Item NO.1	ETG-PS-01-EN	File Name	ESL system user manual

**ESL** SYSTEM USER MANUAL

Item NO.1ETG-PS-01-ENFile NameESL system user manual	
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#### **Historic Version**

Version number	date	Description	Originator	Reviewer
1.0	2023/3/31	Correction Document	Tony	Tony
1.1	2023/8/9	New Features/UI Interface Modifications	Merlin	Tony
1.2	2023/8/22	eRetail3.1 User Documentation Translate	Kris	Tony
1.3	2023/11/14	Added holiday management and scheduled backup functions	Kris	Tony

Item NO.1

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#### 1. Abstract

#### 1.1 Architecture

System B/S architecture, divided into: Database, Cache processing, front-end web application;

Database refers to a data storage container for storing system and user information (System utilizes MySQL);

Cache processing is used to compare data changes. (System utilizes Redis);

The front-end web application is a client-side application based on web browsers, with a default port of 4000.

# 1.2 System Architecture

The management system deployed on the server is used to provide system administrators and business personnel with information about the system's operational status, daily maintenance, and data queries.

The system is divided into six major module main menus: Home Store Management Data Management System Management.

[Store Management]: Store List, Base Station Management, Electronic Shelf Label Management, Digital Signage Management, Area Management, Advertising Screen Management, Video Service Management;

[Data Management]: Product Management, Material Management, Shelf Management;

[Data Query]: Electronic Shelf Label Communication Log, Digital Signage Communication Log, Data Synchronization Log, System Log Query;

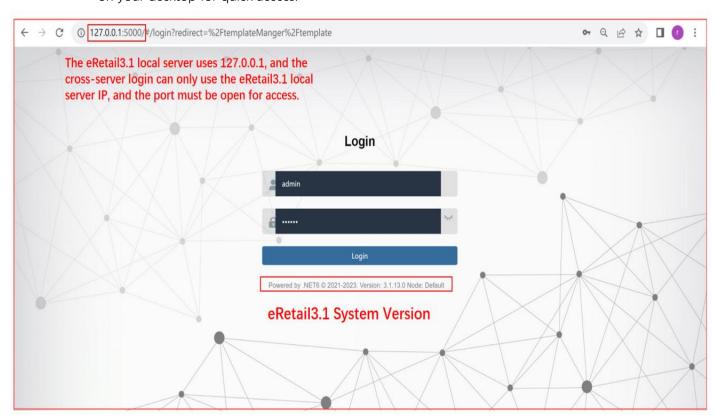
[Template Management]

[System Management]: User Management, Permission Settings, Organization Structure, Parameter Settings, Admin Tools, System Configuration, System Management, Application Management.

# 2. System Login

# 2.1 Login Steps

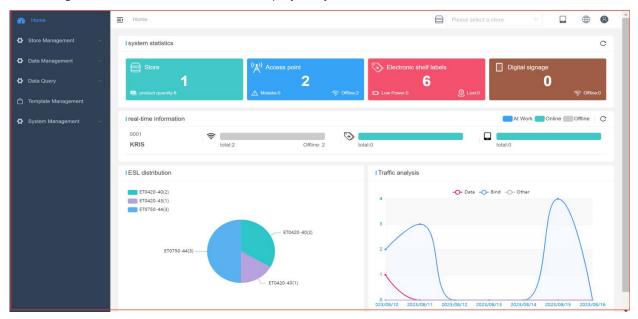
- Open a web browser (Google is recommended), enter the eRetail3.1 system address in the input bar. The address consists of the server's IP address and port.
- Linter the account and password (default admin account: admin, password: Pass99).
- Recommended to add the eRetail3.1 system address to your browser bookmarks or create a shortcut on your desktop for quick access.



# 3. System Menu Function Introduction

#### **3.1 Home**

After login, the content of the Home is displayed by default, and no data for the first use.





- 1.Top menu: Fixed page.
- (1) Side menu collapse, open button
- (2) Please select a store: Search and select the store you want to view, and only display the store information;

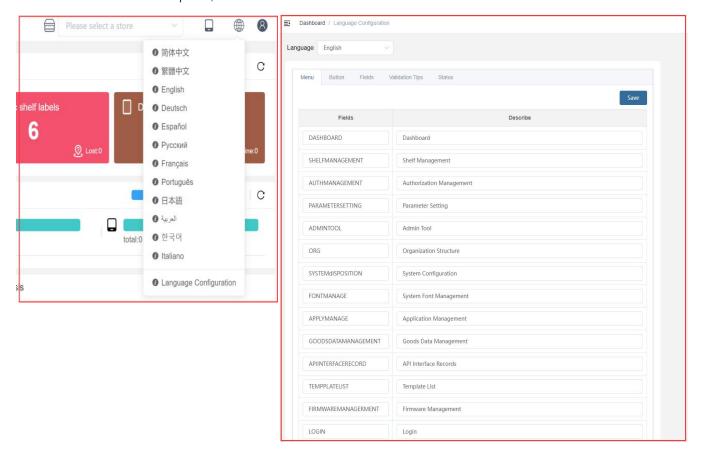


(3) APP configuration menu: Download Android APP and APP Configure;

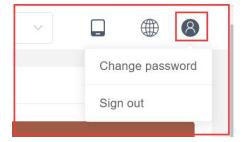


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(4) System Language menu: You can set the interface language of eRetail3.1 system. Currently, 12 languages are supported, and other languages can be added according to requirements. Click the language setting in the drop-down menu to see the text description of the corresponding field. You can see the text description in other languages through the language selection, and you can modify and save the description;



(5) User: To modify the password of the currently logged-in account and to log out of the eRetail3.1 system (redirecting to the login page).



#### 3.1.1 System Statistics

View the number of all stores (including the number of products), the number of Access points (including the number of status and offline), the number of electronic shelf labels (including the number of low battery and lost labels) and the number of digital signage(including Offline Quantity) under the eRetail3.1 system . Click the corresponding color square to jump to the corresponding side menu;



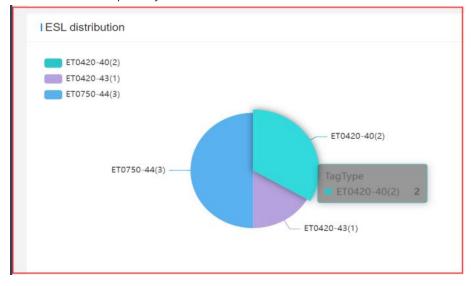
#### 3.1.2 Real-time Information

- **P1** Display the number of stores under the eRetail3.1 system, display the store number (not the customer store number), store name.
- **P2** The area displays the number of AP in the corresponding store, the total number on the left, and the offline number or the number in work on the right (this part is the same in the latter two areas).
- P3 The area displays the number of ESL that the corresponding store is communicating with.
- P4 The area displays the corresponding store [Digital signage LCD ESL] quantity and offline and working status



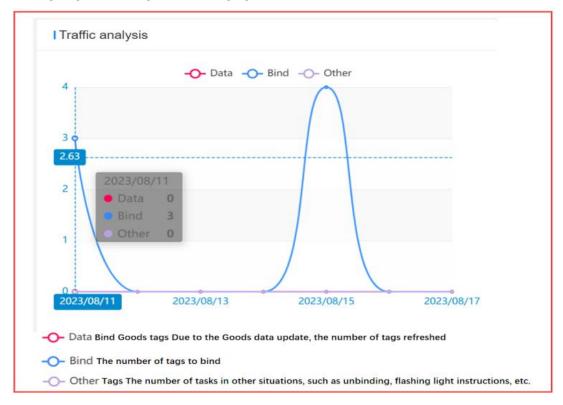
#### 3.1.3 ESL Distribution

Pie chart of the quantity of ESL and LCD ESL of each size.

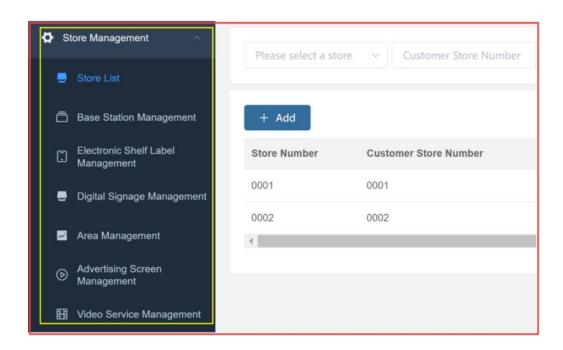


### 3.1.4 Traffic Analysis

View the trend changes in the data of the day's bound tags Goods update, tags and Goods binding, tags unbinding, and flashing light situation for a week.

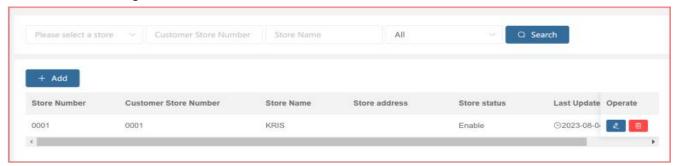


# 3.2 Store Management

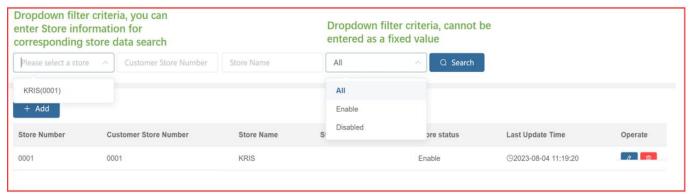


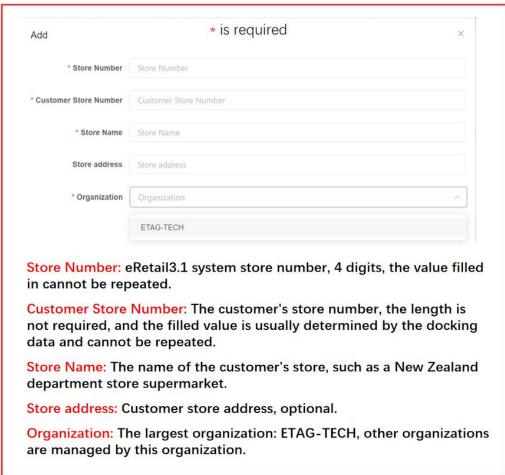
#### 3.2.1 Store List

For creating new stores.



(1) Upper left search bar with four search criteria and one search button.





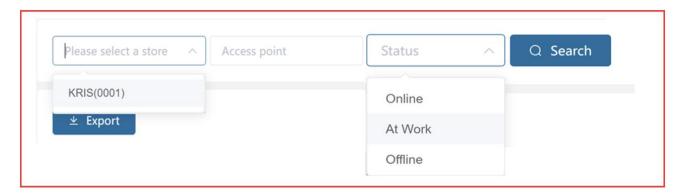
#### 3.2.2 Base Station Management

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Mainly check base station information.

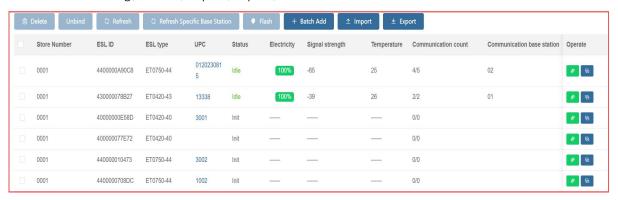


- > Store Number: eRetail3.1 system store number (the same meaning will not be explained in the follow-up menu).
- Access point: Base station ID, consisting of two digits, is determined by configuring the input information parameters of the base station, and cannot be repeated!
- Access point name: Customize the name of the base station, which can be modified at any time.
- ➤ IP: The input information parameters of the configuration base station are determined. The base station has a fixed IP, and the IP cannot be repeated. If it is mapped to the external network, this IP is not the IP used by the actual base station.
- MAC: Base station MAC, each base station has a unique MAC value.
- > Status: Offline, online, at work. Usually offline means that the base station cannot access the background of the eRetail3.1 system, and working means that the base station is processing the sending task.
- ➤ Offline count: The number of times the base station failed to access the eRetail3.1 system background within the period (heartbeat).
- > Last online time, Last offline time, Last working time, Last heartbeat time
- Last heartbeat time: The base station is offline, the time of the last heartbeat on eRetail3.1.



- (1) Top left search bar, three search criteria and a search button.
- (2) Operation button
- (3) Export the Excel table of the base station display information;
- (4) Online base stations cannot be deleted, but offline base stations can be deleted;

Functional operations such as ESL status query, bound Goods status, ESL binding, unbinding, combined binding, refresh, import, export, etc.



- The field column (top) is selected for the current page, and the label information column is selected for the label. After selecting, you can perform operations on the top button menu; (the same meaning in the subsequent menus will not be explained)
- **ESL ID:** The value of the tag barcode, each tag has a unique value, which can be called the tag ID, device ID;
- **ESL type:** The device type can be distinguished by the tag ID, and the first two digits of the tag ID correspond to the tag type;
- > UPC: Commodities that are bound and displayed by this tag, empty means unbound or unbound. UPC is the Goods data field corresponding to the customer's GoodsCode selected in the template parameter configuration during data docking. Click here to view the detailed information of the Goods;

#### Status:

Init: Unused tags, imported into eRetail3.1 system for the first time.

Idle: Non-working tag.

Low power: The voltage of frozen tags is lower than 2.2V, and the voltage of regular tags is lower than 2.5V.

At work: This tag is communicating (refreshing, binding, unbinding, flashing lights, etc.).

Fault: The temperature is 0, but the sending is successful (communication is successful).

Lost: If the number of sending times is less than 128 and more than 64 times are marked as lost, the process is in failure.

Blacklist: Sending more than 128 times eventually failed.

Others: Undefined.

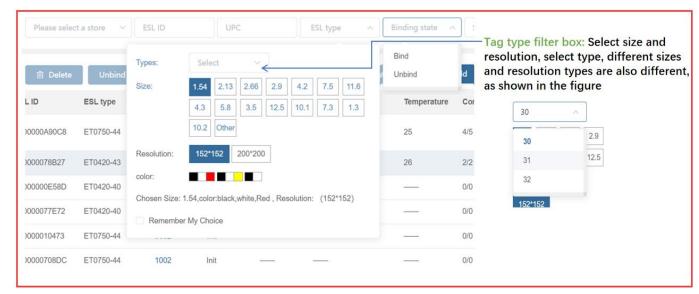
Electricity:

	Regula	Frozen ta	g		
Power≥29	100%	24≤Power < 26	20%	Power≥27	100%
28≤Power < 30	90%	23≤Power < 25	10%	26≤Power < 30	80%
27≤Power < 29	80%	Power < 23	O%	25≤Power < 29	60%
26≤Power < 28	60%			24≤Power < 28	40%
25≤Power < 27	30%			23≤Power < 27	10%

- > Signal strength: Communication quality between the base station and the price tag (usually determined by distance and obstacles), the higher the value, the better the communication;
- Temperature: The ambient temperature recorded in the last communication of the tag;
- ➤ Communication count: The number of successful communications before the \, and the total number of communications after the \;
- Communication base station: The AP ID used for the last successful connection between the AP and the tag;
- Last sent time

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The upper left search bar, six search criteria and one search button



(2) Upper left function button bar



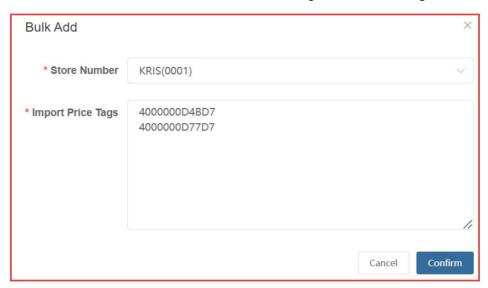
- ➤ Delete: Delete the selected ESL, you can delete in batches
- Unbind: Unbind the tag that has been bound to the UPC Goods. After unbinding, the tag will display the unbind screen (this screen can be customized - corresponding to the template code U) and the UPC value will become empty
- ➤ Refresh: Communicate with the selected ESL, so that the tag refreshes and displays the content first
- Refresh Specific Base Station: The tag of the same store, communicate with the designated AP for the selected ESL



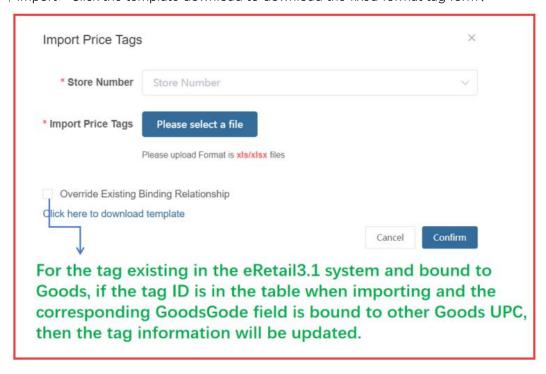
Flash: Specify the flashing color and flashing time for the selected ESL, RGB three colors can be customized to form 7 colors to light up



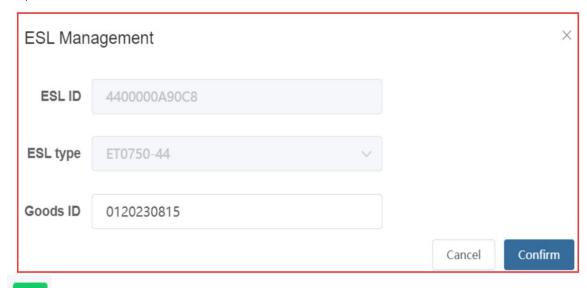
> +Batch Add: Select the store that needs to add a tag, and enter the tag ID in the import option



➤ ↑ Import: Click the template download to download the fixed format tag form.

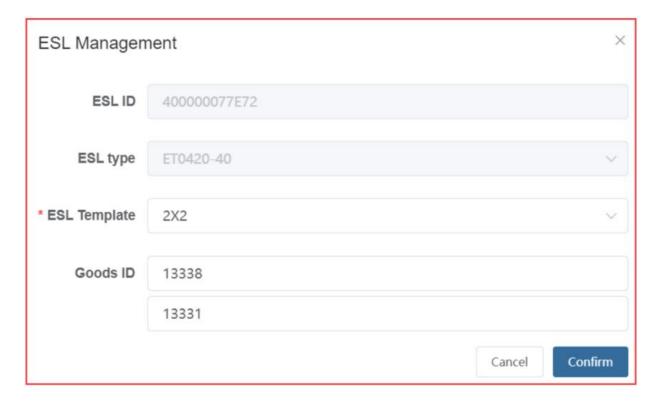


- ➤ ↓ Export: Export all ESL information tables after confirming the execution
- (3) Operate



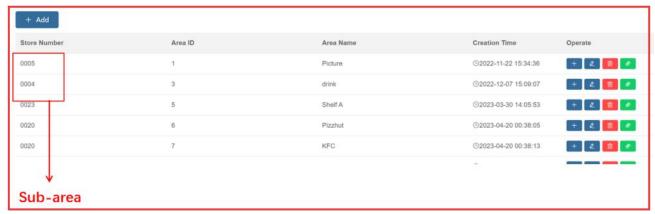
Bind the specified tag with the specified Goods. The Goods ID can be fuzzily unlocked by entering the UPC and Goods name, and click Confirm to submit the binding;

Comb binding: Comb bind templates (one template can display multiple template types or multiple Goods), and decide how many Goods to display by designing the template. The following figure shows a tag that displays two Goods information at the same time;



### 3.2.5 Area Management

Set and manage the area where LCD ESL and LCD devices are located

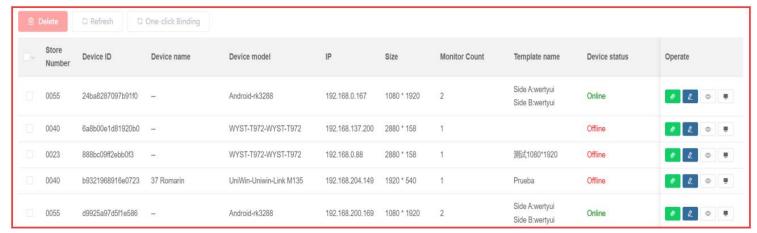


- (1) .+Add: The area can only be used under the store, so each store needs to add the corresponding area (stores that only use ESL do not need to add). The area name is the name of the type of sales area in the mall, such as the fruit area, aquatic product area, cooked food area, etc.
- (2) .Action bar buttons:
  - Add sub-area
  - Modify area information
  - Delete area
  - Area bind material



### 3.2.6 Advertising Screen Management

LCD status query, binding, refresh, display preview and other functional operations



- (1) . One-key binding: When multiple LCDs display the same Goods information, you need to select these devices first. In the search bar, one of the search criteria device size or device model must be selected to use this function.
- (2) . Action bar button
- The operation method here is the same as that of LCD ESL, where the two sides are divided into A side and B side, and both sides need to be bound and submitted separately.
- Modify the device name, customize the device name.
- Preview the current display screen of the device.
- Remote control: IT operation menu, please do not use this content function at will

# 3.2.7 Video Service Management

View service IP and port, online and offline status, software version, etc. LCD ESL and LCD are only available when this service is online.



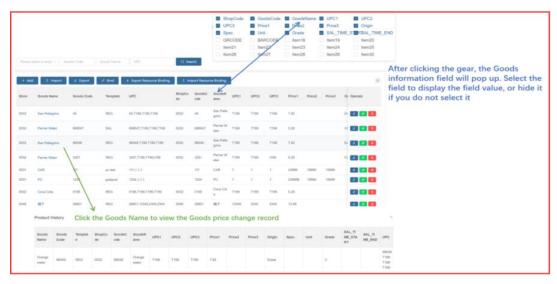
# 3.3 Data Management

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# 3.3.1 Product Management

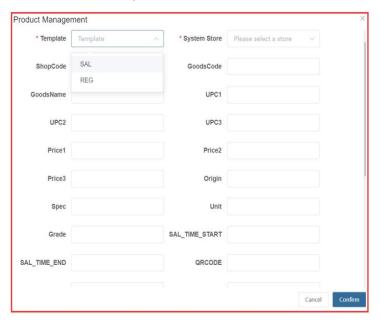
View Goods information, modify Goods information, bind materials, etc.



(1) Function button bar on the upper left



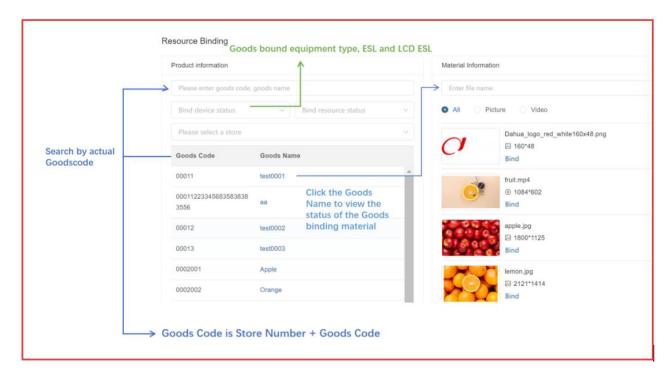
➤ +Add : Add new Goods information, Different dynamic model configurations add different information. Enter the value of the Goods field. If the system is synchronized, please obtain new data from the synchronization interface;



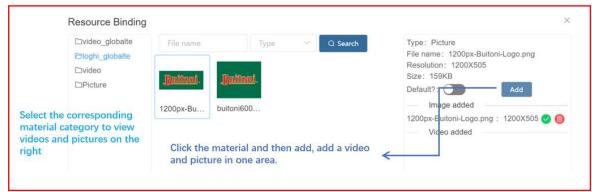
File Name

form. You can export Goods data first, use the exported form as a form template, and modify the content for import. Mainly used for file docking.

➤ Bind: Check out the Goods-bound footage



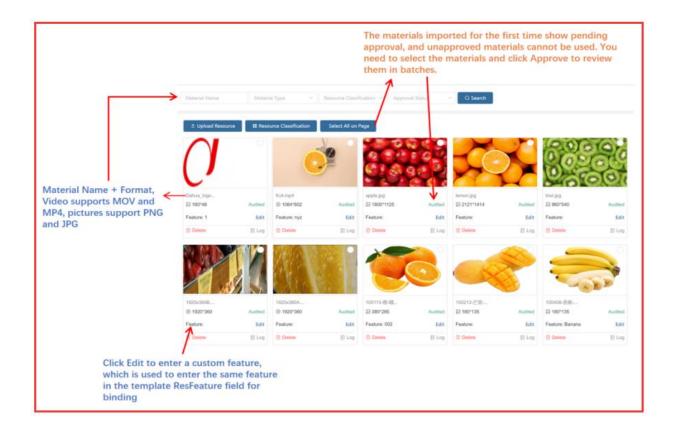
- ➤ Export Resource Binding/Import Resource Binding: Select a store that uses LCD ESL and LCD. If you want to bind materials with tag binding Goods, you can first bind a store material, export the material binding relationship of this store, change the store number and import the material, and quickly bind materials to other store Goods The premise is that the name and code field values corresponding to Goods of each store are the same.
  - (1). Action bar button
  - Modification of Goods information is invalid for database, FTP file, customization, and API interface push docking methods. Modified content will be overwritten after synchronization;
  - Resource Binding



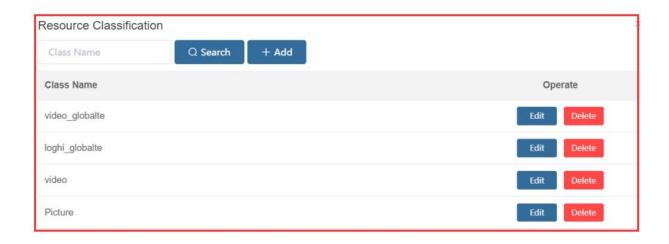
Delete the corresponding Goods information, which cannot be deleted in batches.

### 3.3.2 Material Management

Upload, review, delete video and picture materials and other functions.



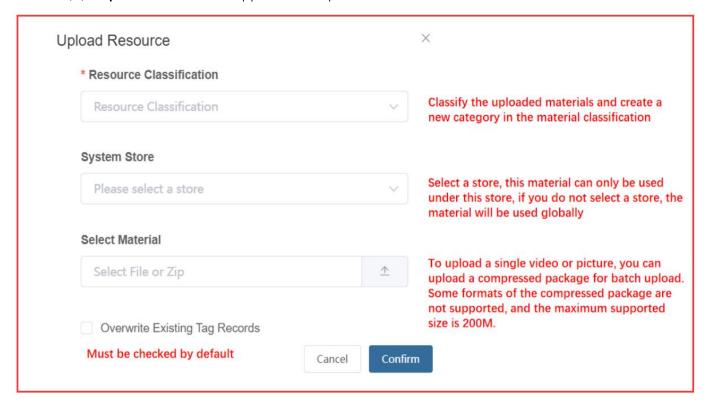
(1) .Resource Classification: Distinguish material format, use area, etc.;



(2) .Upload Resource: Support batch upload.

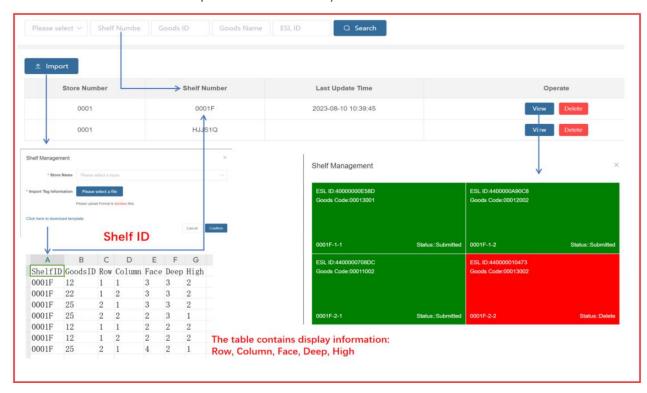
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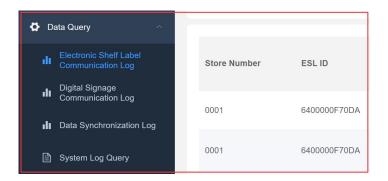
### 3.3.3 Shelf Management

To upload the shelf display information table, view the content of the shelf display information table, and delete the shelf display, you need to use it with the APP display adjustment (this function will continue to be optimized in the future).



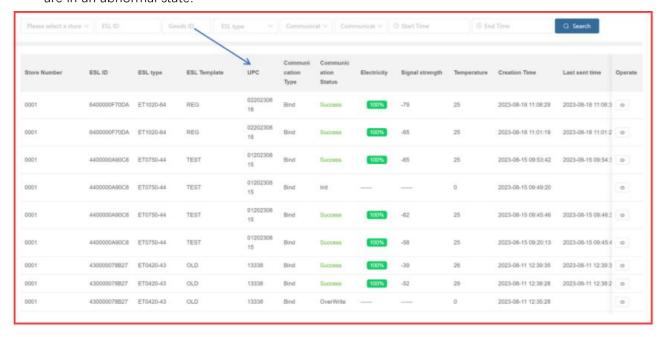
(1). Scenario: The customer has display data (shelf location and product binding), uploads and synchronizes the display data to the eRetail3.1 system, the customer directly binds the tag according to the display data, and the tag displays Goods information according to the corresponding Goods in the display data. Tag is no longer directly bound to Goods.

### 3.4 Data Query



### 3.4.1 Electronic Shelf Label Communication Log

Check the communication status of the label to determine whether the label and the base station are in an abnormal state.



#### (1) . Communication Type:

Status	Meaning	Status	Meaning
First	The state of the task just created	Data	Tasks created by product information changes
Bind	Tasks created by binding  Unbind  Tasks created by unbinding		Tasks created by unbinding
Search	Undefined	Specific	Undefined
Refresh	Tasks created by refreshing	LED	Tasks created by the flash command
Image	Tasks created by specifying an image	Heartbeat	Undefined
TFT	Undefined	Preview	Tasks created through APP custom templates
Low Power	Task created when Label is low on battery	Broadcast	Undefined

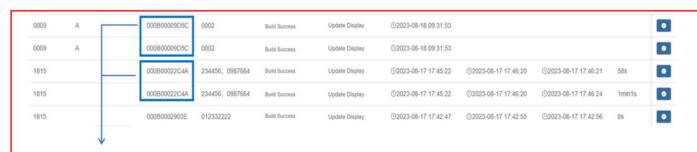
(2). Communication Status:

Status	Meaning	Status	Meaning
Init	Initialization, no communication	Sending	Communicating
Success	Successful communication	Error	Failed communication
Max Try	Label's single communication reached 128 times	Timeout	Undefined
Drop	Undefined	Pause	Undefined
Over Write	Task coverage	Other	Undefined

(3). Communication base station: Check which base station successfully communicated with the task of the label, which is distinguished by the base station ID. The number in () behind the base station ID is the number of times the label communicated this time.

#### 3.4.2 Digital Signage Communication Log

Check the communication status of ESL LCD to judge whether the WIFI base station and video service are in an abnormal state;



An ESL LCD task generates two records, displaying the content generation task and the communication task. After the video is generated, the task communication is performed. If the display content is not successfully generated (the waiting time for generation is related to the distribution of video tasks and the number of video tasks in the TFT configuration).

- 1.Batch communication failed, please check the settings of related videos.
- 2.If a single communication fails, please check the material, and the ESL LCD status is communicating.

#### (1) . Task Type:

Status	Meaning	Status	Meaning
Update display	Tasks created by binding, product data changes	Default	Tasks created by specifying an image
Turn off Backlight	Turn off Backlight Tasks created by "Screen Off"		Tasks created by Bright Screen
Reset	Tasks created by "Delete-Factory Restore"	OTA Upgrade	Tasks created by "OTA upgrade"

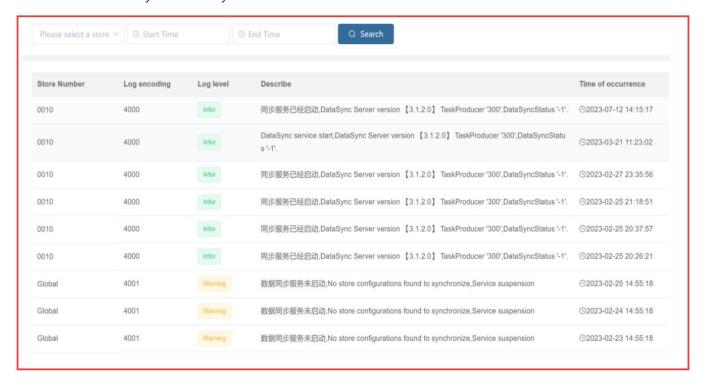
#### (2) Video Send Status:

Status	Meaning	Status	Meaning
Not Generated	Display content	Generating	Display content
Build Failed	Display content	Build Success	Display content
Task Overridden		Download Failed	
Task Overload		Confirmation Failed	
Execution Exception		Confirmation Complete	

(3) . Operation: button, you can view the information created in this task, download videos and pictures, etc.

### 3.4.3 Data Synchronization Log

Each store synchronizes the logs. When the product information does not meet the requirements, check whether the synchronization logs are updated normally, which is controlled by the Data Sync service.



#### Meaning of each value

Status	Meaning	Status	Meaning
Find	The number of products queried under this store	Update	Number of product data updates
Insert	The number of items added	Sync Type	Synchronization type, the first number of 0-0 represents on and off synchronization, -1 off, 0 on -0 means data source, 0 database, 1 file, 2FTP file, 99 customized

### 3.4.4 System Log Query

Synchronization logs, system status information, label communication status, offline base station, whether the service is running abnormally, login account information, whether the system configuration is abnormal, WEB page operation, you can check the message code through the log code to determine which module of the system is the problem, and operate button to see the contents of the system log.

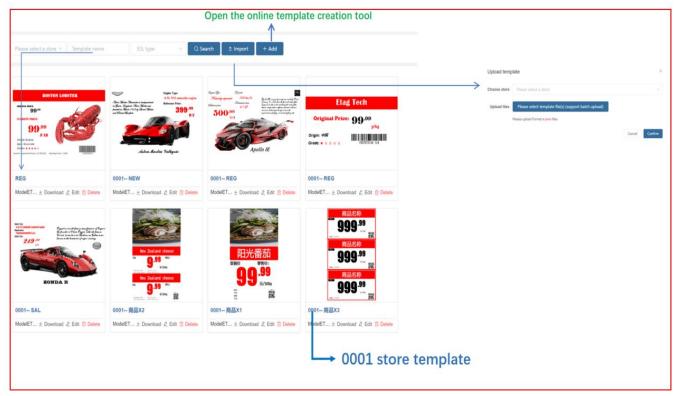
Store Number	Log encoding	Log level	System log	Time of occurrence	Operate
0003	1028	Infor	基站上线,APID 10	©2023-08-21 12:14:55	0
0003	1028	Infor	基站上线,APID 10	©2023-08-21 11:54:39	0
0003	1028	Infor	基站上线,APID 10	©2023-08-19 11:45:14	0
0003	1028	Infor	基站上线,APID 10	©2023-08-18 12:06:44	0
0031	1028	Infor	基站上线,APID 01	©2023-08-17 17:35:50	0
0031	1028	Infor	基站上线,APID 01	©2023-08-17 15:08:34	0
0031	1028	Infor	基站上线,APID 01	©2023-08-17 13:39:18	0
0031	1028	Infor	基站上线,APID 01	©2023-08-17 13:24:32	0
0003	1028	Infor	基站上线,APID 10	©2023-08-17 11:48:53	0
0032	1029	Warning	基站离线。APID 01	©2023-08-16 20:38:50	0
0032	1002	Infor	任务已经创建(绑定),1	©2023-08-16 20:23:52	0
0032	1002	Infor	任务已经创建(绑定),1	©2023-08-16 20:23:36	0
0032	1002	Infor	任务已经创建(绑定),1	©2023-08-16 20:21:59	0

# 3.5 Template Management

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#### 3.5.1 Template Management

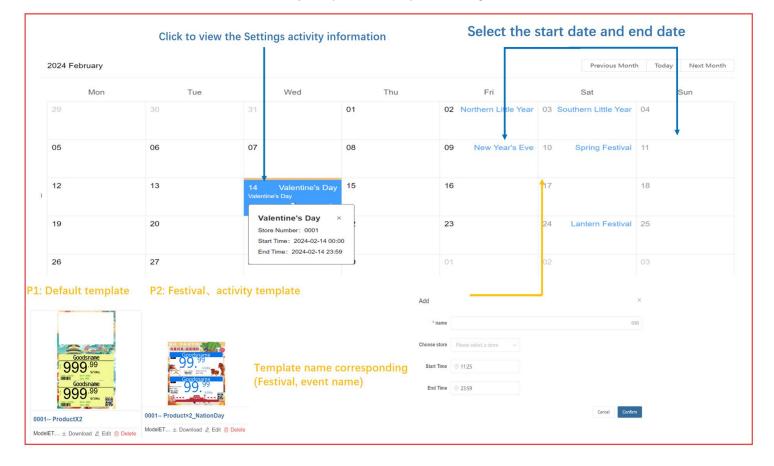
The product judges the template type through the template configuration-template expression, calls the corresponding template for display, and makes the corresponding template according to the required label model and the number of template types. Templates can be created and edited online, or templates made by eDesigner3.1 template tools can be imported through the import function. Templates are divided into global and store. The store template can only be used in this store, and the global template can be used in all stores.



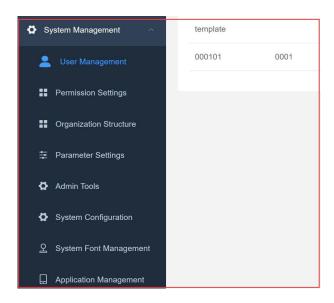
- (1) . Description of the template name: REG corresponds to the general sales model of the product, SAL corresponds to the promotional sales model of the product, and MER corresponds to the member sales model of the product. The names of these three categories can be customized, and this name is defaulted. The meaning of the template code fixed by the system, U is unbinding, and OOS is the APP inventory mark template. **Commodity**  $\mathbf{x}$   $\mathbf{1}$  is usually the template name of LCD ESL or LCD, and **Commodity**  $\mathbf{x}$   $\mathbf{2}$  means that the price tag displays two commodity information at the same time. Only U and OOS mentioned above cannot customize the name. The name of the label template of the same model cannot be the same, and the name of the label template of different models can be the same.
- (2) .Template name naming specifications: model + template type or template display product quantity, such as 4.2-inch REG, 2.13-inch frozen REG, 10.1-inch **product**  $\times$  **2.** 
  - (3) . **+Add:** there are many contents, and the user manual is made separately;

### 3.5.2 Holiday Management

Set the date to automatically switch special themes (festivals, events) templates for LCD ESL. First of all, make festival and activity templates in template Management.

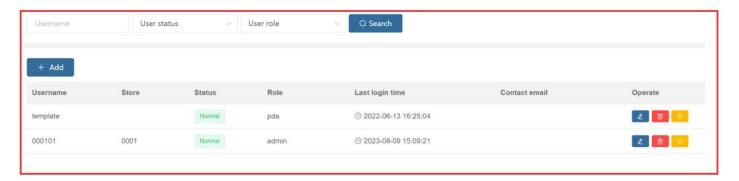


# 3.6 System Management

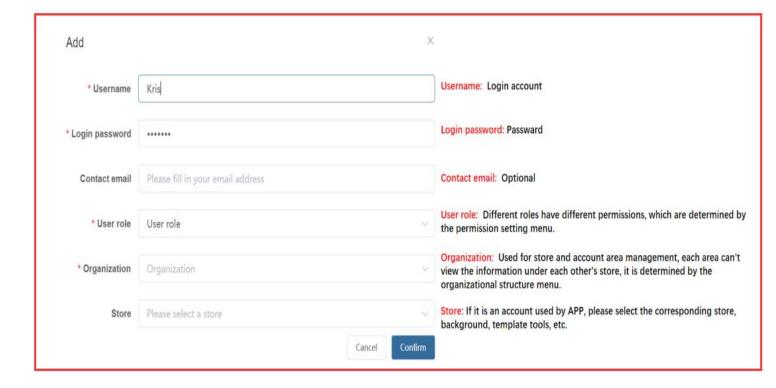


# 3.6.1 User Management

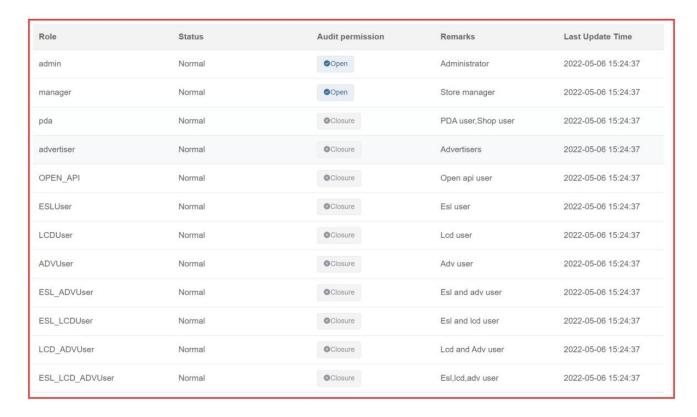
1. Manage eRetail3.1 system background and APP background login accounts, and the same account can log in to multiple devices.



(1)+Add: Add new user.



# 3.6.2 Permission Settings



(1) The meanings corresponding to the name of each authority role.

Character name	Meaning
admin	Administrator authority, the highest authority, all content can be set and
	changed
manager	Customer business manager login account role
pda	The relevant personnel who use the APP at the store end to log in to the account role
advertiser	Advertiser users, only the homepage displays content
advertiser	Advertiser users, only the nomepage displays content
OPEN_API	Interface permissions, used for users used in API docking, mainly used for
	data transmission, etc.
ESLUser	Label permissions
LCDUser	ESL LCD permission
ADVUser	ADV permission
ESL_ADVUser	Label and ADV permission
ESL_LCDUser	Label and LCD permission
LCD_ADVUser	LCD and ADV permission
ESL_LCD_ADVUser	LCD、Label and ADV permission

#### 3.6.3 Organization Structure

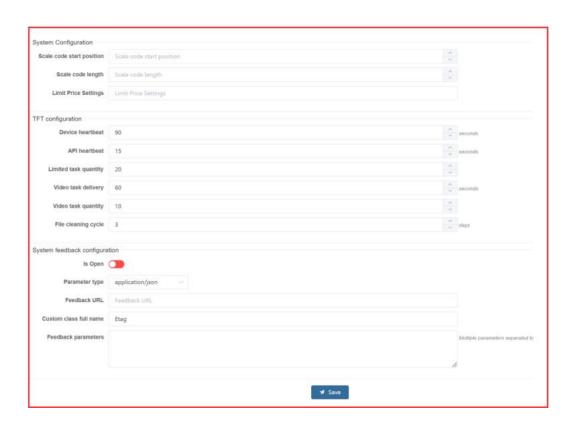
The default ETAG-TECH organization, all sub-organizations are managed under this organization, and organizations of the same level as ETAG-TECH cannot be added, and sub-organizations can be added through +.



(1) Effect: It is used to log in to the APP account (global account) and the establishment of stores in the background to realize the management of stores under different organizations.

For example: the newly-built stores 0013 and 0014 belong to the Australian region, the 0015 store selects the UK region, the new global account role selects manager, the organization selects the Australian region, and the login account eRetail3.1 system background only displays the information of 0013 and 0014 stores. Stores that do not display 0015 display.

#### 3.6.4 Organization Structure



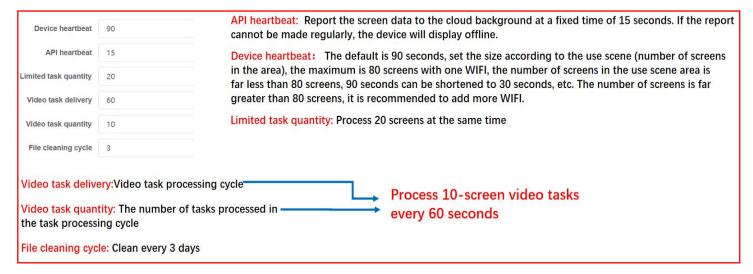
(1) **Please Select a Store:** You can also set a single store when setting the global setting. The TFT configuration part is only used for the global. After selecting a store, click + to add store configuration, and select the corresponding store to set parameters;

(2) System Configuration

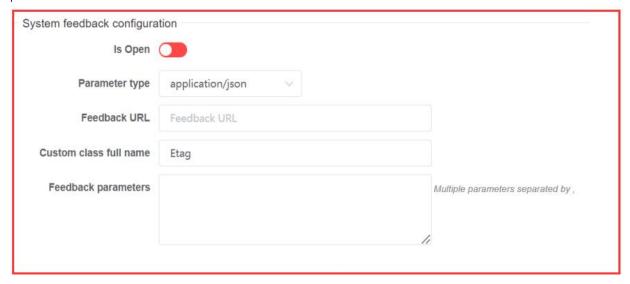
Scale code start position and Scale code length: Parameters filled in for APP interception and binding.

Limit Price Settings: It is restricted that the price changed by the store app cannot be greater than the price specified by the headquarters. Invalid for database and customized synchronization methods.

- (3) **TFT configuration:** Only set globally.
- (4) Set the TFT timer switch time, control all LCD ESL under this store



(5) **System feedback configuration:** To feed back parameters such as ESL refresh and base station status to the customer system, the customer needs to provide the URL address of the feedback. If it is a customer-customized project, the customer needs to inform the custom name and feedback parameters.

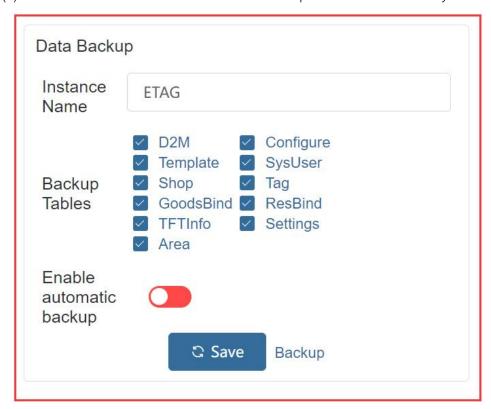


#### 3.6.5 Admin Tools

(1) Set information modification, set stores to synchronize independently.



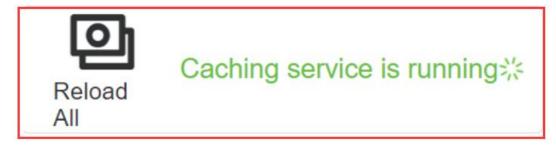
(2) The instance name is the actual column name parameter filled in the system configuration.



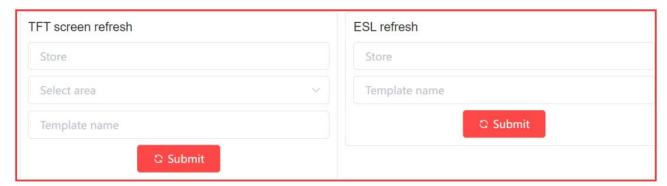
- Select the backup data table, D2M is the commodity data connection information table, Shop is the store information table, and Tag is the ESL information table.
- Enable automatic backup: Set the backup period-Scheduled backup.
- (3) If the synchronization service is abnormal or not synchronized, it will show that the synchronization service is not running. When the data cannot be updated normally, check whether it is running normally here.



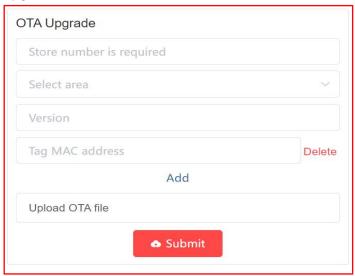
(4) Clear the eRetail3.1 system-related data in Redis. If the base station is not online, the data cannot be imported or exported. Try to clear the cache service.



(5) Refresh all labels in the specified store, or refresh the labels under the store according to the conditions;

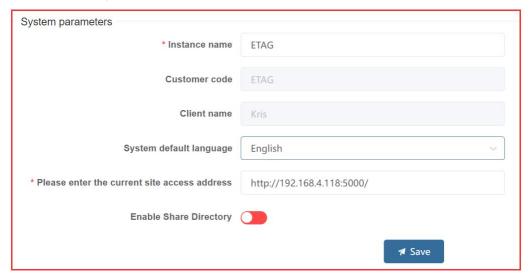


(6) LCD ESL hardware program upgrade, click Add, enter the MAC address of the device to upgrade, the label MAC address is the device ID.

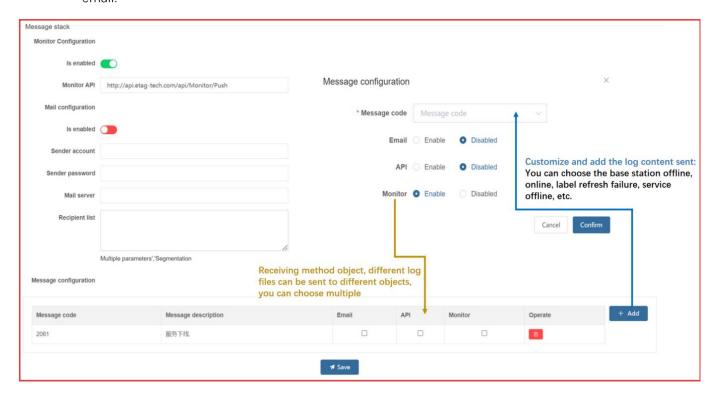


# 3.6.6 System Configuration

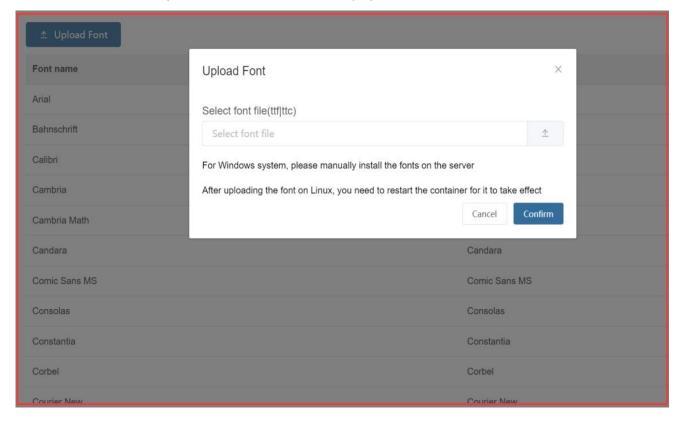
(1) Parameters set in the system configuration. Enabling the shared directory means that the video is sent through the SendServer service, and after it is enabled, it is downloaded through the TFTAPI shared folder;



(2) **Message Stack:** eRetail3.1 system log files are sent to relevant maintenance personnel by email.



(3) **System Font Management:** The font selected when making the template needs to be installed on the eRetail3.1 system server to achieve the display effect.



(4) **Application Management:** Download the APP software, LCD software, upload the ESL handheld APP here to scan the QR code in the APP configuration menu to download the APP.



