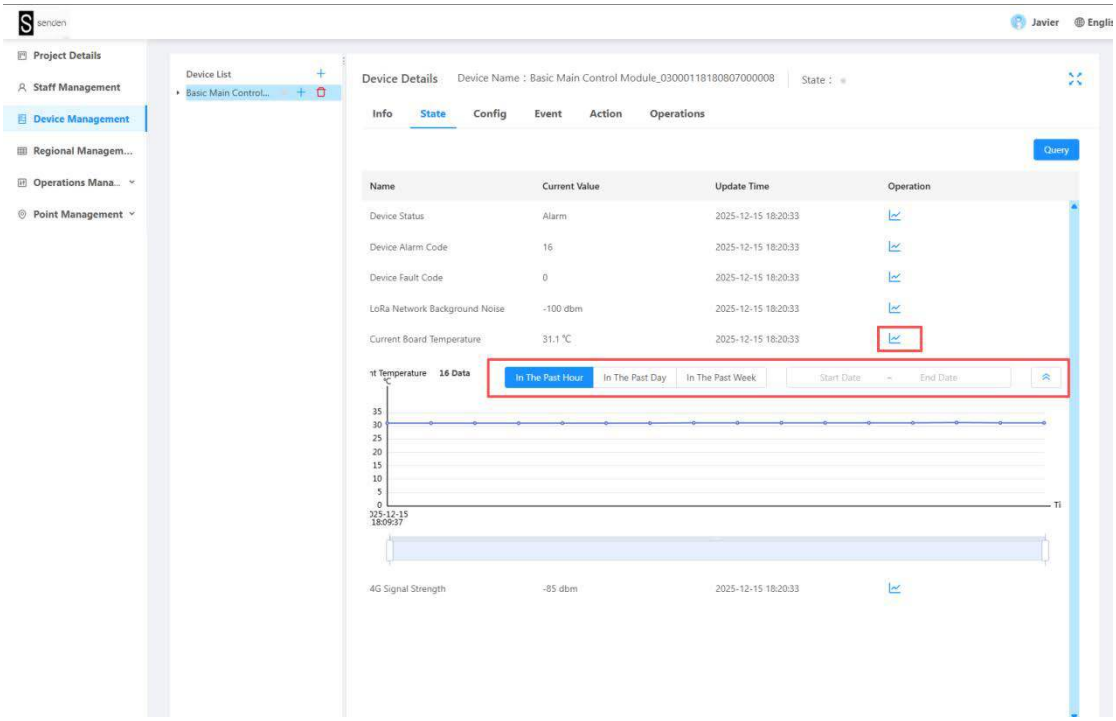
C-2 Deleted

C-3 Equipment Information and Status



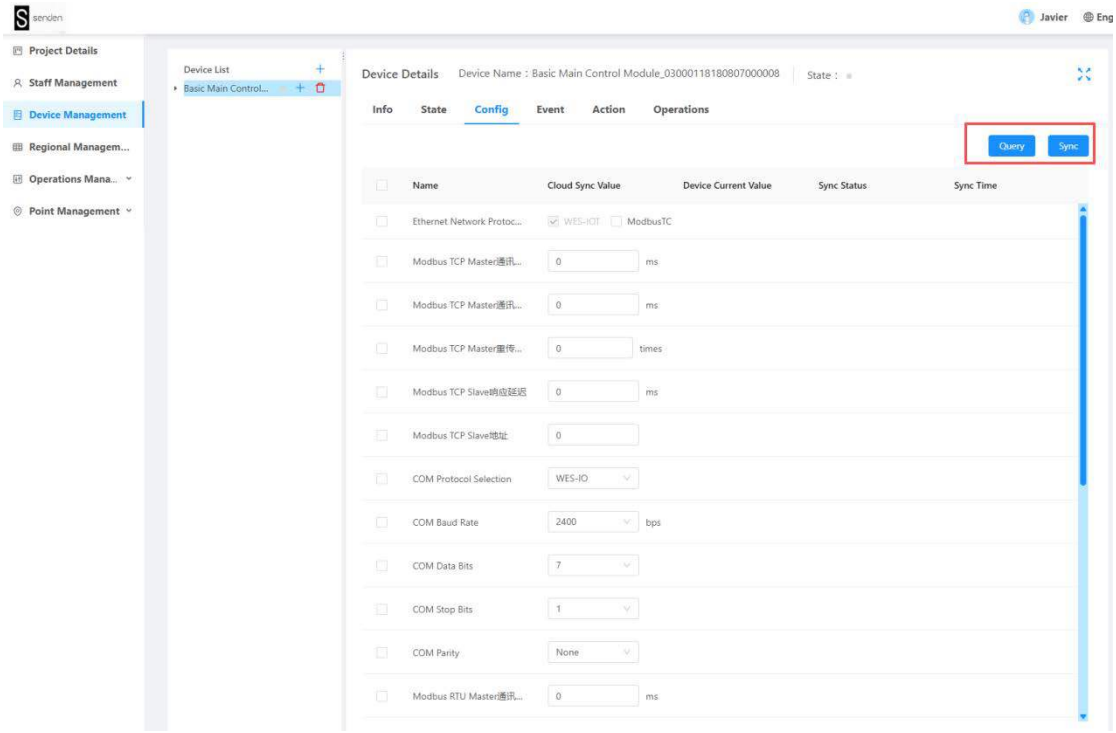


You can query the status and view the status information over a period of time

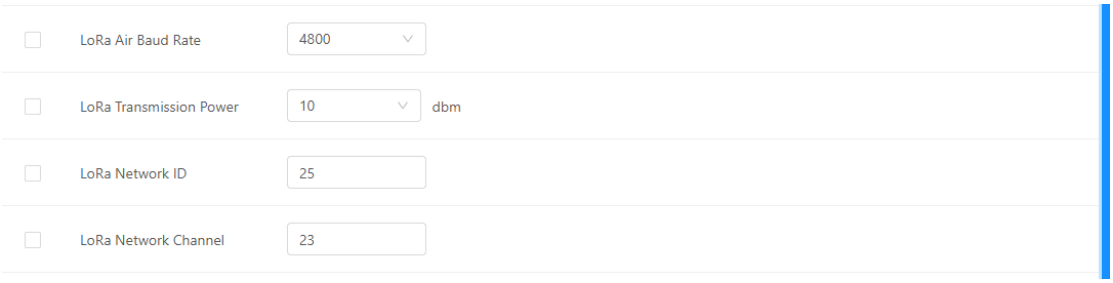


C-4 configuration

You can query the current device configuration information, or set the parameters, and click Sync to complete the setting



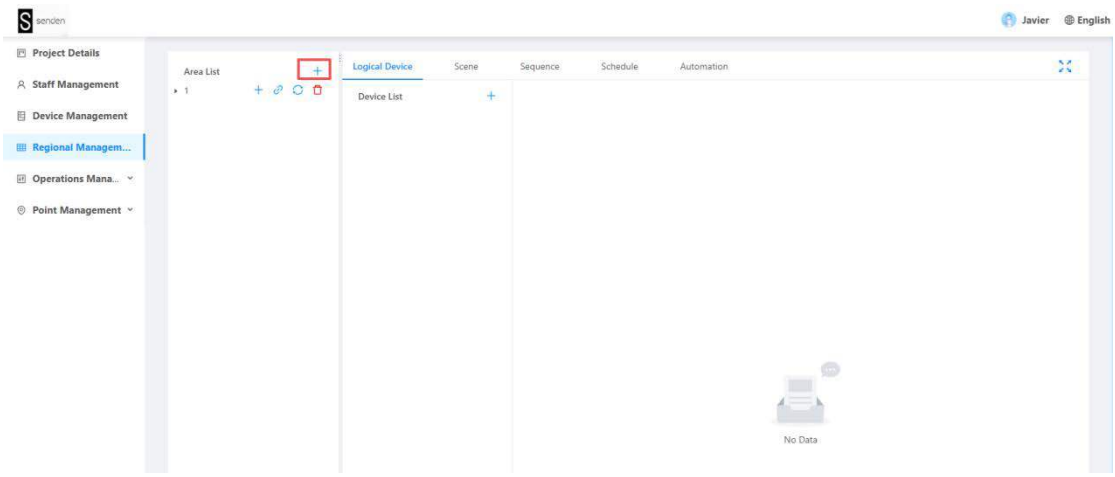
Parameter settings are roughly divided into three parts, Modbus-related parameters, LORA parameters, and operation modes;
For example, LORA parameters



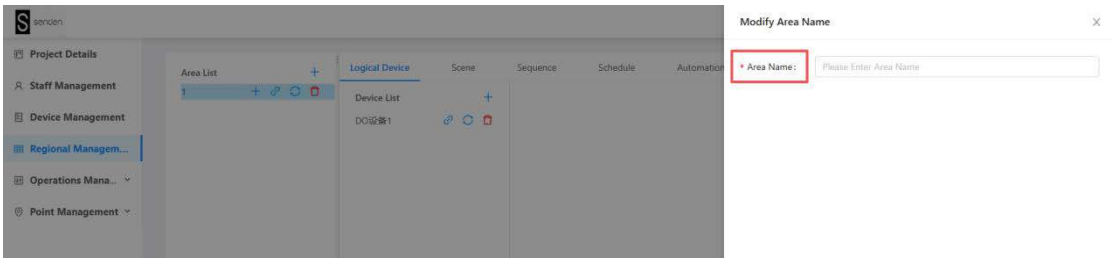
3.3 Regional management

Make the automation setup

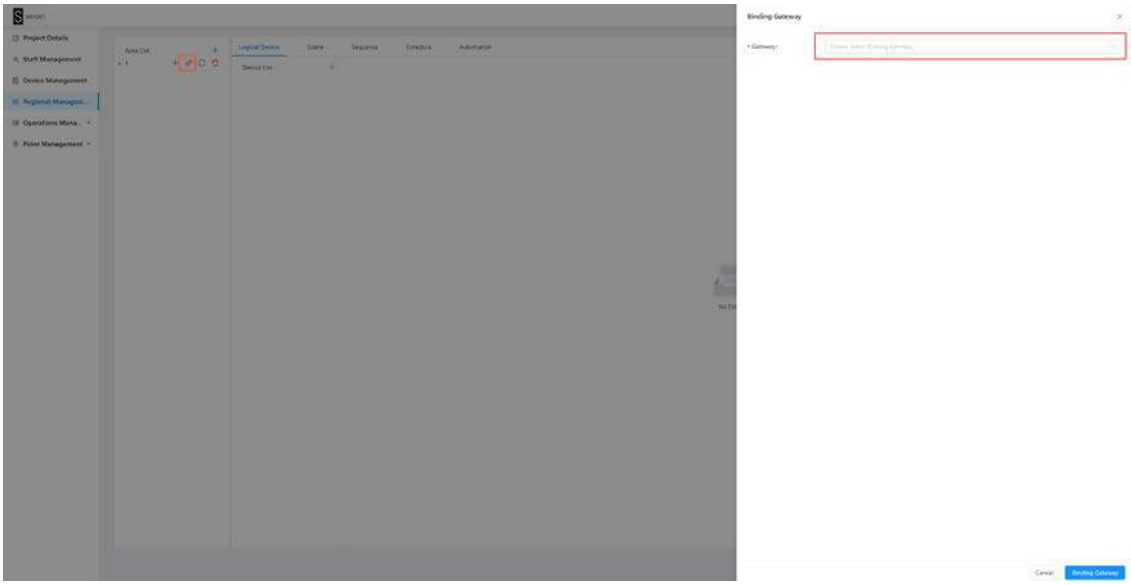
3.3.1 Creating a Region

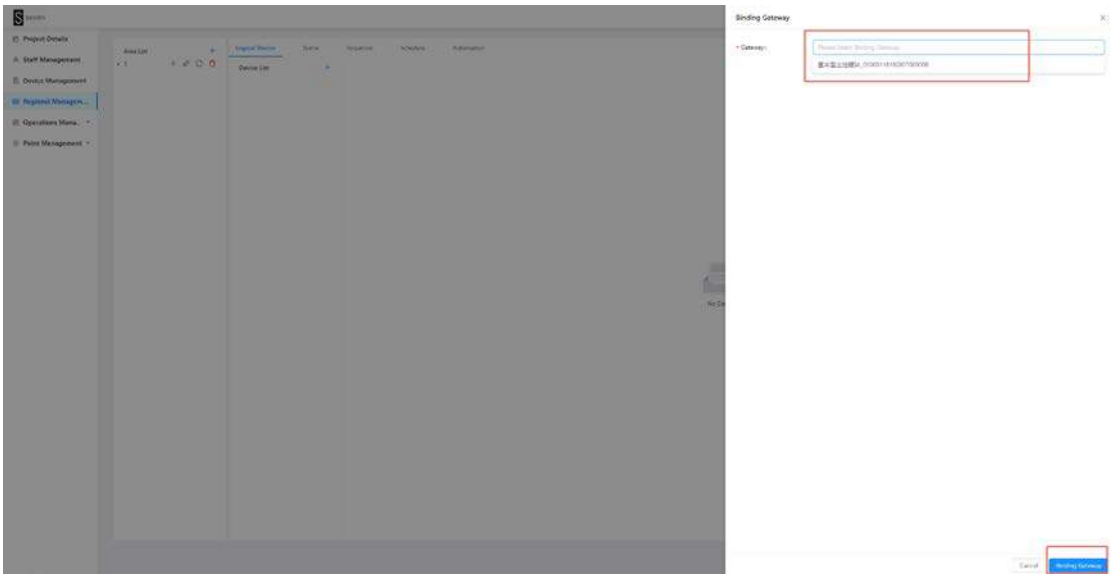


- Enter a name and save

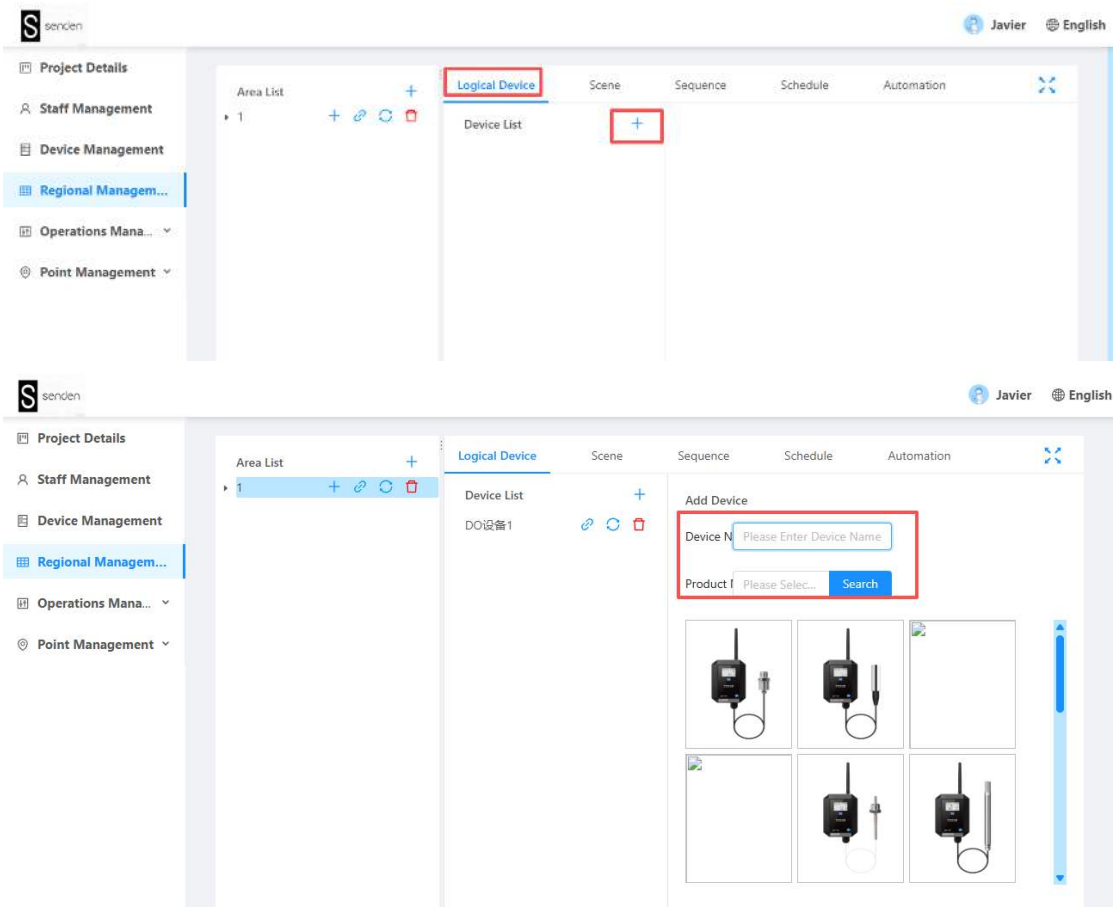


- Bind the gateway

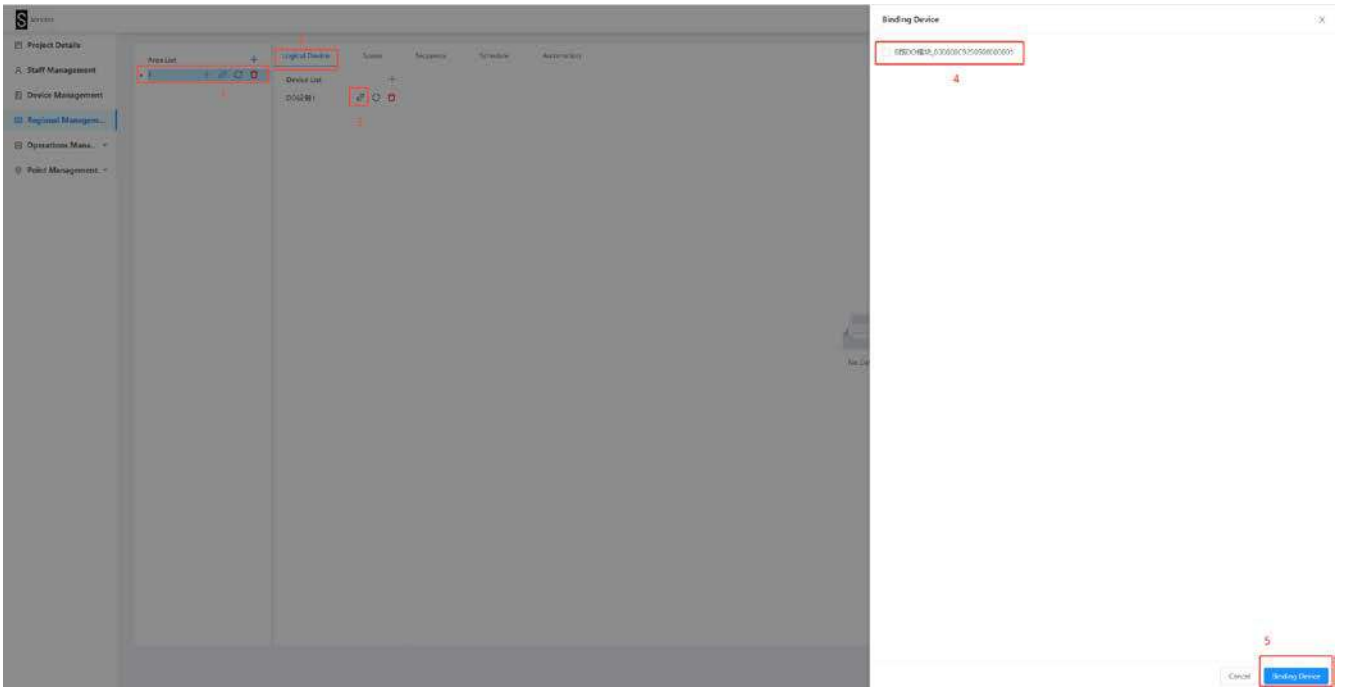




3.3.2 Creating a Logical Device



- Bind the device



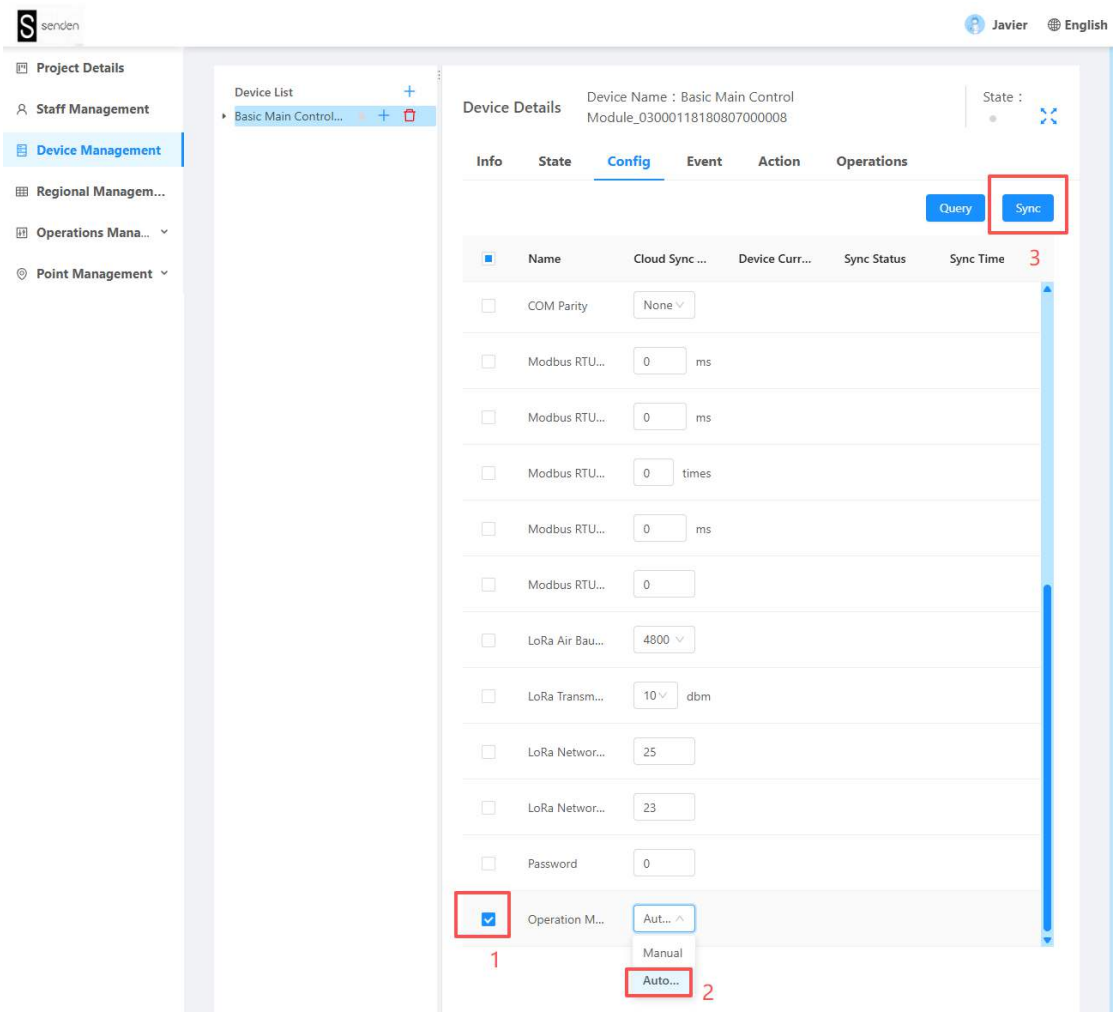
Step 4: Tick Up Devices

3.3.3 Automation Settings

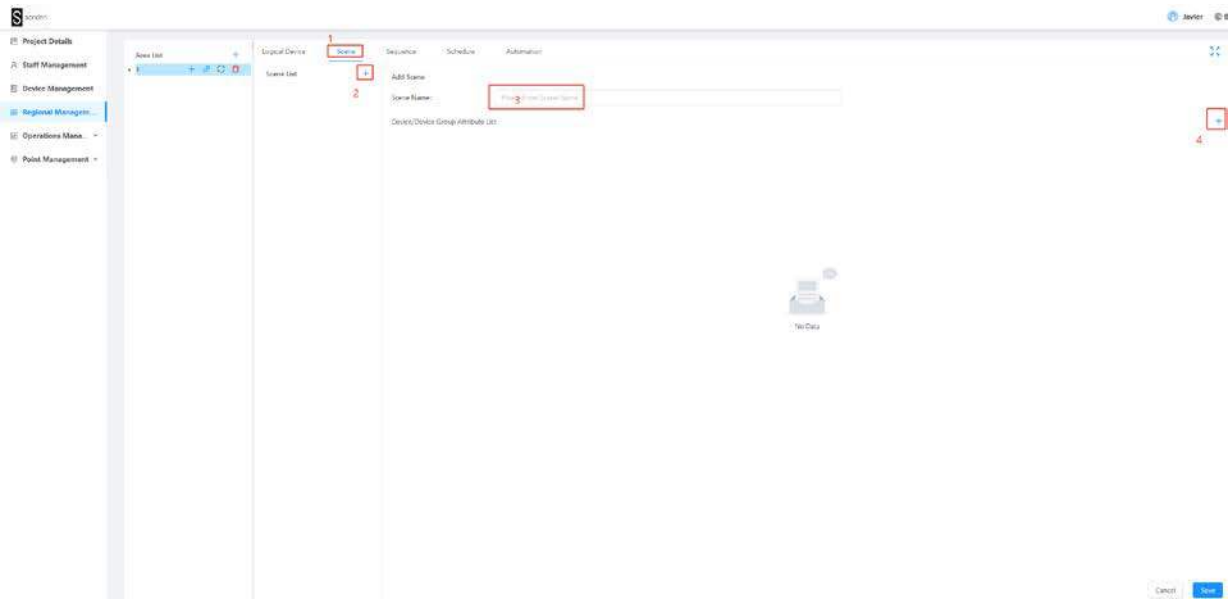
- For example

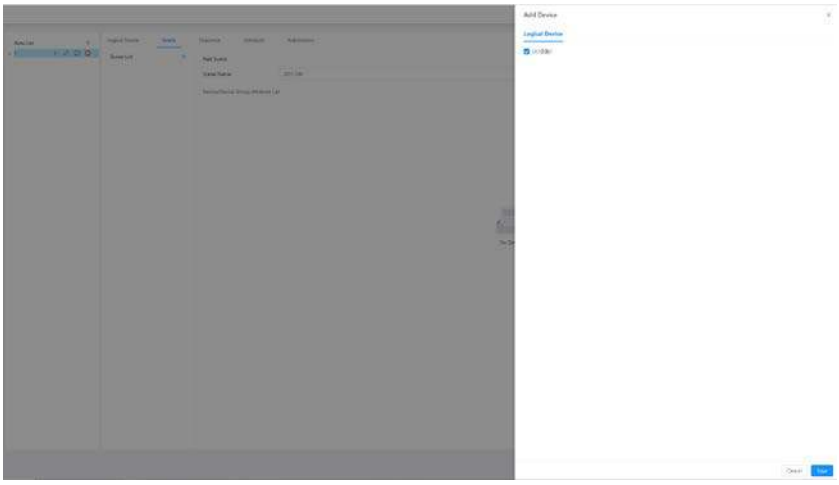
According to the devices that have been added to the area and the binding gateway, control the DO device channel 1 to open and close regularly

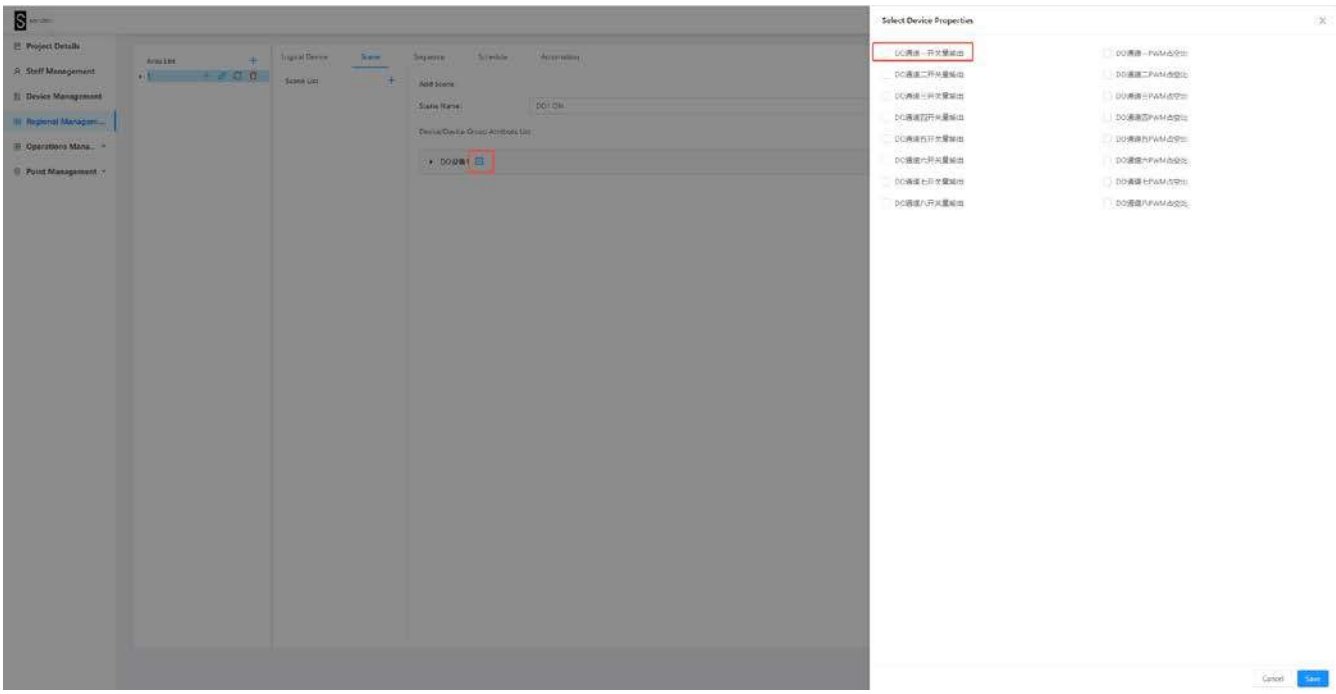
First, set the gateway to automatic mode

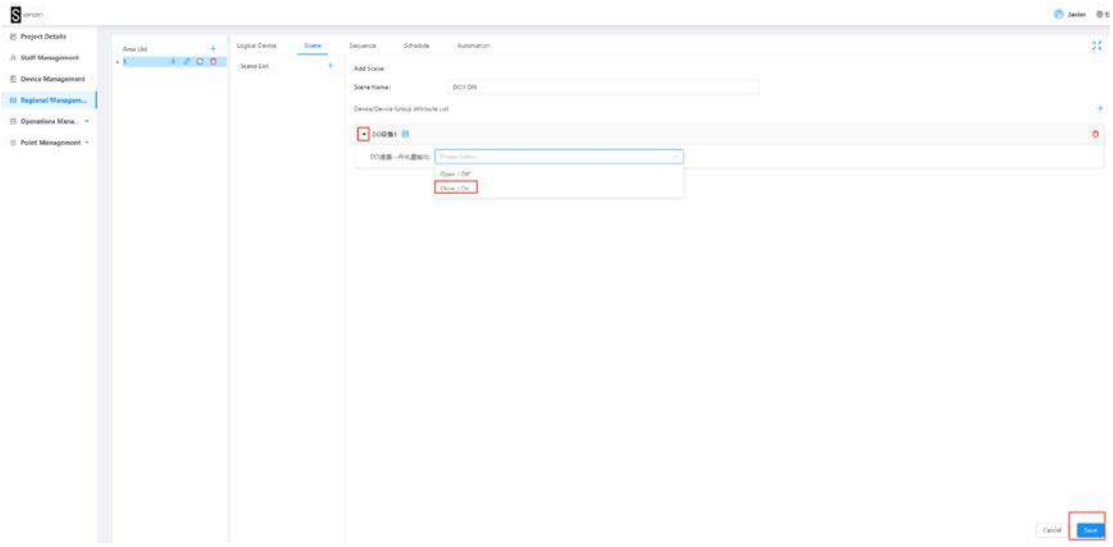


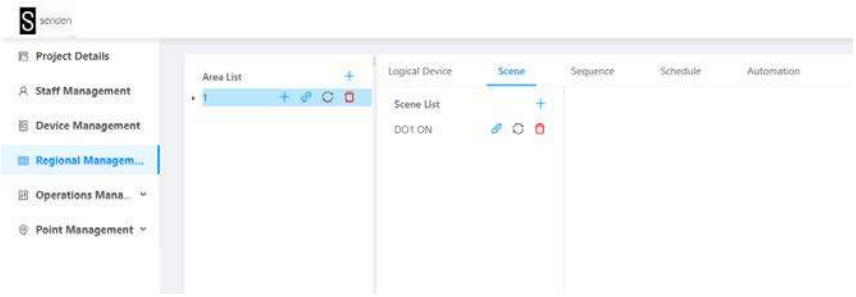
- Then set it up in Area Management



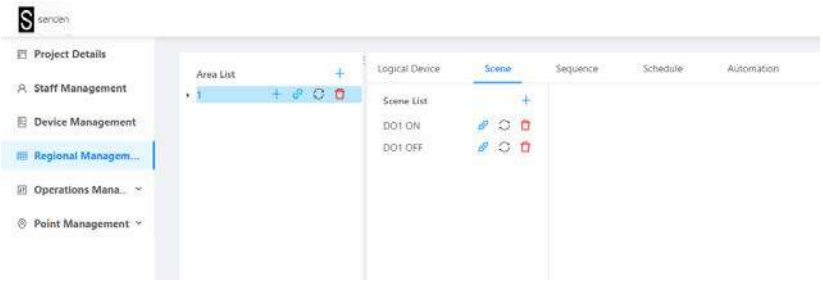


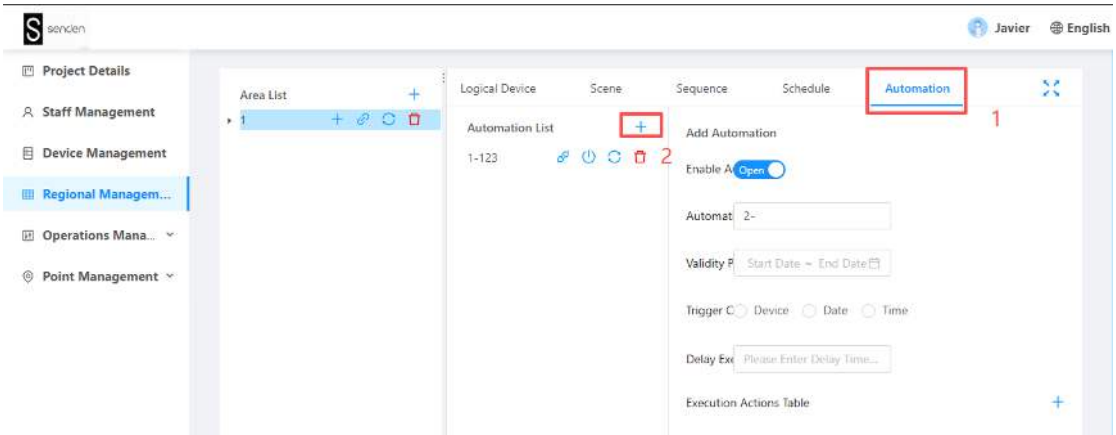

Project Details
Staff Management
Device Management
Operations Mana...
Point Management
Select Device Properties
Cancel
Save

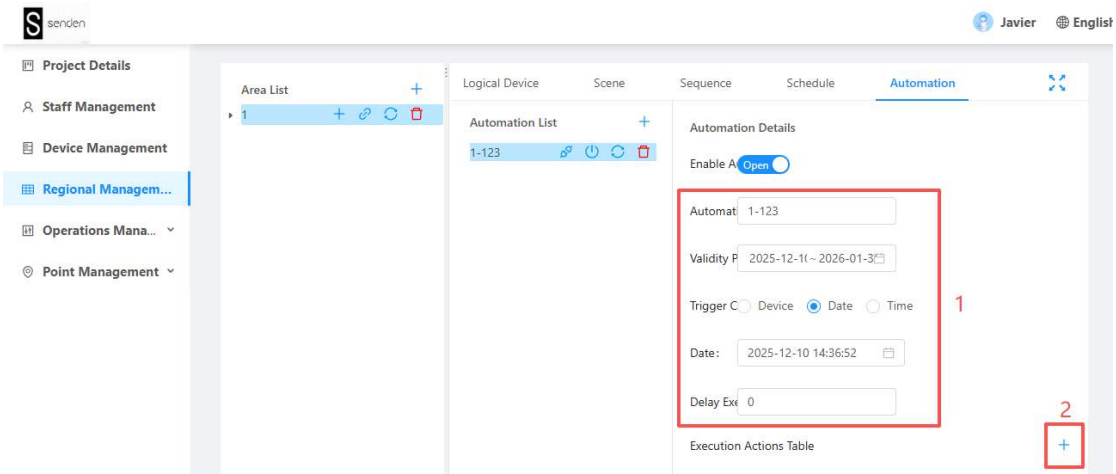




- Follow the steps above to create another DO channel 1 disconnect






senden
Javier
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Project Details
Staff Management
Device Management
Regional Managem...
Operations Mana...
Point Management
Area List
1
Logical Device
Scene
Sequence
Schedule
Automation
Automation List
1-123
Automation Details
Enable A
Open
Automat
1-123
Validity P
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Trigger C
Device
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2025-12-10 14:36:52
Delay Exe
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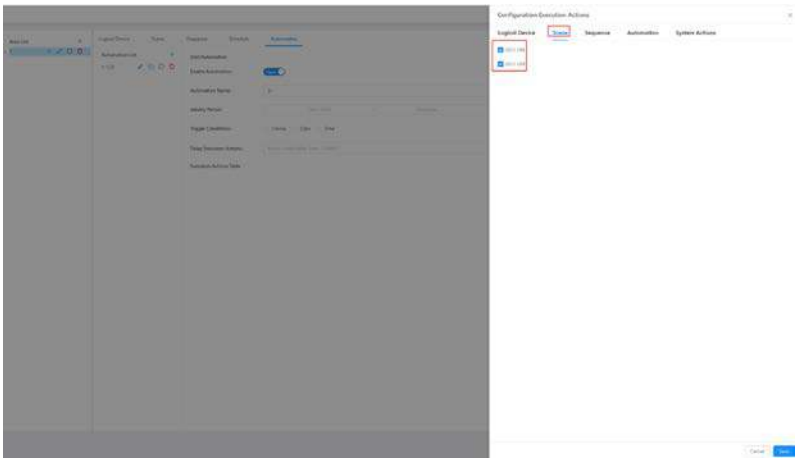
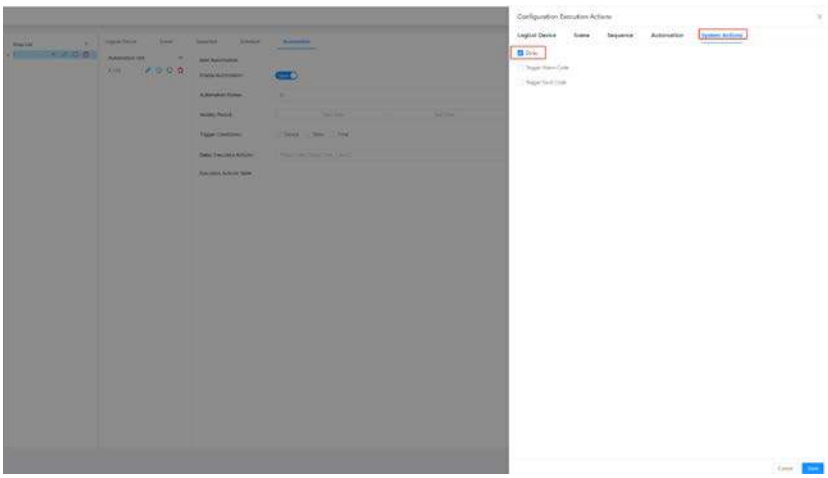
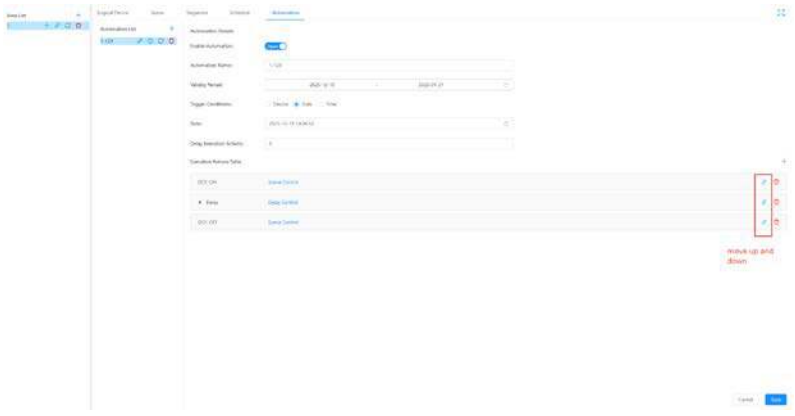
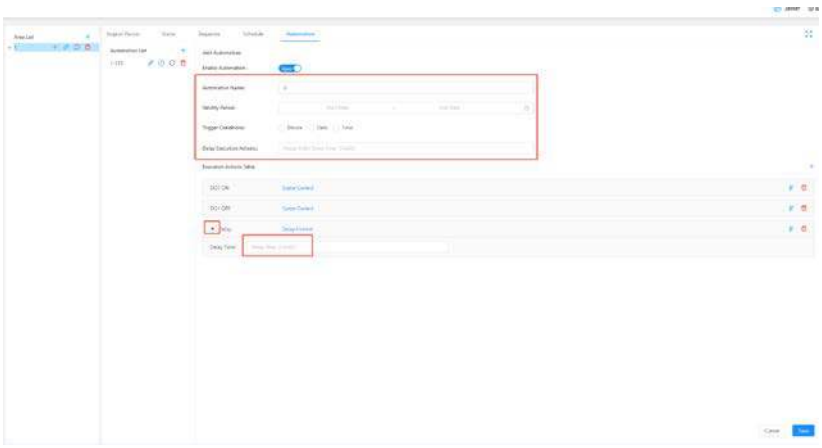
Execution Actions Table
+

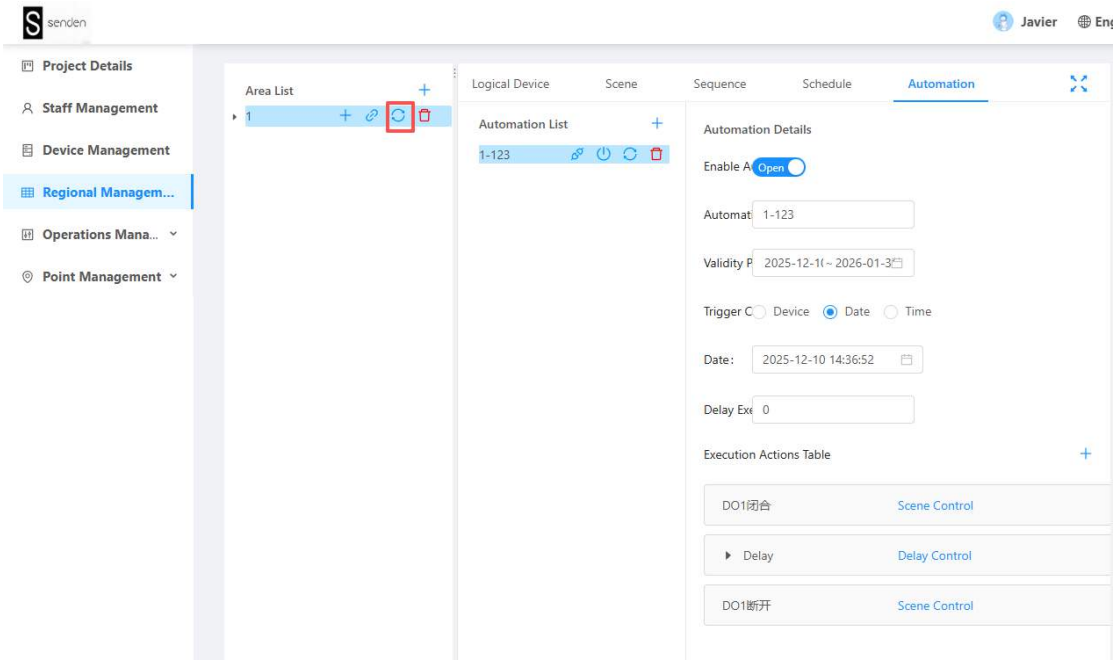








- Sync area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Staff Management
Device Management
Regional Managem...
Operations Mana...
Point Management
Area List
1
Logical Device
Scene
Sequence
Schedule
Automation
Automation List
1-123
Automation Details
Enable A
Open
Automat
1-123
Validity P
2025-12-1(~ 2026-01-3
Trigger C
Device
Date
Time
Date:
2025-12-10 14:36:52
Delay Exe
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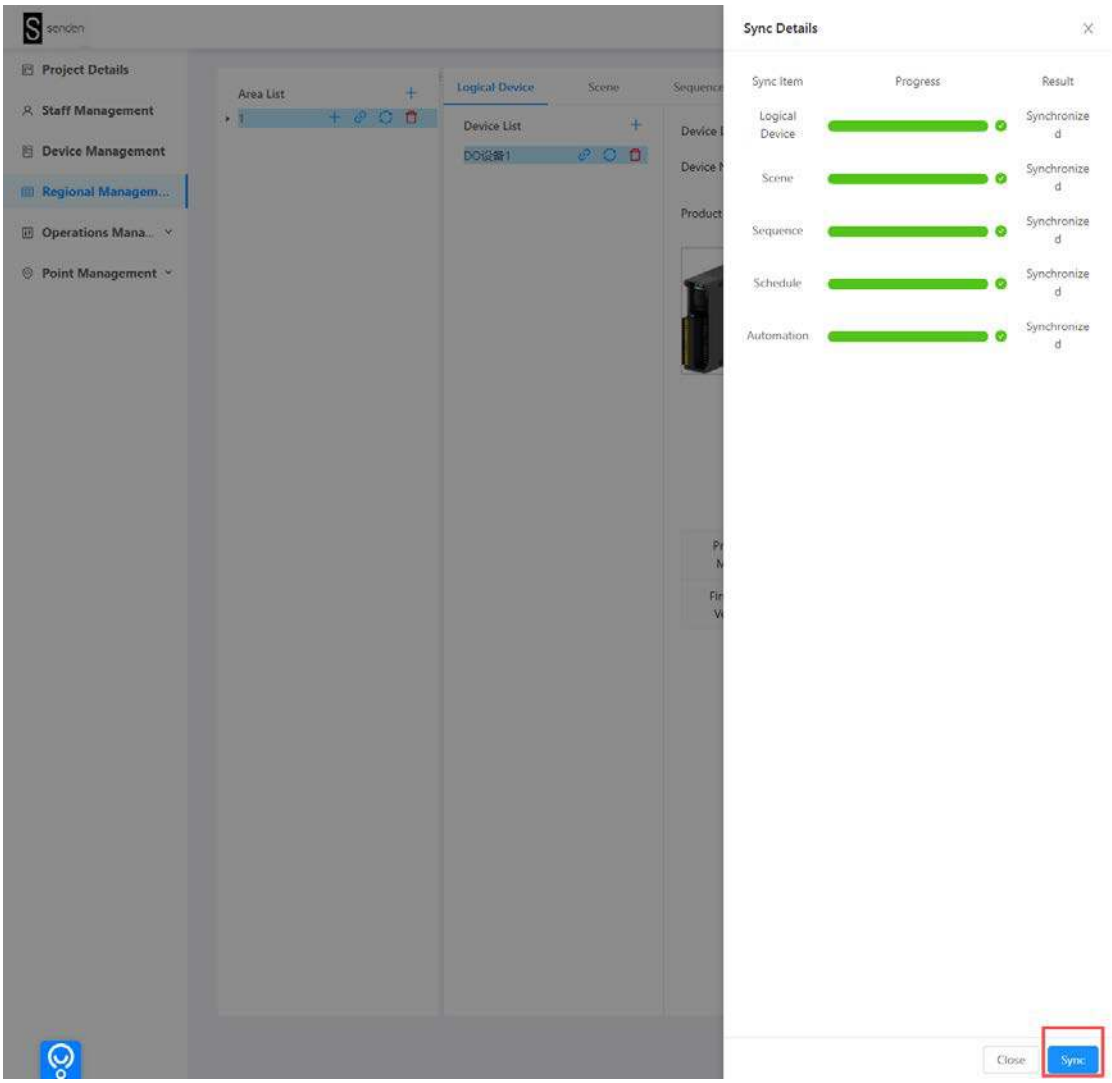
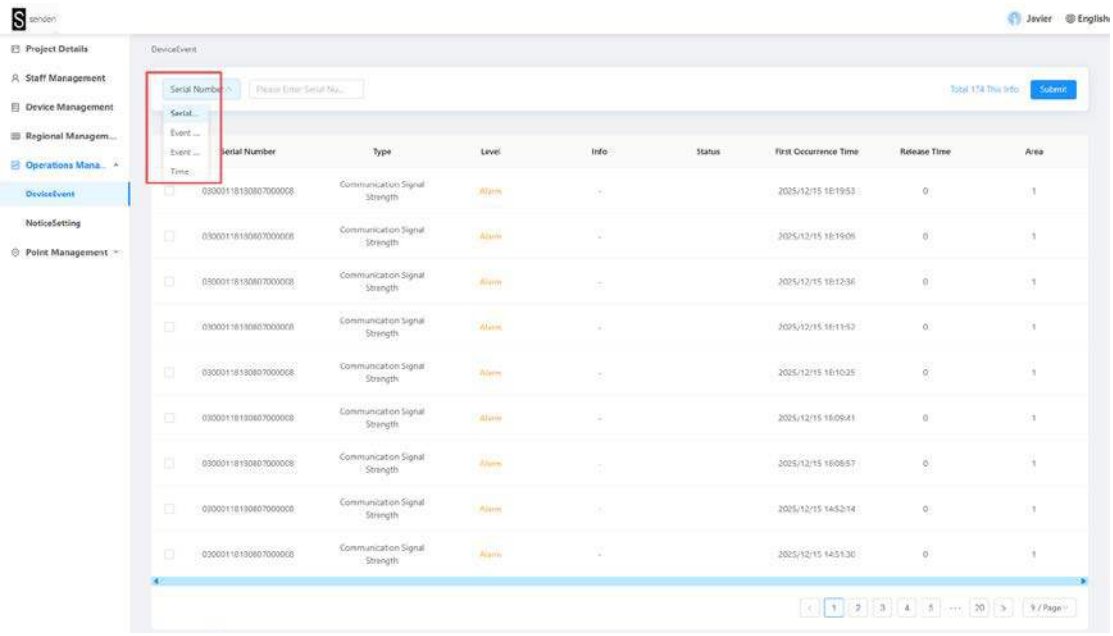
Execution Actions Table
DO1闭合
Scene Control
Delay
Delay Control
DO1断开
Scene Control



3.4 O&M management

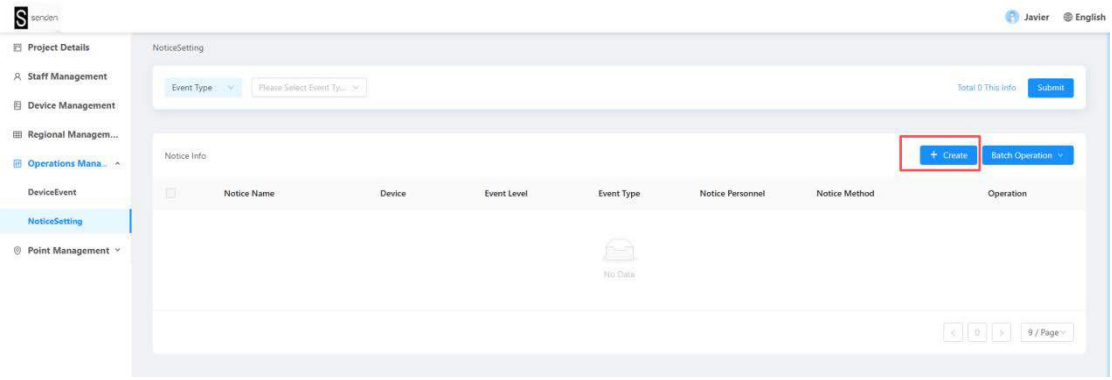
3.4.1 Device Events

It can be queried according to different conditions



3.4.2 Notification Settings

Alarm notifications are automatically triggered when conditions are met based on pre-set trigger conditions



3.5 Point management

It supports web configuration to facilitate customers to access third-party clouds and third-party sub-devices

3.5.1 Southbound passage

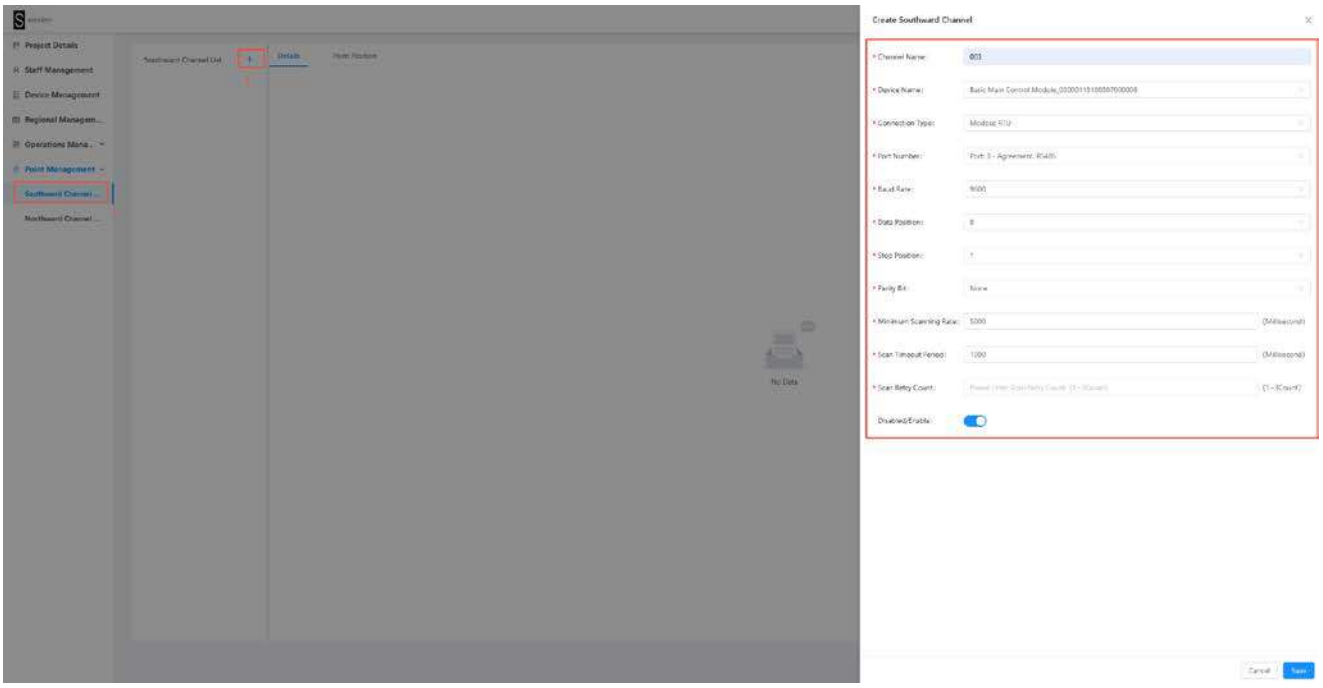
The gateway acts as the host and communicates with the slave device through this

communication bus

For example, the gateway acts as a Modbus Master, which reads and writes Modbus slave devices through RS485, and RS485 here is the southbound channel

a. Add southbound channels

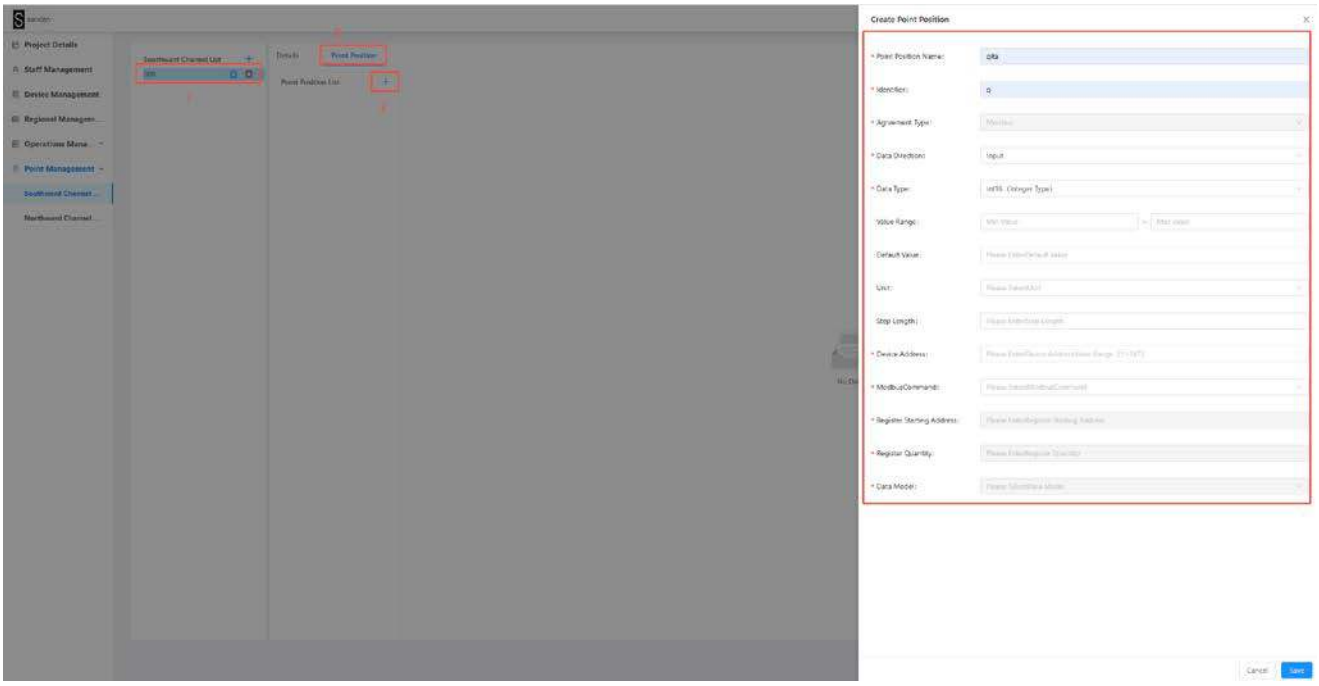
Add the southbound channel according to the image below



Type	Description	Note:
Channel name	The name of the identifier can be filled in according to the needs	
Device name	Select the SN number of the gateway you are using in the drop-down menu	
Connection type	Modbus RTU	
Port number	ports	
Porter rate	Choose according to your needs	
Data bits	Generally 8	
stop position	Generally 1	
Check position	Generally None	
Minimum scan speed	After the current scan is over, wait for that time to start the next scan	
Scan timeout	If the order sent does not receive a reply after the timeout, it is considered a failure	

The number of scan retries	The number of attempts after failure	

b. Add points



Type	Description	Note:
Point name	MQTT for jason packets	
Logo	MQTT for jason packets	
Types of agreements	Modbus	
Device address	The Modbus address of the device can be found in the device-related documentation for details	
Modbus command	Select the corresponding command as needed	
register start address	The register start address to be read	
Number of registers	Data to read	Please correspond to the data type
Data schema	Generally the big end	
Data direction	Input, output	
Data type	According to Modbus from the documentation of the device	

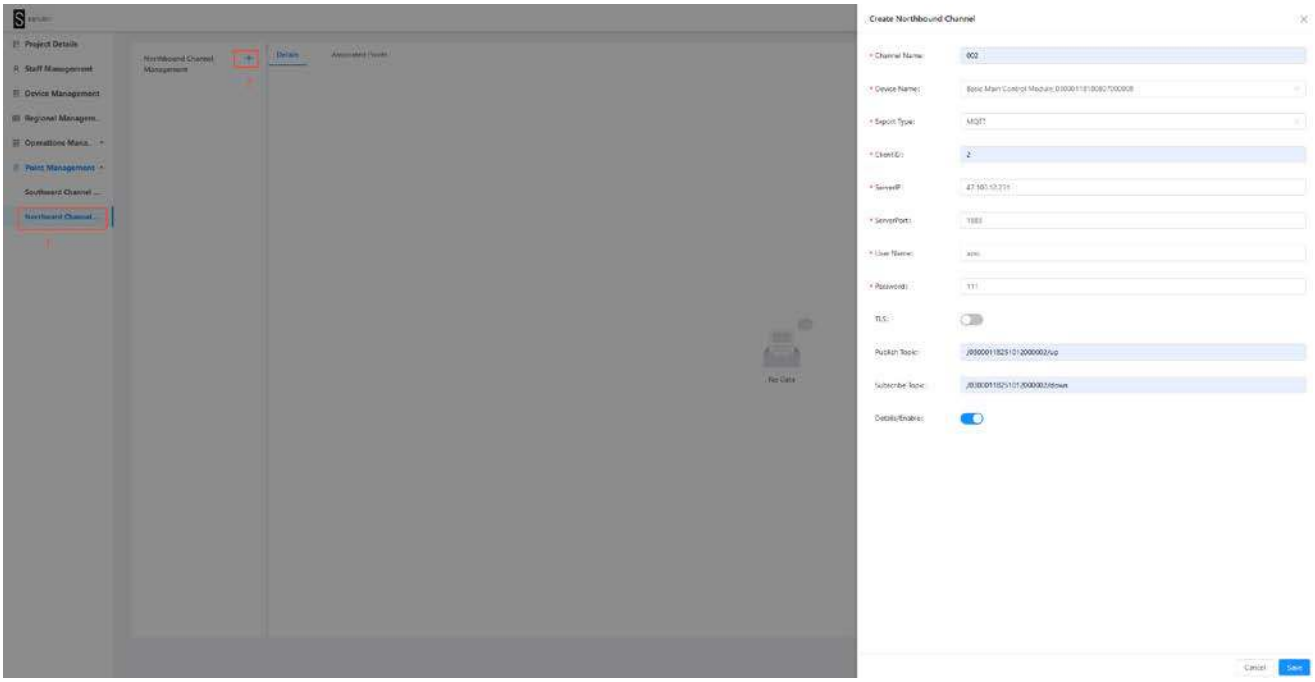
3.5.2 Northbound Channel

The gateway acts as a slave and communicates with other devices through this channel

For example, the cloud uses MQTT to communicate with the gateway, and MQTT here is the northbound channel

a. Add a northbound channel

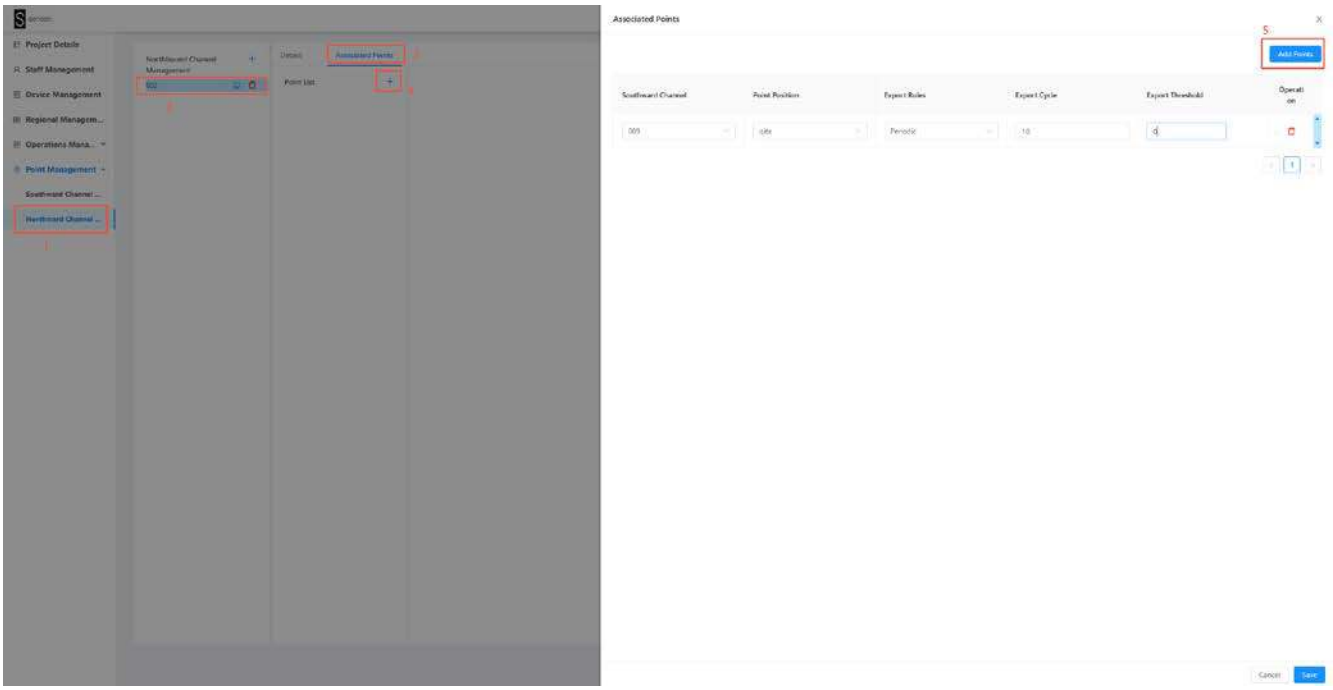
- Here's what we tested, borrowing from our testing environment



- Publish topics and subscription topics cannot be filled with the same value

b. Add the associated points

- After the addition is successful, you can receive the data on MQTT
- Just fill in 0 for the threshold



8.3. Data format

3.6 Data reporting

3.6.1 Format

```
{
  "sn": "03000118180807000001",
  "version": 2,
  "time": "2025-11-19 10:39:47",
  "dplist": [
    {
      "id": 212,
      "status": "ReadSucceed",
      "value": 0,
      "symbol": "channel-1",
      "unit": ""
    },
    {
      "id": 215,
      "status": "ReadFailed",
      "value": 0,
      "symbol": "c2",
```

```
      "unit": "mA"
    }
  ]
}
```

- It is possible to send it under contract
- There are many points set in the web page
- The reporting interval of each point is inconsistent

3.6.2 Content description

- SN: The gateway serial number, which is a unique gateway identifier
- version: The version number of the current format, and if the format changes in the future, the number will also change simultaneously
- time: The time when the device sent the packet
- dplist: The number of reported data points will change according to the number of settings on the web page
  - ID: The unique ID number of the point, obtained from the web page. This ID number will not be duplicated for WEST products
  - status: The current point reading status
    - Uncertain: The data for this point is not updated
    - ReadSucceed: The data for this point has been updated
    - ReadFailed: The point data failed to read
  - value: The point reading
  - symbol: The "flag" set in the web page, if not set, it is a null value ("")
  - unit: The "unit" set in the web page, if not set, it is a null value ("")

3.7 Data distribution

3.7.1 Send

```
{
  "sn": "03000118180807000001",
  "version": 2,
  "seq": 1022,
  "dplist": [
```

```
    {
      "id": 214,
      "value": 1
    },
    {
      "id": 215,
      "value": 0
    }
  ]
}
```

- A single package of data can be set up to 16 points

3.7.2 Description of content

- SN: The unique identifier of the device, which needs to be matched with the device
- version: format version number, which is convenient for subsequent multi-version format support
- seq: The serial number of the data frame, which will be included in the reply frame to facilitate the correspondence of sending and receiving messages
- dplist: The content of the point that needs to be set
  - id: The unique identifier of the dot, obtained from the web page
  - value: The value that needs to be set
    - Note that the device does not check the range, and if you set an illegal value, an abnormal situation may occur
    - For example, the legal setting range of the point is 0~100, allowing users to set values outside the legal range.

3.8 Replies

3.8.1 Normal reply format

```
{
  "sn": "03000118180807000001",
  "version": 2,
  "seq": 1022,
  "time": "2025-11-19 11:22:01",
```

```
  "res": "ok"
}
```

3.8.2 Abnormal reply format

```
{
  "sn": "03000118180807000001",
  "version": 2,
  "seq": 0,
  "time": "2025-11-19 11:23:11",
  "res": "parse error"
}
```

```
{
  "sn": "03000118180807000001",
  "version": 2,
  "seq": 1022,
  "time": "2025-11-19 13:07:22",
  "res": "warning",
  "fail list": [
    218,219

  ]
}
```

3.8.3 Description of content

- seq: from the seq in the sending frame, if the sending frame is abnormal or not set, the default is 0
- res: The result of the current setting

Result	Description
ok	The device is correct and resolves the packet, and the point is legitimate
warning	There are rejected points, which may be ID errors, not bound to

	northbound, no value, etc
parse error	If the packet parsing is abnormal, there is a high probability that the JSON format is incorrect
sn error	The serial number is wrong and does not match the device
version error	version is not supported
point parse error	Failed to obtain point information
point num error	The number of points exceeds 16, exceeding the single processing capacity, and the whole package of data is not processed
other error	Other unknown causes

- fail list：
  - A list of points that are in the correct format but rejected by the device

Chapter 4 Delivery list

The software platform is delivered and the Chinese server deployment version will be delivered in the form of a notepad. Deliverables include:

Delivery list

Serial number	Type	Name	Login URL	Account number	Passwords
1	Test platform	Things platform for IoT hardware (testing).	https://www.west-dh.com		
2	Test platform	Management platform for specific application projects (testing)	https://www.west-dh.com/wessass		
3	formal platform	IoT hardware platform (formal).	https://www.west-iot.com		
4	formal platform	Management platform for specific application projects (formal)	https://www.west-iot.com/wessass		
5	Customized version of the platform Instruction manual (English).	User Manual V1.1 for WEST - AIOT Cloud Platform			

Notes:

1) The login URL of the test platform is temporarily used for training and production of delivery documents, if there is any change, please refer to the latest URL notified by the account manager; Please ask your account manager for your account password after completing the subscription payment.

2) Customized products may be slightly different from standard products, please refer to the order;

3) The instruction manual may be updated with the delivery of software products, please always refer to the latest version;

Chapter 5 Disclaimer

We believe that we should try to ensure that the document description is accurate when publishing. Considering the technical complexity of the product and the differences in the working environment, it is still difficult to exclude individual inaccurate or incomplete descriptions, so this document is for user reference only. We reserve the right to make changes to the product without notifying the user, and our company does not make any promises and guarantees in the legal sense. Encourage customers to provide feedback on recent updates to products and support tools.

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- This manual is an instruction manual for various functions, wiring methods, operation methods, etc. of the product.
- Please read this manual carefully before operation, use this product correctly, and avoid unnecessary losses caused by incorrect operation.
- If there are any changes to the contents of this manual due to function upgrades, please refer to the newly released document.
- We strive to be correct in the content of this manual, so if you find an error, please contact us.
- The content of this manual is strictly prohibited from reprinting or copying.
- After you finish reading, please keep it in a place where it is easy to access it at any time for easy reference.

The final interpretation of this manual is the property of the Company.

Chapter 7 Version information

version	Modify time	Modified by	Modify the content
Rev.1.0	2025-12-3	Dianlong Mu	Create original documents
Rev.1.1	2025-12-15	David Liu	Standard format

			English translation
Rev.1.2	2026-01-07	David Liu	1) Chapter 4 Change of Login Test URL in Delivery List 2) Introduction to System Customization Function Update