STS Vending and Management System
User Manual
V1.0

CONTENT

1. General

Web VMS is Joy Technology's 2nd generation of STS Vending System. It is designed by B/S structure, which only need to install a server and all clients can manage and vend via a browser everywhere. An operator never need a client have to install on a vending point PC, which cost a lot of maintenance for different sites.
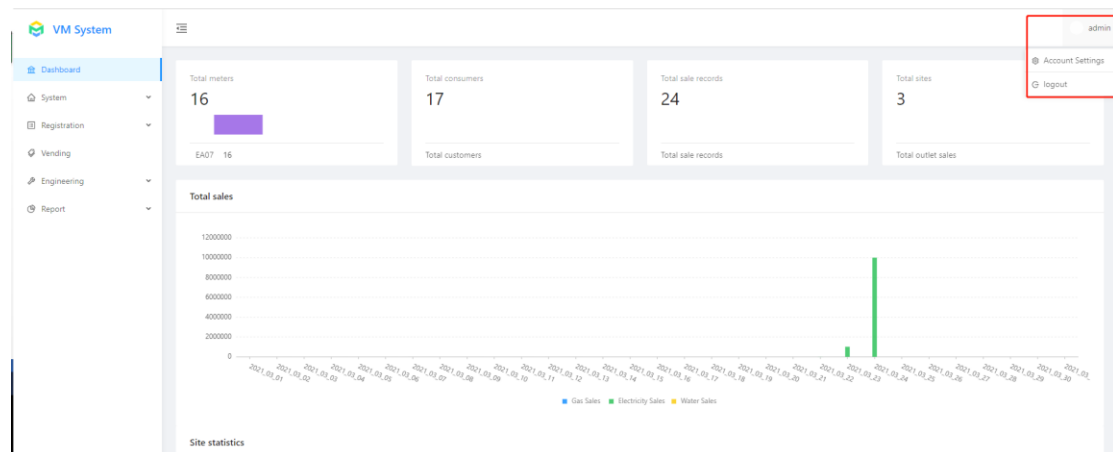
2. Login & Accounts

Enter the webpage address of STS Meter Vending and Management System in in browser and enter the correct account password.

The default account's initial password is provided by Joy. It can be modified after login on the top right corner, see below "Account Settings>Security Settings":
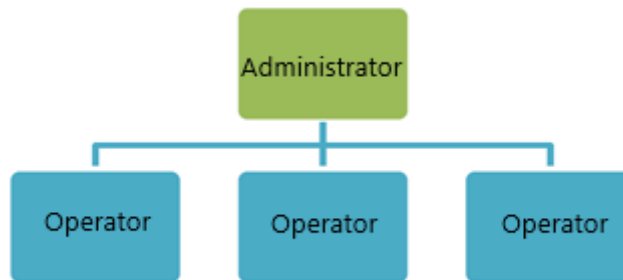
The account after login is the administrator account, which has all the permissions in the system. Multiple operator accounts can be created in "System"-"User" for sub-management. See section 2.5 for details.

3. System Configuration

Configuration steps of initial use:
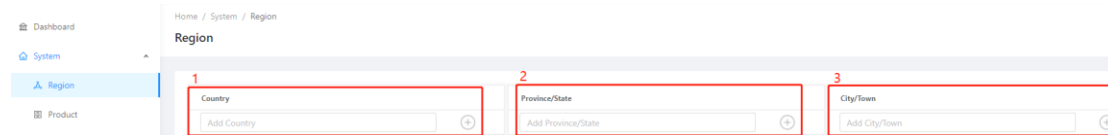
1) Region
2) Product*
3) Vending Point
4) Tariff
5) Security module
6) Setup
7) Consumer*
8) Meter*

All the items with "*" is required fields. 1)~6) are in module "System", while 7)&8) are in module "Registration".

3.1 Region

"Region" defines the regions that will be used by user/consumer in the system.

By entering a Country/State/City name and click the cross "⊕". The sequence of adding "Region" is Country>Province/State>City/Town in module "System", and the latter can be operated only after the former is selected.

3.2 Product

This is to manage product information, including:

1) Product model
2) Product name
3) Meter type
4) Manufacturer

3.3 Vending Point

Vending Point is to help define where an operator's figure belongs:
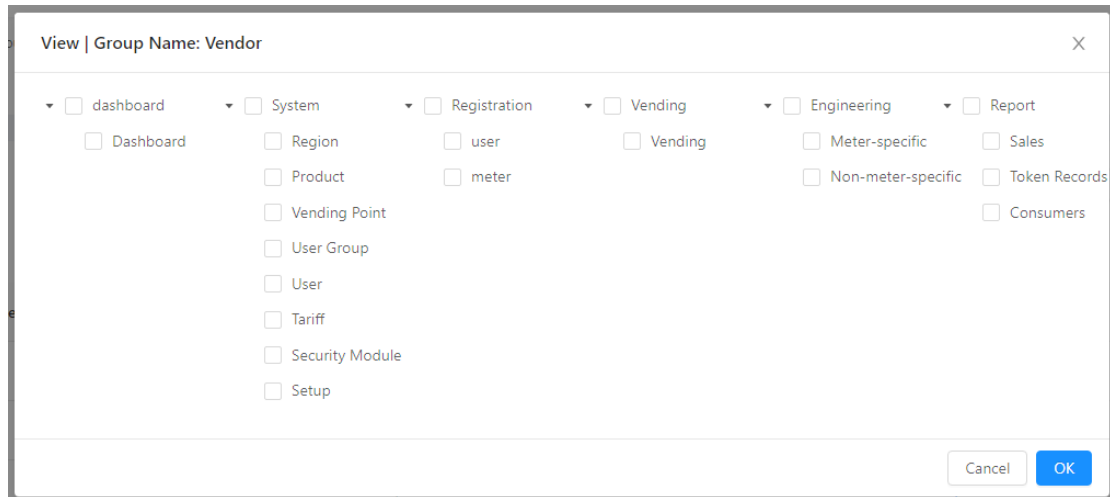
- Point Name
- Region
- Address
- Contact Person
- Telephone
- Email

Operator can only manage the data under the appointed vending point.

3.4 User Group

It is used to manage different types and levels of operators to access different function menus. Creat a group with basic name and description, and define the access level in "Permissions".

Permission can be selected in "Permissions". It can be decided by manager and "System" is not suggested open to operators.

3.5 User

"User" is the operator definition with different permissions for different vending points or operators. A user is consisted by the following information:

1) Group name(see section 2.4)
2) Region(see section 2.1)
3) Username
4) Password
5) Vending Point(see section 2.3)
6) Email
7) Status

3.6 Tariff

Tariff is an important basis of settlement amount. Process of adding a tariff is divided into two steps: creating a tariff name and adding a tariff plan (One meter corresponds to one tariff, while one tariff could be used by lots of meters):

1) Enter name and select meter type to create a tariff
2) Enter tariff plan name, setup tariff plan and select effective date when adding a tariff plan. The plan including fixed tariff setting, step tariff setting, step penalty setting as below:

- Fixed Fee: refers to a fixed fee charged once in each fixed period. The period can be set each time, every day, every week, every month, or every year.

- Step Tariff: According to the electricity tariff steps, different unit prices and tax rate can be set for each step. For example, the starting kWh of the first step is 0, the ending kWh is 150, the unit price is 3 USD, and the tax rate is 0.1%; the starting kWh of the second step is 150, the ending kWh is 2000, the unit price is 4 USD, and the tax rate is 0.2%.

- Step penalty: set a stepped penalty according to the amount of a single purchase which can max setup to 5 steps of fines. For example, for a single purchase of 0~500kWh, a fine of 0 USD; 500kWh to 2000kWh, a fine of 100 USD; 2000kWh to 5000kWh, a fine of 500 USD.

3.7 Security Module

Security Module is a main part of vending and generate Token.

Adding a security module by enter address and port, and enter module name after connect test successful. The key file needs to be uploaded when creating it for the first time.

Support Legacy algorithm and the latest STS6 algorithm. Multiple security modules can be added, but an algorithm can only correspond to one security module.

3.8 Setup

3.8.1 License

System license is used to setup account valid date, supported meter quantity limitation. All information as well current meter quantity is showed in license details.

3.8.2　Currency Unit

There are three common currency units set in the system, and the currency unit can also be customized.
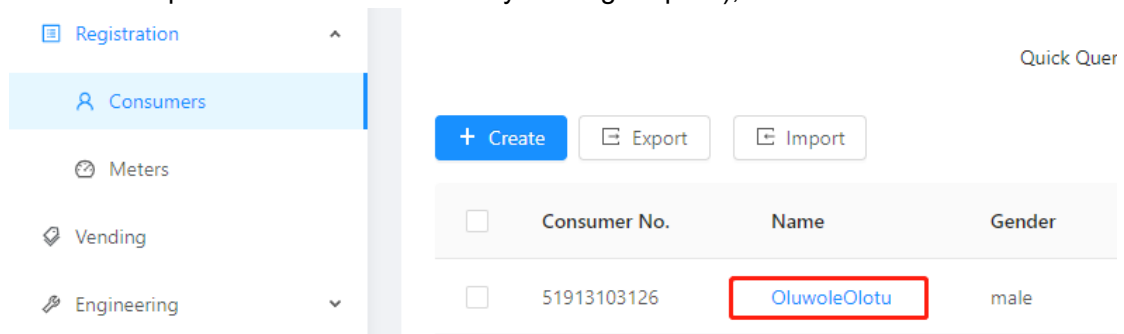
3.8.3　Settlement Method

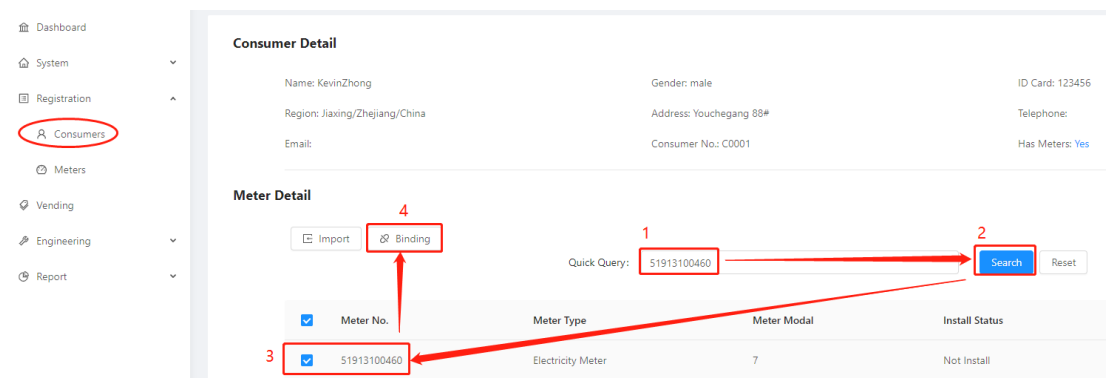Round up or down settlement can be selected.

4.　Registration

4.1　Consumers

It's used to manage the addition, deletion, modification, batch import, batch export, query, and binding of all meter users. Information includes name, user number, region (see section 2.1 for details), address, gender, ID number, email address, and phone number.

- Click a consumer name to bind a meter to a consumer. (Importing meters in this page of "Consumer detail" can automatically bind to the user. Batch importing template can be downloaded by clicking "Import");

- Search for unbound meters with "Meter No." in the "Meter Detail" area, and select them to bind to a user;

- The meter can be unbound in the "Meter Detail" interface.

4.2 Meters

It's used to manage the meter's addition, deletion, modification, batch import, batch export, query, and unbinding. Information includes meter number, meter type, meter algorithm, product model (see section 2.2 for details), tariff (see section 2.6 for details), region (see section 2.1 for details), SGC、KRN、TI.

NOTE: One user can have multiple meters, and one meter corresponds to only one user.

5. Vending

Go to "Vending" and search a meter that needs to vend. Click "Purchase" in the meter card to enter the purchase interface, and choose to buy by quantity or by amount.

After purchase is completed, a sales token will be generated on an invoice. Enter this token into the meter to complete the purchase and recharge.

5.1 Purchase by quantity

Enter the quantity when purchase and the system will automatically calculate the required amount based on the tariff. See section 4.2 for the specific calculation method.

5.2 Print

After confirming the purchase, click "Printing", invoice information will pops up, including operation time, user number, user name, ID number, region, address, meter type, meter number, SGC, KRN, Ti, Token Number, fee, the actual received amount and change amount. After confirming the information, click "Confirm Printing" to start the printing operation.

6. Engineering

The "Engineering" generates engineering tokens, including key change token. Data in the meter will be directly modified after the generated token is input.

6.1 Meter-Specific Tokens

6.1.1 Engineering Token

It's used to manage the meter, set the maximum power threshold, clear the balance, clear the tamper status, set the three-phase unbalanced power limit, etc.

6.1.2 Key Change

Select the new registration information, enter the new tariff number and click "Generate" to generate the Token code for meter key conversion.

6.2 Non-meter-Specific Tokens

1) Choose functions to generate token mainly for test purpose, including:
2) Initiate Meter Test
3) Test Load Switch
4) Test Meter Display
5) Display Cumulative Consumption
6) Display the KRN
7) Display the TI
8) Test Token Reader
9) Display Maximum Power Limit
10) Display Tamper Status
11) Display Power Consumption
12) Display Software Version
13) Display Phase Power Unbalance Limit
14) Display Water Meter Factor
15) Display Tariff Rate
16) Display EA Number
17) Display No of KCT Supported
18) Display SGC
19) Display KEN
20) Display DRN

7. Report

7.1 Sales Report

Sales report: time, meter type dimension sales statistics report. System administrators can check sales amount in all regions, and ordinary operators can only view sales amount in

their own region.

Sales record report: specific sales record report of outlets and time dimensions. System administrators can view the sales records of all outlets, and ordinary operators can only view the sales records of their own outlets.

7.2 Token Records

Engineering Token Record: the Engineering Token record report can be checked. System administrators can view the engineering token records of all vending points, and ordinary operators can only view the engineering token records of their own vendin.

Key Change Token Record: the key change Token record report generated by a table can be checked. System administrators can view the key change token records of all outlets, and ordinary operators can only view the key change Token records of their own outlets.

Token sales record: Token sales record report generated by a table can be checked. System administrators can view the token purchase records of all outlets, and ordinary operators can only view the token purchase records of their own outlets.

7.3 Consumers Report

Purchase amount statistics: time, meter type, data statistics report of purchase amount. System administrators can count the purchase amount of all users, and ordinary operators can only count the purchase amount of users in the area where they are located.

Purchase records: purchase records of users and time. System administrators can view the purchase records of all users, and ordinary operators can only view the purchase records of users in their own area.

Inactive user report: Statistics of inactive users in a certain period of time. System administrators can view all inactive users, while ordinary operators can only view inactive users in their own area.