

# **Retail Application Suite**

## **User's Manual V1.0.13**

**2019/08/23**

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# Preface

## Trademark

All product names mentioned in this documentation are registered trademarks of their respective companies.

## Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

# System Requirements

When using the Retail Application Suite (RAS) on other computers, take note of the following minimum system requirements:

- CPU Recommendation: Intel Core i5-6500TE, 8GB RAM
- Operating System: 32/64 bit Windows 7 Embedded, Windows 8, Windows 10
- Network: Ethernet 1000 Base-T recommended
- Storage: SSD 128 GB

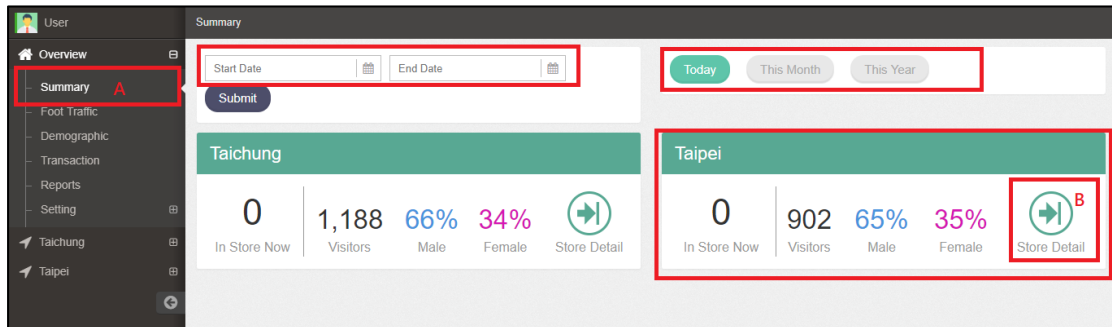
# 1. Function Overview

## A. Summary

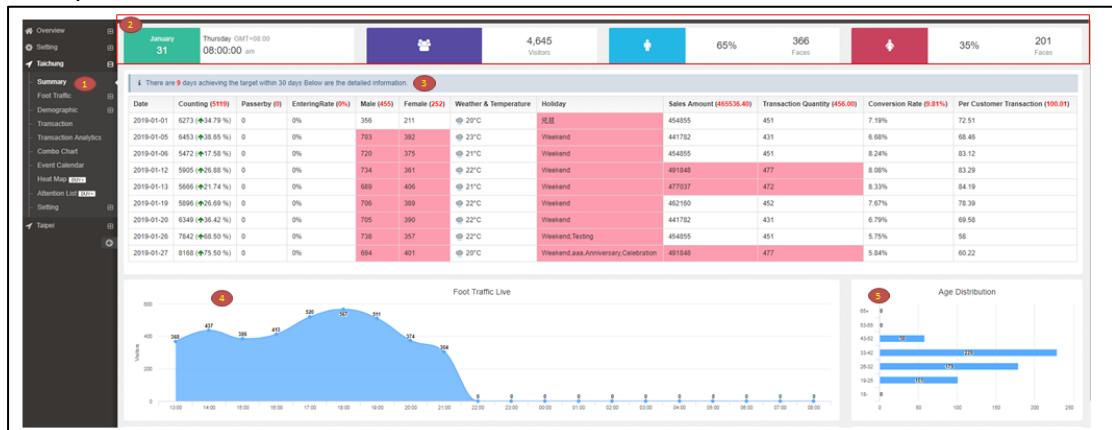
Enter the home page, you can find the function list on the left side menu.

(A) Click "Summary", you can see the overall result of the stores you registered. You can manually define the period to view: by day/ month/ year.

(B) Click "Store Detail" to enter the store page.



More data can be analyzed in the store summary. Take below Taichung branch as example.

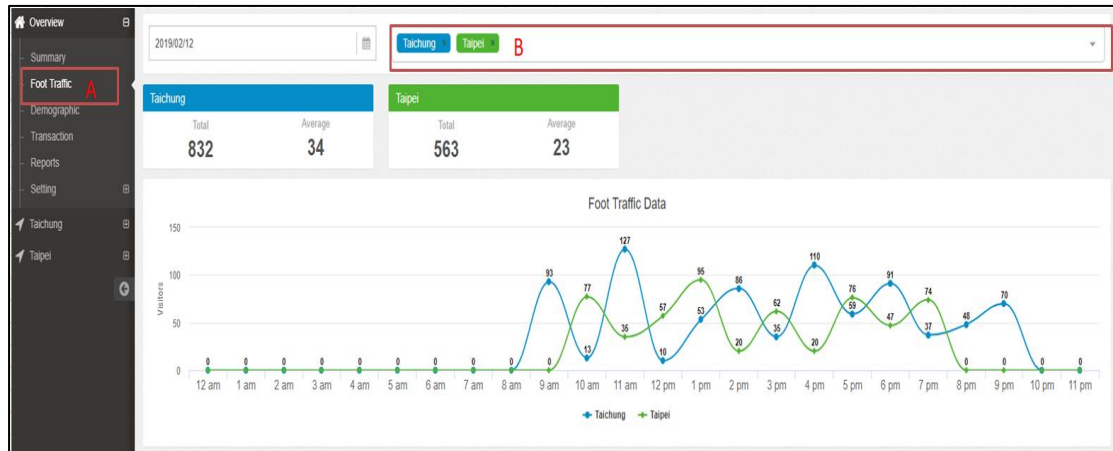


1. Click "Summary" under store list
2. Quick summary of this store.
3. The Target mode shows the real value which is exceeding the pre-defined target. For instance, if you define the counting target point to be 3000 persons, then this system will output the date by which the counting becomes over 3000.
4. Analyze the foot traffic of the store, by hours
5. Analyze the age distribution

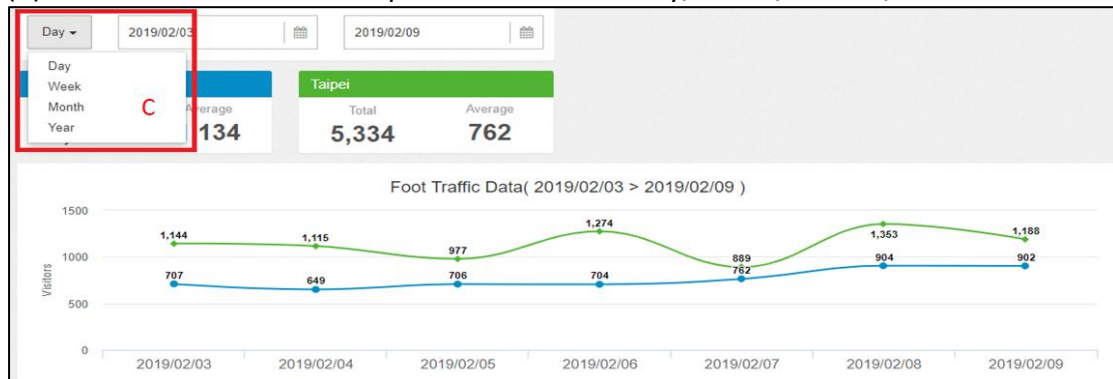
## B. Foot Traffic

(A) Click "Foot Traffic", check all the store for foot traffic.

(B) Add your preferred store, and then enter the date you would like to know. Hourly report can be generated.

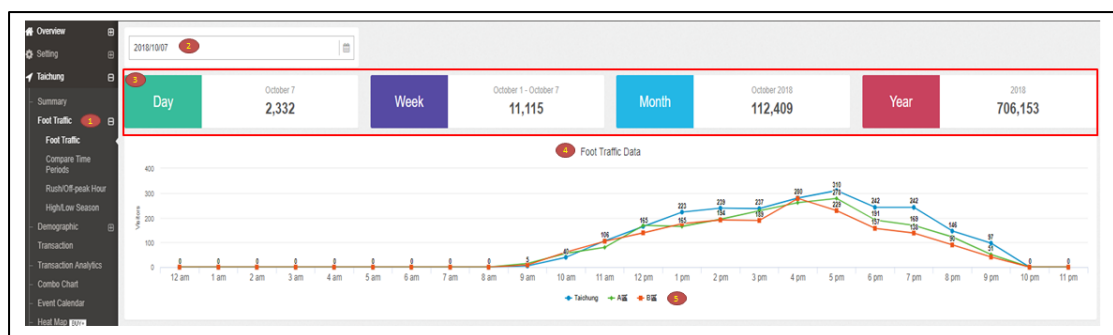


(C) User can also enter the report duration with Day/ Week/ Month/ Year.



**In store summary**, more data can be analyzed. Take below Taichung branch as an example.

### Foot Traffic



1. Click "Foot Traffic" under the store list.
2. Choose the date.
3. Show the static data per day/ week/ month/ year.
4. Line chart: If you have more than 1 block in this store, the line chart can be shown as different color lines. Click on it to see the details.
5. Color Legend of the different blocks

## Compare Time Period

Date	Taichung	A區	B區
2018/09/30 (Sunday)	↓ 2236	2206	1788
2018/10/07 (Sunday)	↑ 2332	1979	1803
2018/10/01 (Monday)	↓ 1046	1050	963
2018/10/08 (Monday)	↑ 3019	1143	1033
2018/10/02 (Tuesday)	↓ 1075	1030	890
2018/10/09 (Tuesday)	↑ 3428	1147	1074
2018/10/03 (Wednesday)	↓ 1175	1128	951
2018/10/10 (Wednesday)	↑ 5715	2008	1718

1. Click "Compare Time Periods".
2. Choose the period you would like to analyze.
3. Select the date that you want to compare.
4. Select the date that you want to compare with (No.3 compares with No.4).
5. The result will show up, you can directly know which day is higher/ lower.

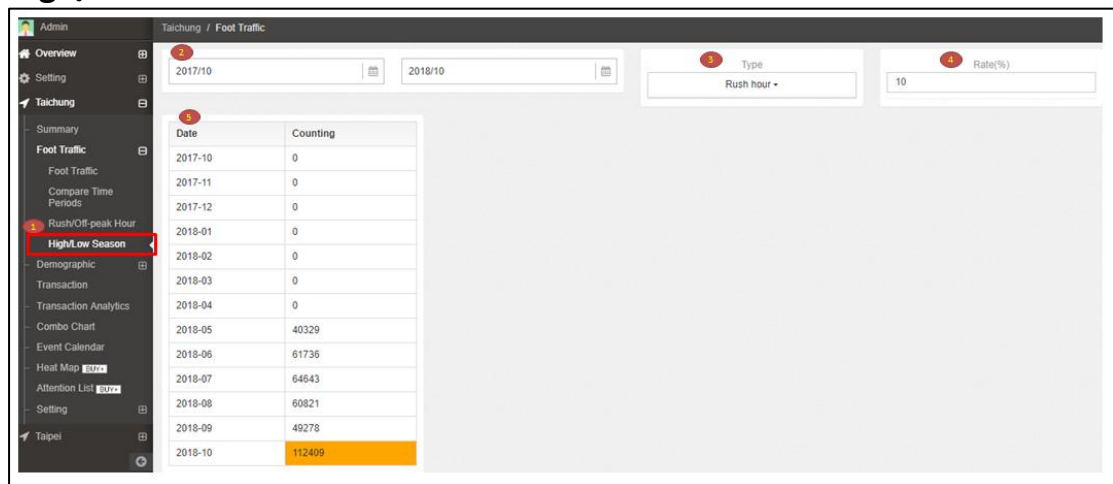
## Rush/ Off-peak Hour

See where the peak/ off-peak intervals are, in order to change the business strategy.

Date (Day of Week)	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
2018-10-07 (Sunday)	5	40	106	165	223	239	237	280	310	242	242	146	97

1. Click "Rush/ Off-peak Hour".
2. There are two options, sorting by specific interval and by week.
3. Peak or off peak selection.
4. Define the percentage, the counting number would be in orange if it is over the percentage.
5. Result in a day which is along with each hour.
6. You can also see the analysis result in the calendar mode. Same concept as above, choose the duration and define the percentage. In addition, in calendar mode, user can see the temperature.

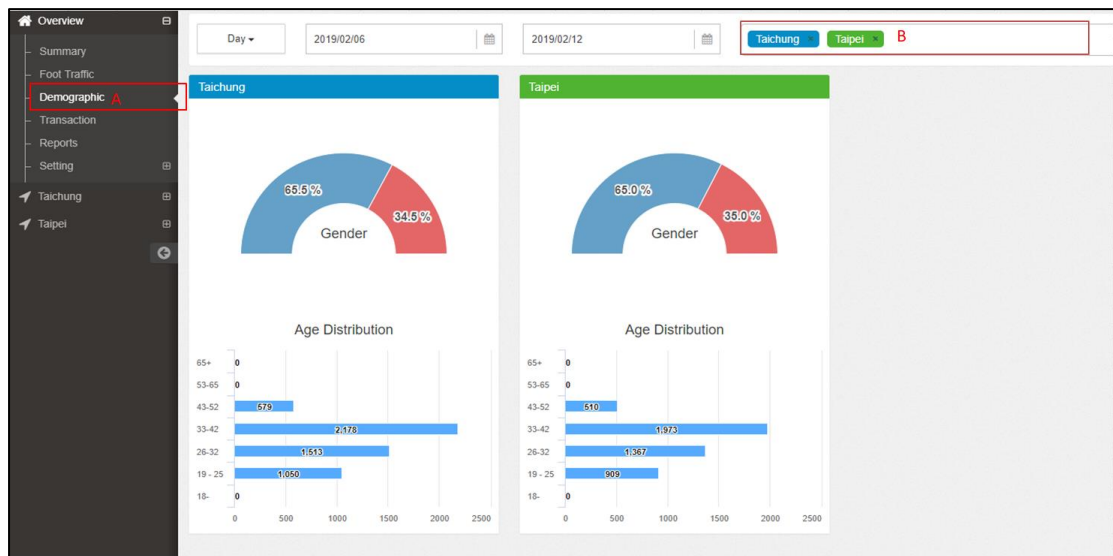
## High/ Low Season



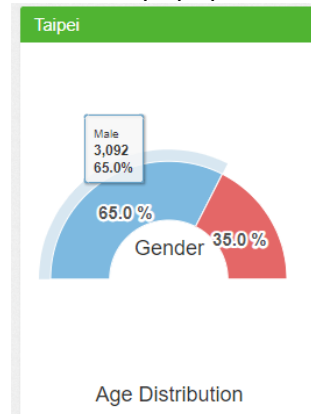
1. Click "High/ Low Season".
2. Select the start date and end date.
3. Peak or off peak selection
4. Define the percentage, then the counting number would be in color orange if it is over the percentage.
5. The result will appear on the table for comparison.

## C. Demographics

- (A) Click "Demographics"
- (B) Select your preferred store, user can directly review the Age/ Gender distribution from the pie chart.



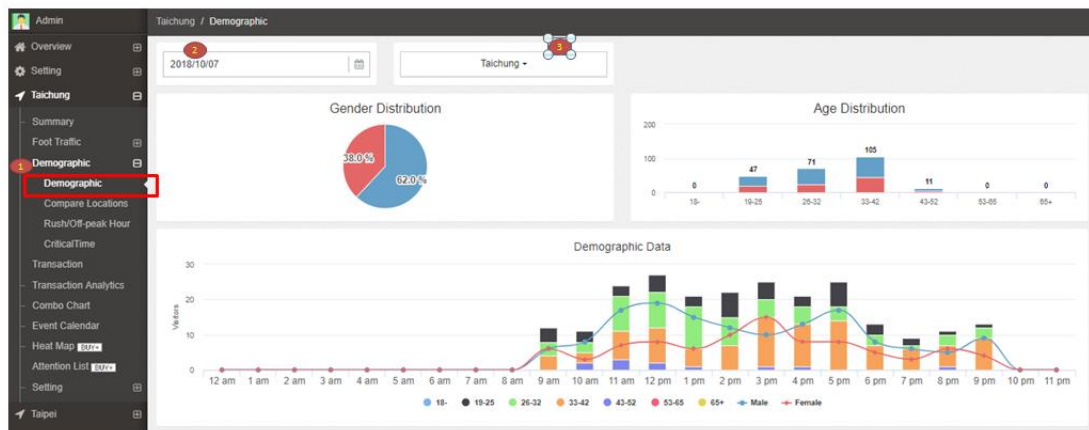
Point to the percentage of pie chart, the popup message shows the detail quantity.



**In store summary**, more data can be analyzed. Take below Taichung branch as an example.

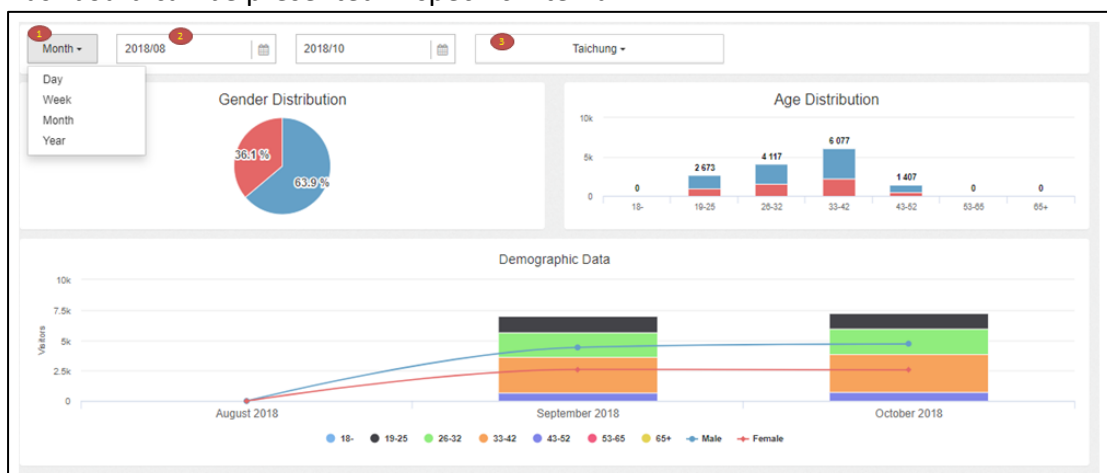
## Demographic

See more data, this includes pie chart and line chart.



1. Click "Demographic".
2. Choose the date for knowing the demographic distribution.
3. Choose the block from the branch (if there is more than 1 block).

Dashboard can be presented in specific interval.

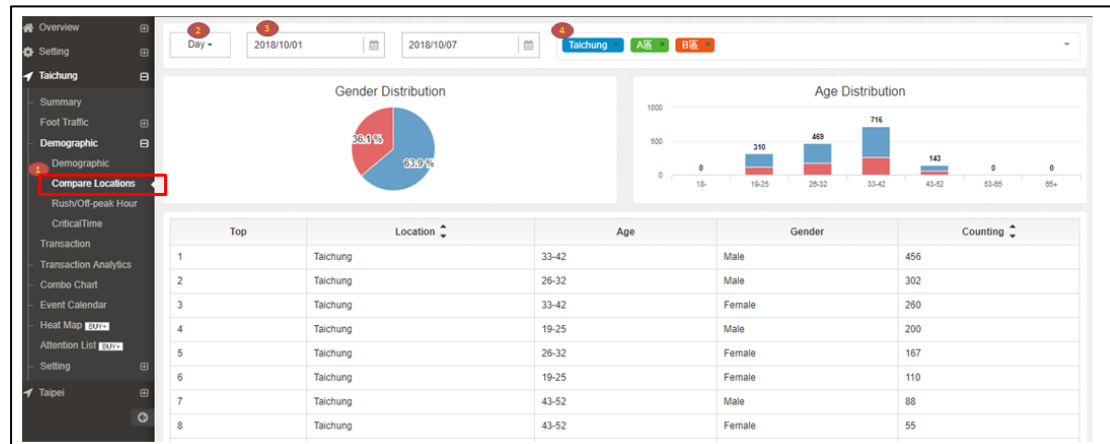


1. Select the duration, day, week, month or year.
2. Choose the start date and end date.
3. Choose the block from the branch (if there is more than 1 block).



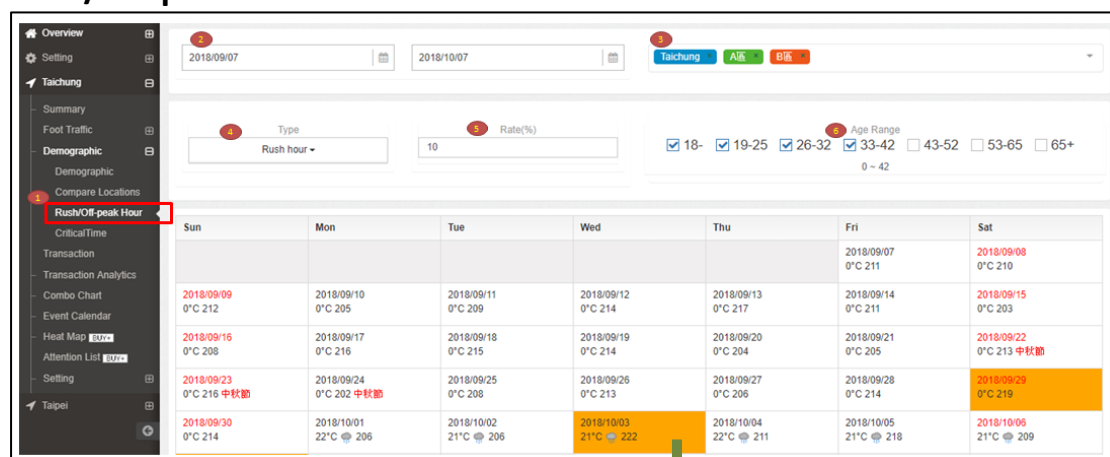
## Compare Locations

Different blocks in one branch might have totally varying counting. See what the distribution is from the below instruction.



1. Click "Compare Locations"
2. User can select the duration like Day, Week, Month and Year.
3. Choose the start/ end date.
4. Select the location/ block that is for comparison.

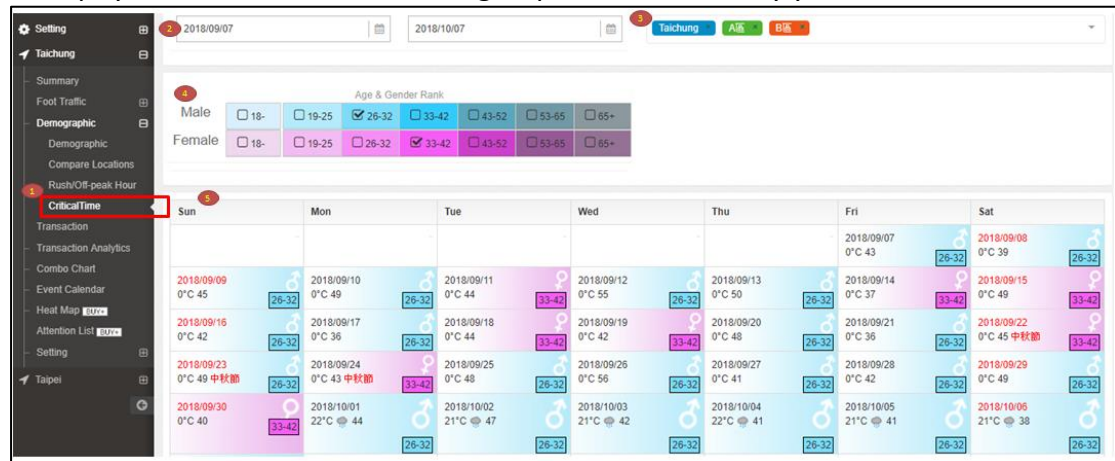
## Rush/Off-peak Hour



1. Click "Rush/ Off-peak Hour".
2. Choose the start/ end date.
3. Select the location/ block that is for comparison.
4. Selection for Peak/ Off-peak.
5. Define the percentage, then the counting number would be in orange if it is over the percentage
6. Use can choose the target age range.

## Critical Time

Promptly understand the consumer group from the table by your definition.



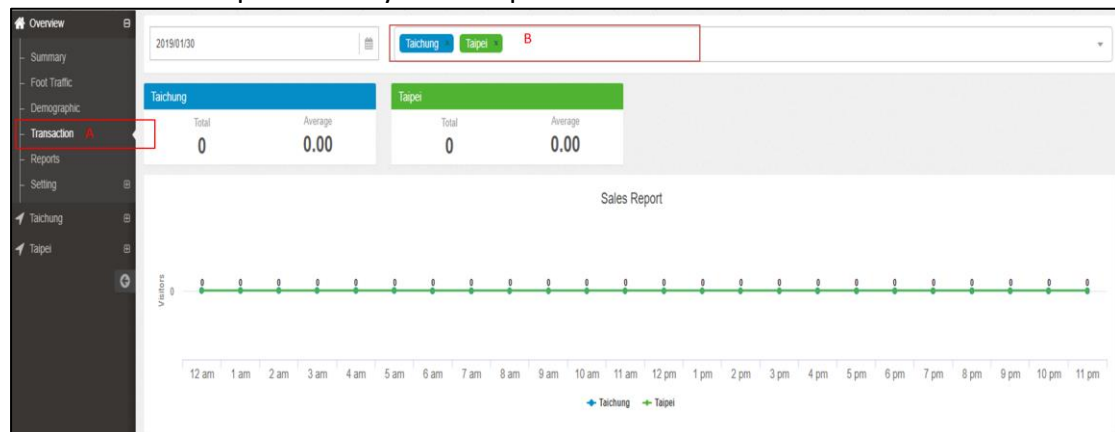
1. Click "CriticalTime".
2. Choose the start/ end date.
3. Select the location/ block.
4. Select the age and gender.
5. Table is shown in calendar mode and shows the most counting of age with gender.

## D. Transaction/ Analytics

In order to know the sales condition by each store:

(A) Click "Transaction"

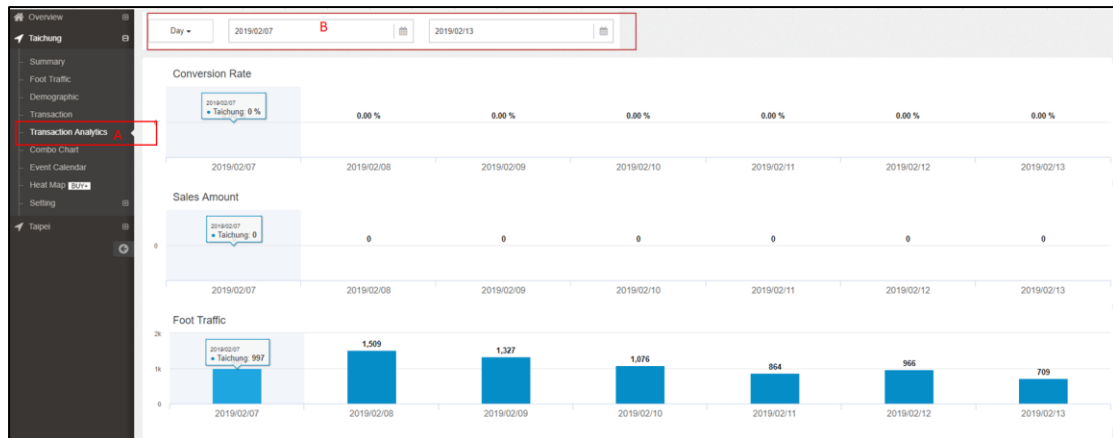
(B) Select store under Drop-down menu (see Chapter2-A for setting step). The transaction report directly shows up.



There is a comparison function for each store detailed transaction report.

(A) Click "Transaction Analytics".

(B) Select the compared duration you want to see. The result includes Conversion Rate, Sales Amount and Foot Traffic.



This sample is based on days. The data show the increase and decrease for each column.

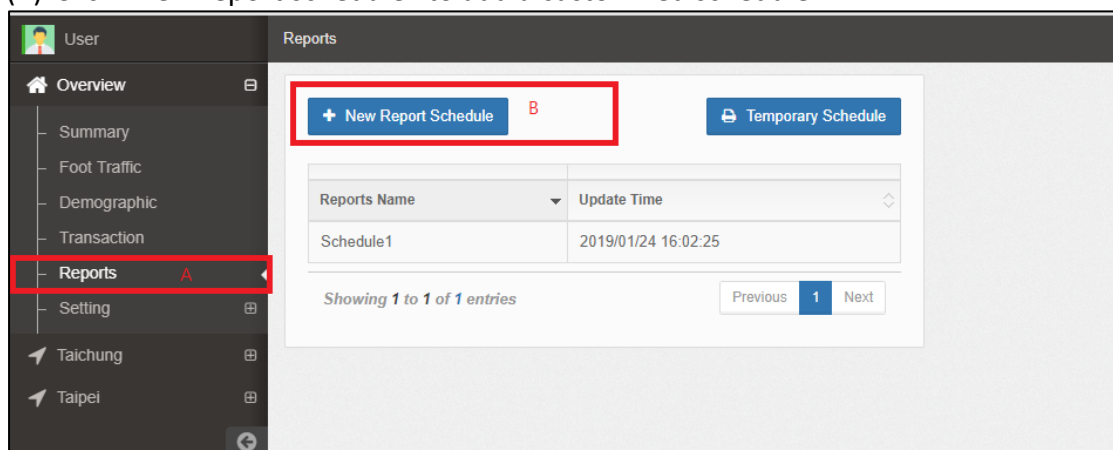
Time	Foot Traffic	Sales Amount	Transaction Quantity	Conversion Rate (%)	Per Customer Transaction
2019/02/03	1257	0.00	0	0.00	0.00
2019/02/04	↓ 1250	— 0.00	— 0	— 0.00	— 0.00
2019/02/05	↓ 1214	— 0.00	— 0	— 0.00	— 0.00
2019/02/06	↑ 1298	— 0.00	— 0	— 0.00	— 0.00
2019/02/07	↓ 997	— 0.00	— 0	— 0.00	— 0.00
2019/02/08	↑ 1509	— 0.00	— 0	— 0.00	— 0.00
2019/02/09	↓ 1327	— 0.00	— 0	— 0.00	— 0.00
	8852	0	0	0	0

## E. Report Schedule/ Combo Chart

The system will generate reports as defined by the user.

(A) Click “Report” to the page.

(B) Click “New report schedule” to add a customized schedule.



Enter the related info as the following:

- Reports Name: Customized the file name.
- Store: Select the store
- Analysis Type: Several data can be selected
- Unit: Select the time unit for the report
- File Type: Supports Excel and CSV format
- File Path: The designated path to save the report
- Recipient: The report will be sent to the specified person

After finishing the above setting, go to “Trigger” page.

(A) Click “Trigger”.

(B) Add the trigger rule so that the user can get the report by specific time.

(C) Fill out each column then remember to save the setting.

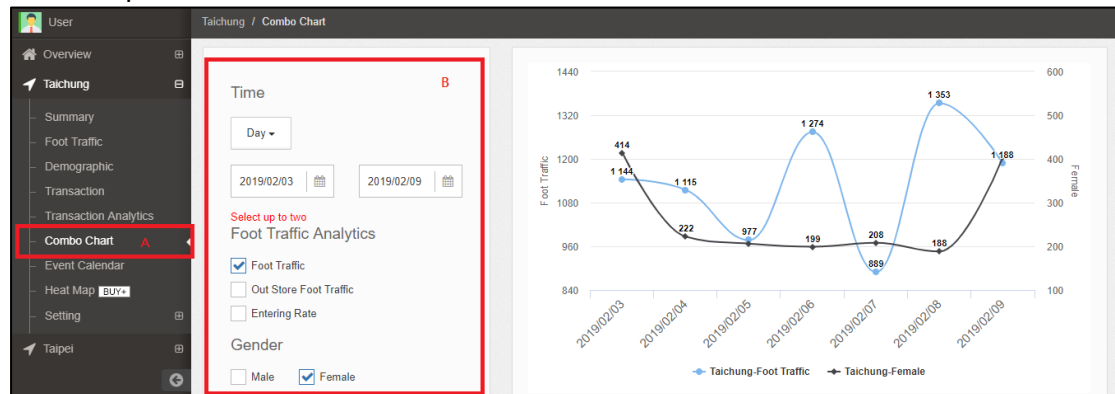
**Note:** Please refer to the [Annex](#) for the report export format.

The report will be generated along with pie and line chart.

Go to each store for its detailed report, there is a “Combo Chart” pattern.

(A) Click “Combo Chart”.

(B) Select up to two different data sources, user can see the relationship between them. There are five sources: “Foot Traffic”, “Gender”, “Age”, “Transaction” and “Temperature”.



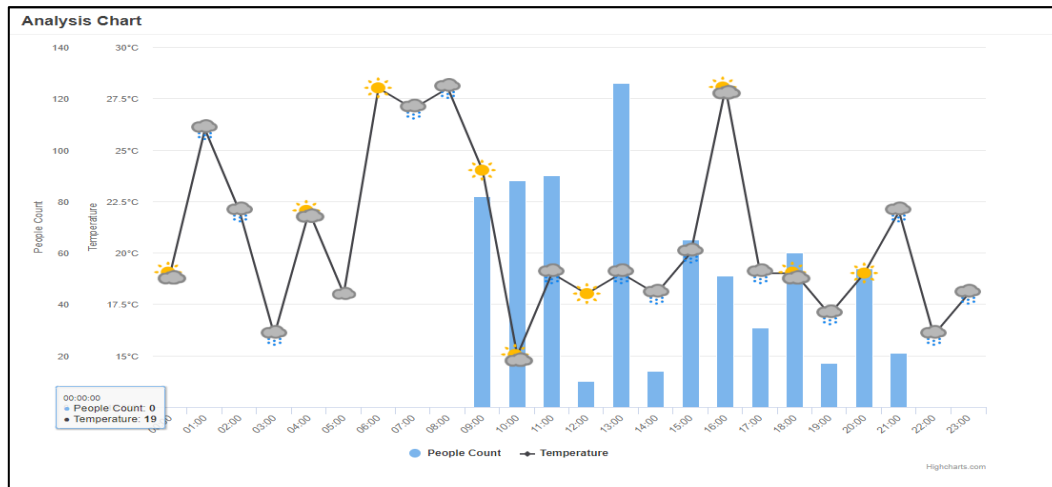
## F. Event Calendar

(A) Click “Event Calendar”, enter the page.

(B) Select the month you would like to check. The whole month report will be shown day by day.

February 2019				
Sun	Mon	Tue	Wed	Thu
27	28	29	30	31
average temp : 20.2°C In : 581 / In Store Rate : 0% 63.38% / 36.62% Age : 33-42 42.19%	average temp : 20.0°C In : 843 / In Store Rate : 0% 60.85% / 39.15% Age : 33-42 40.39%	average temp : 20.8°C In : 654 / In Store Rate : 0% 63.32% / 36.68% Age : 33-42 39.51%	average temp : 20.8°C In : 1021 / In Store Rate : 0% 60.49% / 39.51% Age : 33-42 41.62%	average temp : 20.6°C In : 606 / In Store Rate : 0% 64.55% / 35.45% Age : 33-42 40.39%
3	4	5	6	7
average temp : 21.9°C In : 1144 / In Store Rate : 0% 64.77% / 35.23% Age : 33-42 42.47%	average temp : 22.9°C In : 1115 / In Store Rate : 0% 62.63% / 37.37% Age : 33-42 45.29%	average temp : 22.1°C In : 977 / In Store Rate : 0% 65.32% / 34.68% Age : 33-42 43.10%	average temp : 21.0°C In : 1274 / In Store Rate : 0% 66.50% / 33.50% Age : 33-42 42.42%	average temp : 21.8°C In : 889 / In Store Rate : 0% 64.98% / 35.02% Age : 33-42 38.38%

There is a popup window as below that you can review the line chart based on the correlation of people count and temperature.



As for the management of calendar event and event file uploading, please refer to [\(Chapter2-E\)](#).

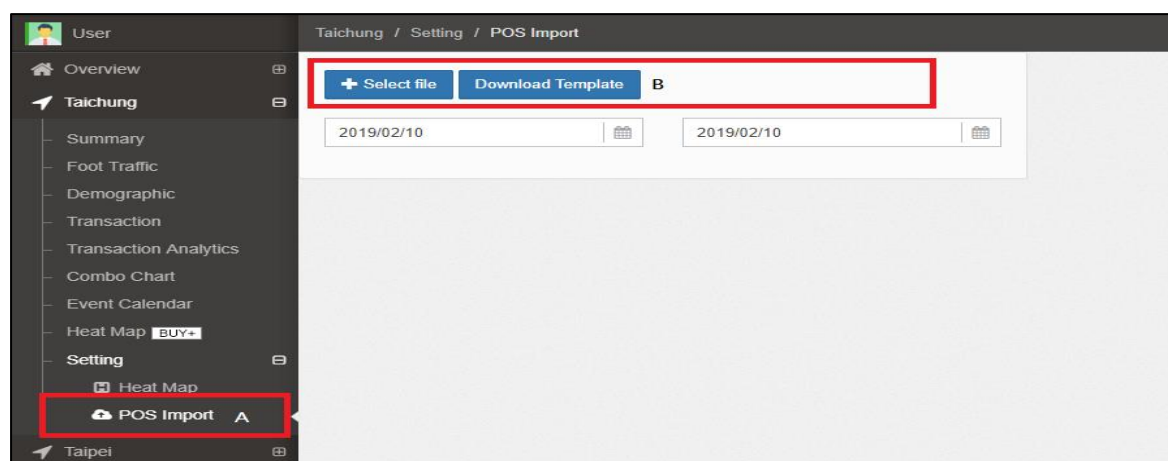
## G. POS Data Upload

Users may need the analysis from different POS source by RAS engine, so upload the POS data per below instruction.

- Click "POS Import".
- You can select the file that you would like to analyze and submit it to system.

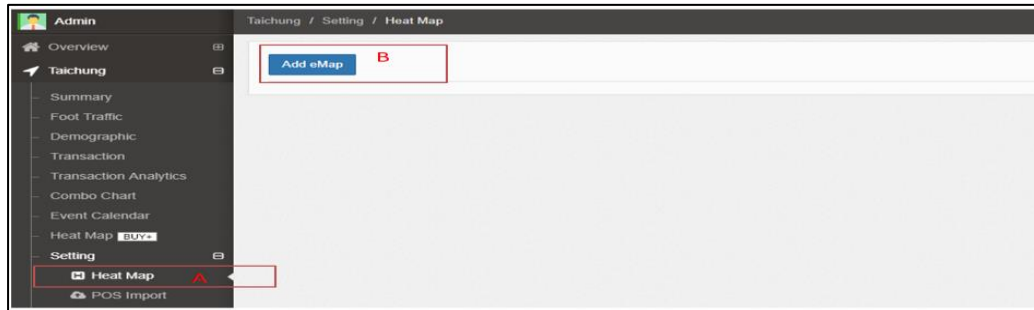
Thus, the analyzed result can be shown on the dashboard.

(Before uploading file, please download the template and follow the format for uploading.)

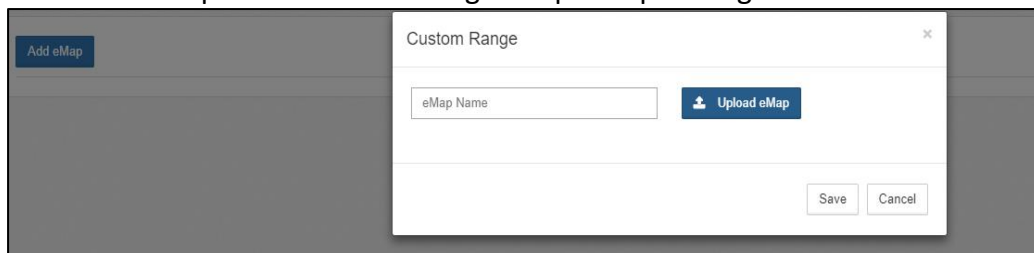


## H. Heat Map

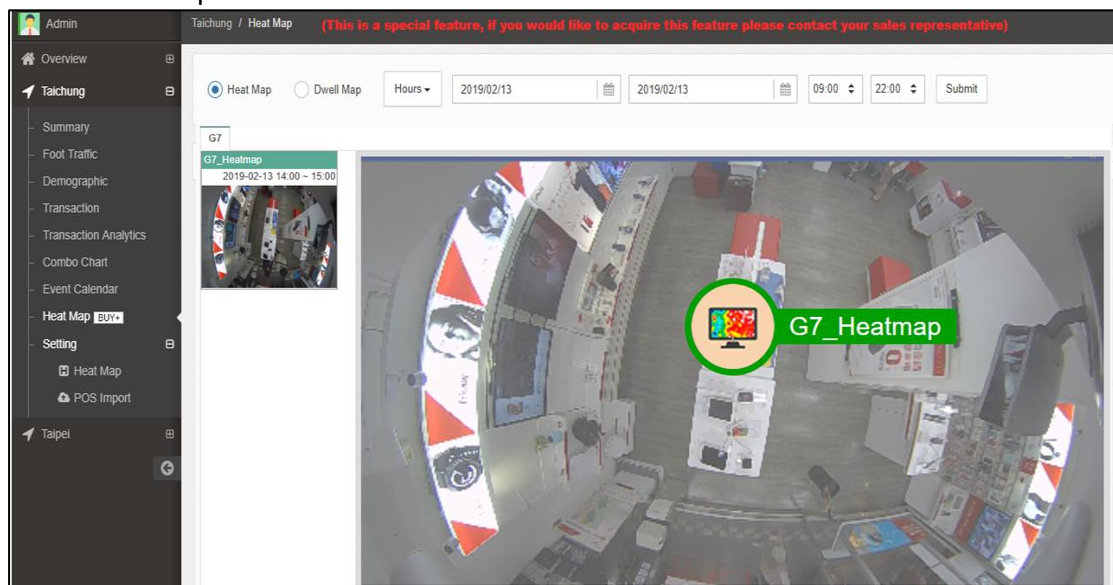
(A) Click “Heat Map” to this page, you can check the traffic flow via heat map. And the map can be uploaded by the user.



(B) Click “Add eMap” and select the target map for uploading.



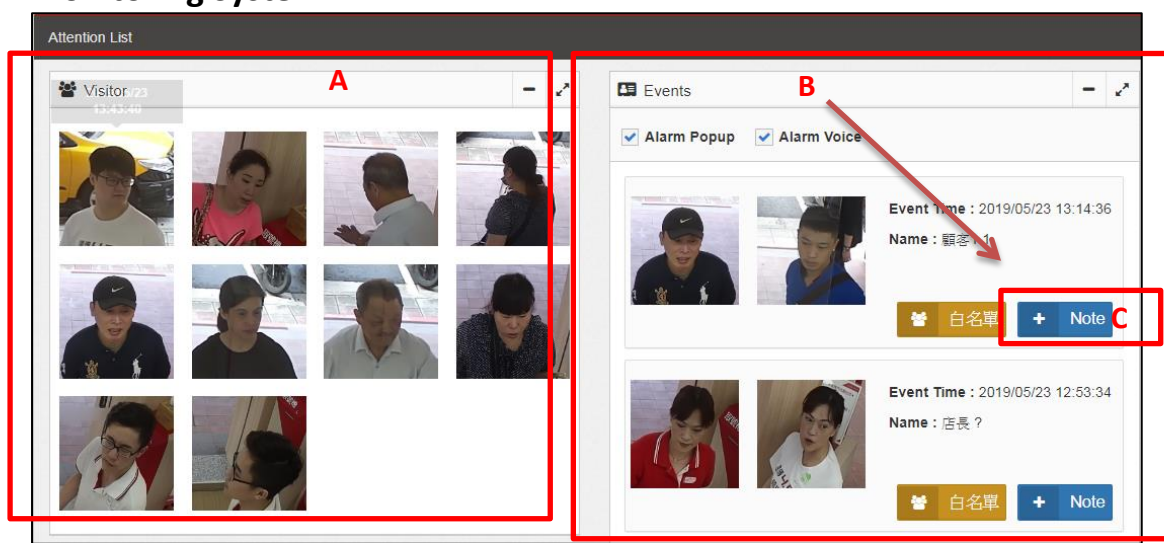
Below is a sample:





## I. Attention List

### A. Monitoring System

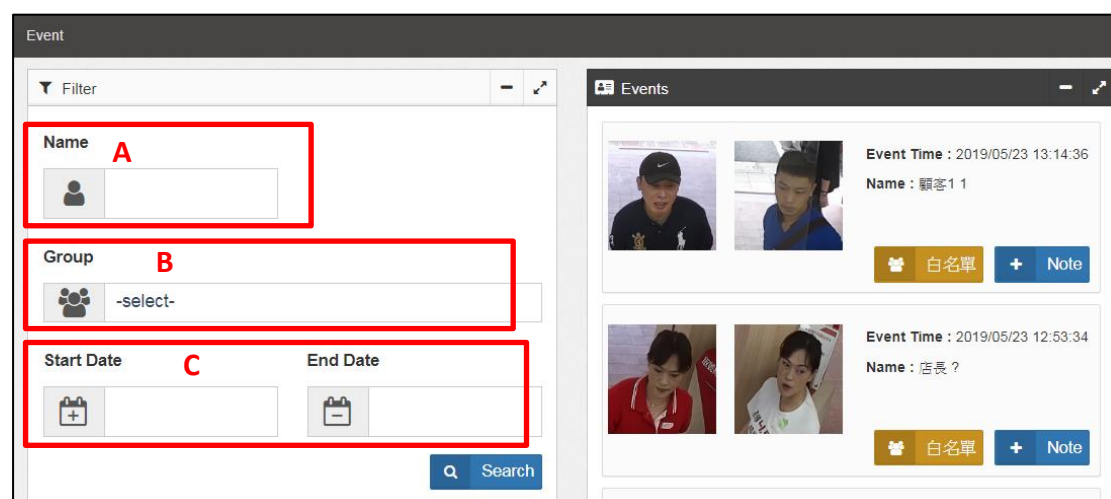


Interface of the instant face detection and recognition area

- A. Photos instantly appear in this area when it detects a face.
- B. The list of identified database, including a list of blacklists and whitelists appear here.
- C. If you want to add a note to this identification result, you can directly manage it in the section “Note” (which will be described below) °

### B. Event

The filter can be used to manage and select events, and the results will be presented in the list on the right side.

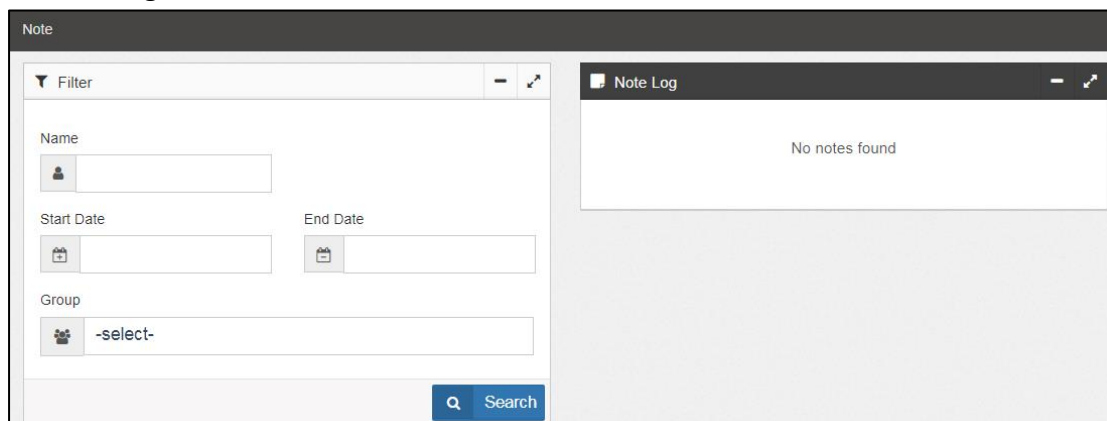


- A. Search by Name
- B. Search by Group
- C. Search by Specific time interval



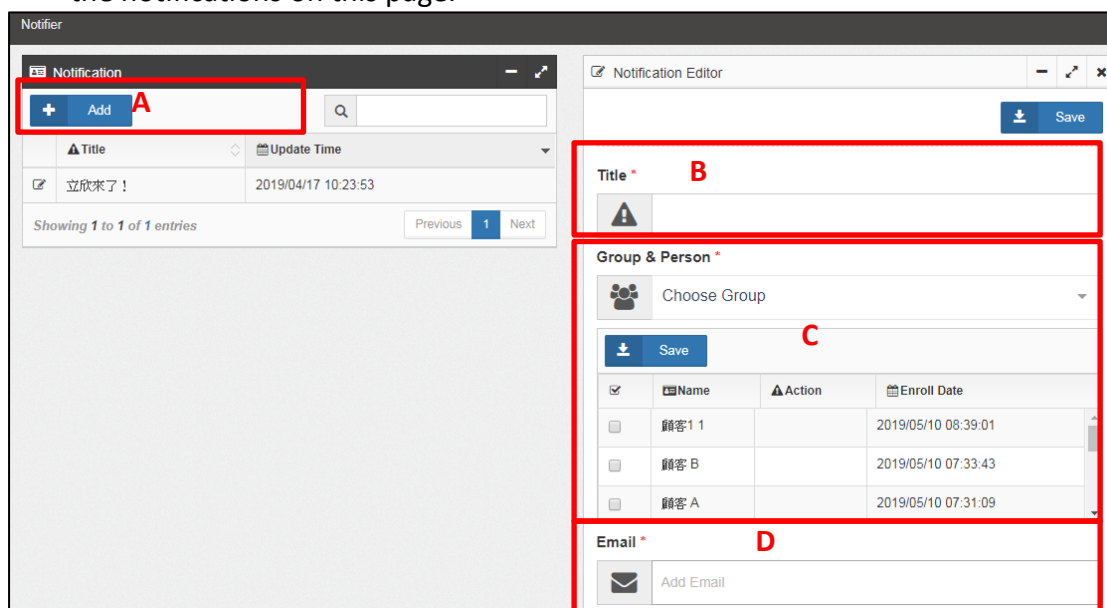
### C. Note

The identification results added from the notes can be distinguished from the name, time interval or whitelist/blacklist, can be searched, filtered, and managed.



### D. Notifier

There will be different notification actions for the identified results, you can set the notifications on this page.

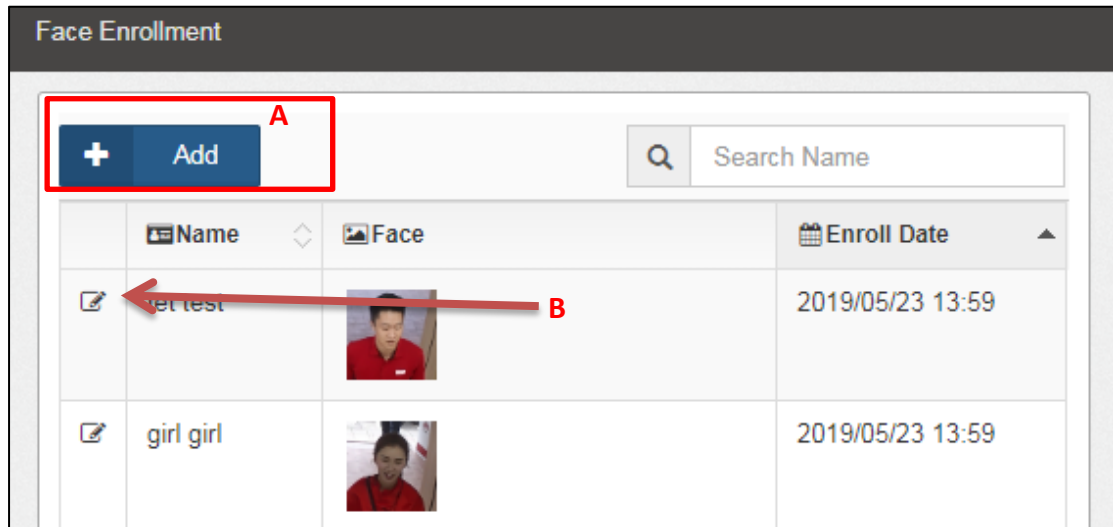






✓	Name	Action	Enroll Date
<input type="checkbox"/>	顧客11		2019/05/10 08:39:01
<input type="checkbox"/>	顧客 B		2019/05/10 07:33:43
<input type="checkbox"/>	顧客 A		2019/05/10 07:31:09

- A. Click "Add" to add notification rules.
- B. Enter a title or a brief description.
- C. Select the corresponding person to be notified.
- D. Enter the email of the manager who will be notified.

## E. Face Enrollment

Add and edit the Face database



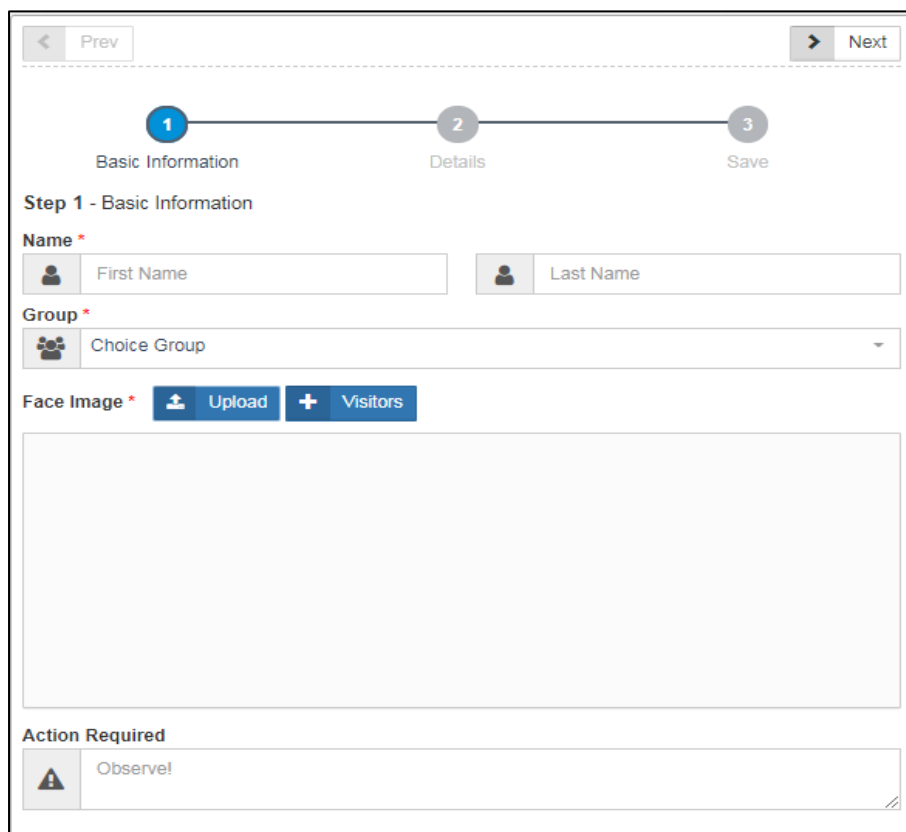
	Name	Face	Enroll Date
	et test		2019/05/23 13:59
	girl girl		2019/05/23 13:59

- A. Click "Add" to add a Face database.
- B. Modify or delete the existing Face.

There are three steps to create a Face database.

Step one:

Enter First/Last name → Select the group which it belongs to → Upload a picture of the face (You can also extract images from the identification results directly) → Action, you can do either "Welcome your VIP" or drive away the blacklist person from the result on the screen.





< Prev
Next >

1
2
3


Basic Information
 Details
 Save

**Step 1 - Basic Information**

**Name \***


 First Name
  Last Name

**Group \***

 Choice Group

**Face Image \*** Upload + Visitors

**Action Required**

 Observe!

Step two: Fill in the detailed information of the person.

< PrevNext >

1

2

3


Basic Information


Details

Save

**Step 1 - Basic Information**

**Name \***


 First Name

 Last Name

Please enter First Name.


Please enter Last Name.


**Group \***

 Choice Group

Please choice Group.


**Face Image \***

 Upload

 Visitors

Please upload Face Image.

**Action Required**

 Observe!

Step three: Click " Save" and complete face registration.

< PrevSave

1

2


3

Basic Information

Details

Save

**Step 3 - Save**

 **Complete**

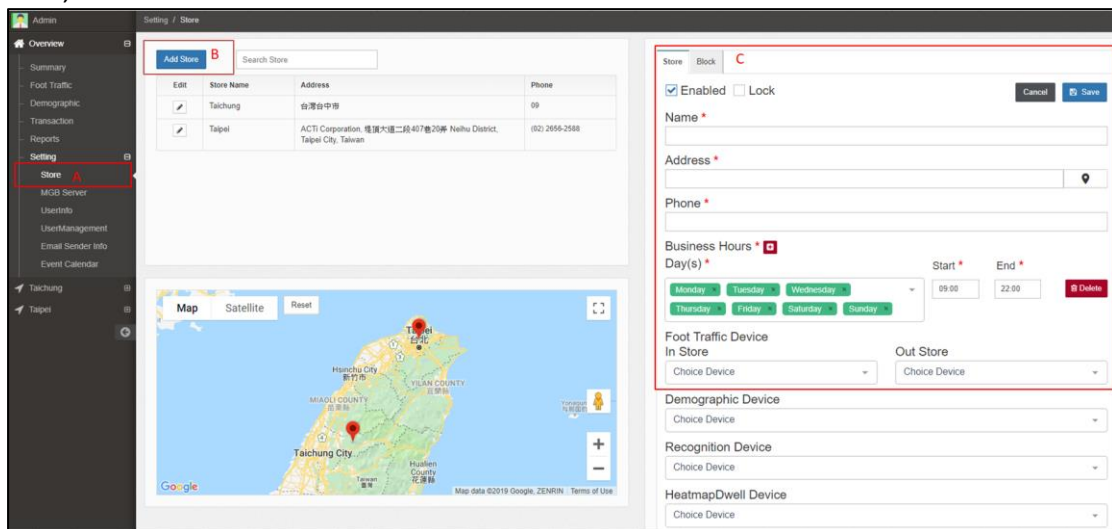
Click Save to finish

## 2. Setting

### A. Store setting

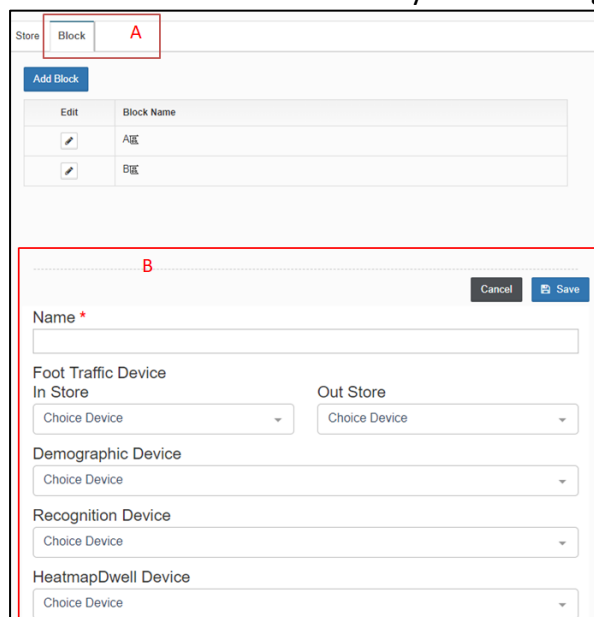
Users can add every store branches and select the related devices from this page.

- (A) Click “Store” to enter the edit page. In this page, you can see the store list which was added before and the profile can be edited at any time. Also, the branch location will be labeled on Google map.
- (B) Click “Add Store” to fill out related information such as the store name, location, store working hours and the device selection. Please note that the device in use would be listed on the drop-down menu if the user has already added it (See [Chapter2-B for step.](#))
- (C) The items with the star sign (\*) are REQUIRED entries. After completing these data, click Save.



In the store, users can choose the device that belongs in that area.

- (A) Click “Block”.
- (B) Fill out related information such as store name, location, store working hours and the device selection. Then you can manage either by store or block.

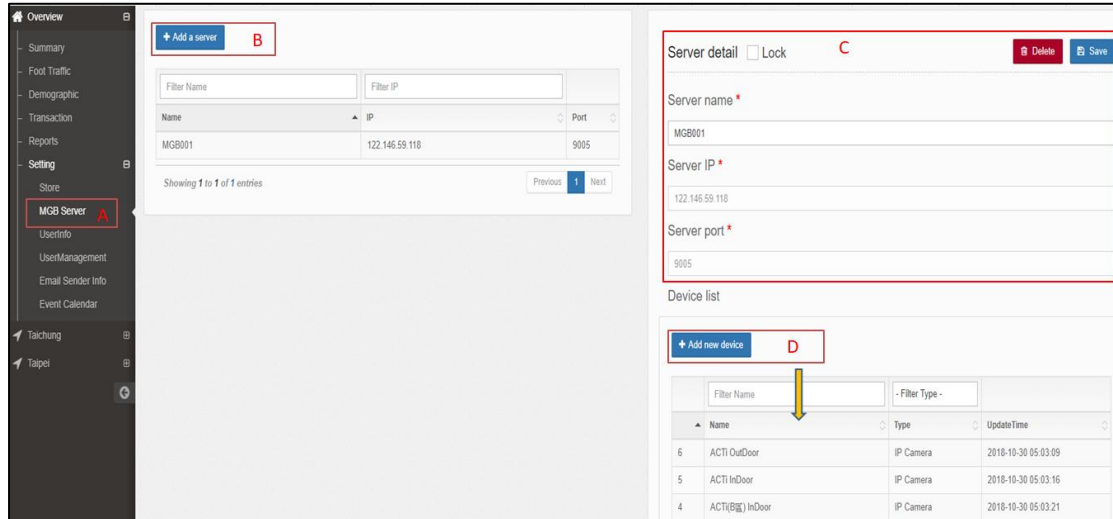


## B. MGB Server Setting

Before using any of the analysis function, configure first the camera and the MGB server on this page.

(A) Click “MGB Server”, then add or edit the related setting.

(B) Click “Add server” to set MGB server. The server which was set will be listed.

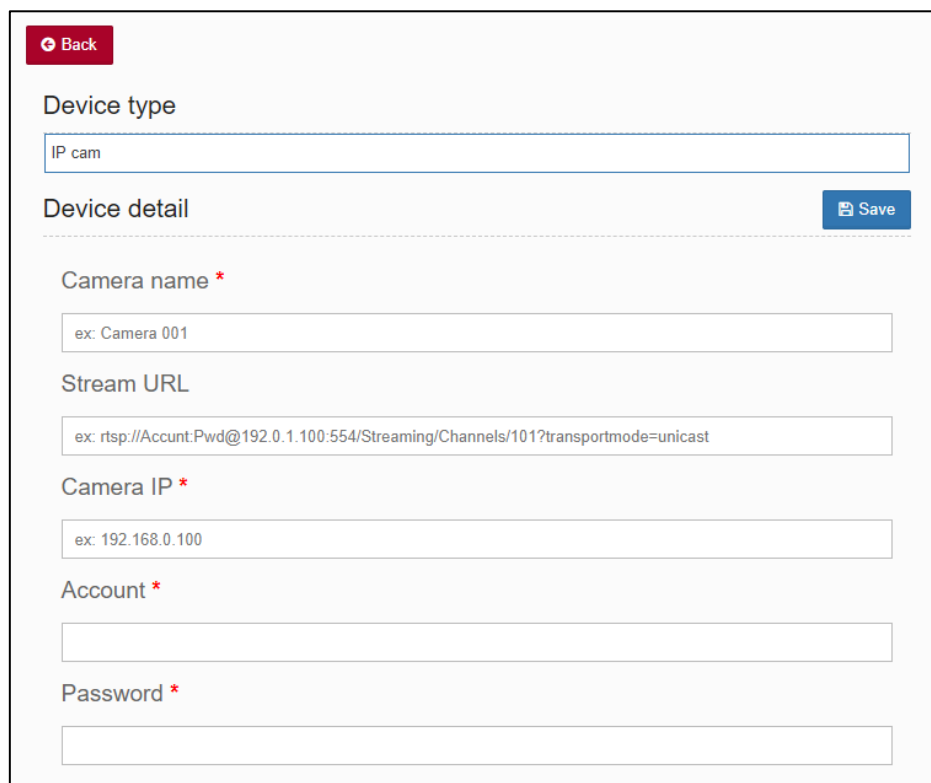


The screenshot shows the MGB Server configuration interface. On the left, a sidebar menu has 'MGB Server' highlighted. The main content area is divided into two sections. The top section, labeled 'Add a server' (B), contains a table with one entry: 'MGB001' with IP '122.146.59.118' and Port '9005'. Below the table is a 'Showing 1 to 1 of 1 entries' message and 'Previous'/'Next' buttons. The bottom section, labeled 'Server detail' (C), contains a form with fields for 'Server name' (MGB001), 'Server IP' (122.146.59.118), and 'Server port' (9005). There are 'Delete' and 'Save' buttons at the top right of this section. Below the form is a 'Device list' section with an 'Add new device' button (D) and a table with three entries:

Name	Type	UpdateTime
6 ACTi OutDoor	IP Camera	2018-10-30 05:03:09
5 ACTi InDoor	IP Camera	2018-10-30 05:03:16
4 ACTi(Big) InDoor	IP Camera	2018-10-30 05:03:21

(C) Fill in all the required data so that the child devices can find this server.

(D) Click “Add new device” to configure the camera. Users need to fill out all these data so that the server can receive the video stream.



The screenshot shows the 'Add new device' form. It has a 'Back' button at the top left. The form is divided into two main sections: 'Device type' and 'Device detail'. The 'Device type' section has a dropdown menu with 'IP cam' selected. The 'Device detail' section has a 'Save' button at the top right and several input fields:

- Camera name \***: ex: Camera 001
- Stream URL**: ex: rtsp://Account:Pwd@192.0.1.100:554/Streaming/Channels/101?transportmode=unicast
- Camera IP \***: ex: 192.168.0.100
- Account \***: (empty field)
- Password \***: (empty field)

## C. User Management

There are four different permission levels (from the highest authority to the lowest): Super Admin, Admin, Manager, and User. Each level of permission only can modify or monitor the one who is lower than him.

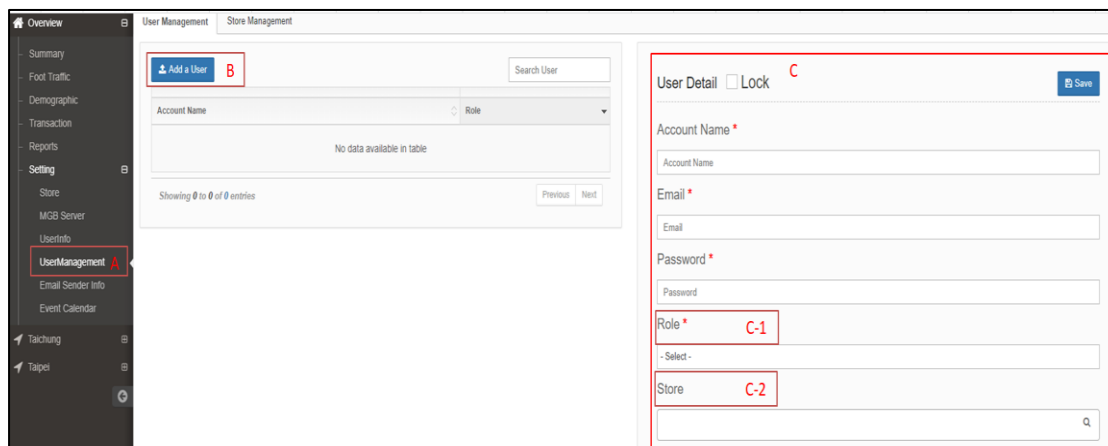
There is only one Super Admin account. The Super Admin account is created and can only be accessed by ACTi as a security measure since it is the highest permission.

Super Admin can create accounts for “Admin”, “Manager” and “User”; while “Admin” can create “Manager” and “User” accounts. The logical flow is on this basis.

As a security measure, RAS has a “lock” function which enables the system to preserve data by locking it to avoid the data being accidentally changed by anybody.

Take note that only an “Admin” can “lock” data, but “Admin” or any other users cannot “unlock” them. Only a Super Admin has the permission to unlock data.

Therefore, if there is a need to “unlock” any data, then you need to contact ACTi to do this.



(A) Click “User Management” from the page above.

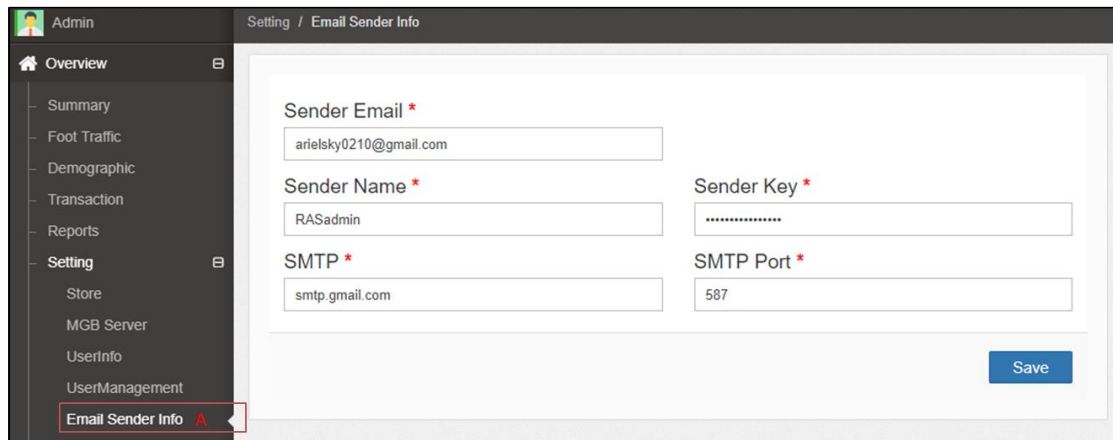
(B) Add a user and fill out the related information.

(C-1) Provide the level of permission of this new member. The available selection will depend on the creator’s permission level.

(C-2) Choose the store which will be managed by this new member.

## D. Email Server Setting

In order to send Email notifications to target receivers, users have to set the Email server first.



The screenshot displays the 'Email Sender Info' configuration page. The left sidebar contains a menu with 'Email Sender Info' highlighted by a red box and a red letter 'A'. The main content area has the following fields:

- Sender Email \***: arielsky0210@gmail.com
- Sender Name \***: RASadmin
- Sender Key \***: (masked with asterisks)
- SMTP \***: smtp.gmail.com
- SMTP Port \***: 587

A blue 'Save' button is located at the bottom right of the form.

- (A) Click “Email Sender Info” and fill out the server related information which includes sender name, SMTP and SMTP port. From the current default setting, we already added Gmail as an example. *(Please depend on the real situation)*

## E. Event Calendar Setting

User can dynamically add event to the calendar so that the manager could easily check the schedule at the same time.

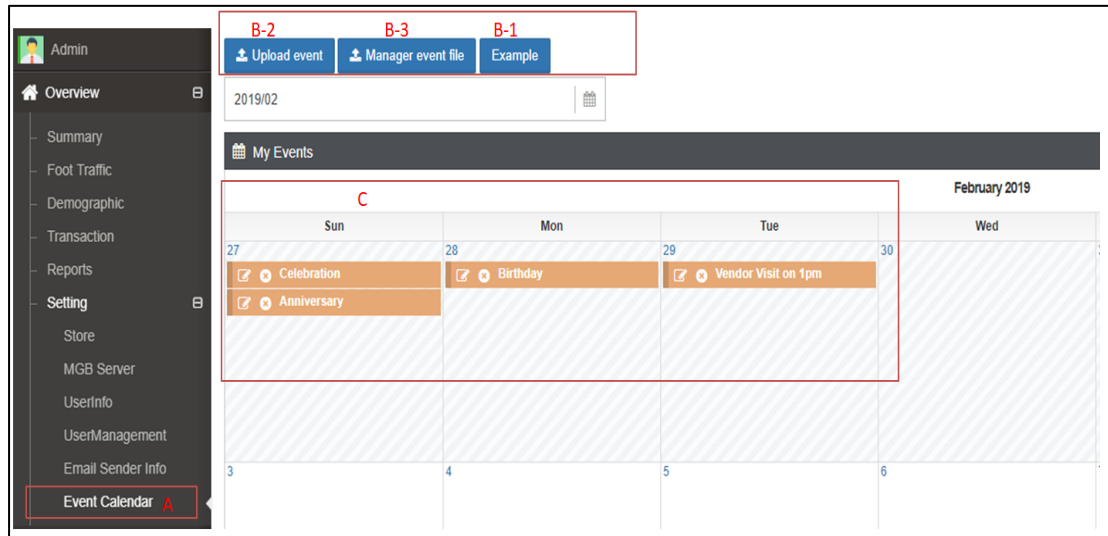
(A) Click “Event Calendar” to enter this page.

(B-1) First, download the example and follow the format to add your event in Excel.

(B-2) After editing the event, upload the file and then the event will automatically appear on the calendar.

(B-3) User can edit / delete the files to adjust the schedule.

(C) Review the event on the calendar and you can edit/ delete at any time.



The screenshot shows the 'Event Calendar' page. On the left sidebar, the 'Event Calendar' option is highlighted with a red box and labeled 'A'. At the top of the main content area, there are three buttons: 'Upload event' (labeled 'B-2'), 'Manager event file' (labeled 'B-3'), and 'Example' (labeled 'B-1'). Below these buttons is a date selector showing '2019/02'. The main calendar area is titled 'My Events' and shows a grid for February 2019. A red box labeled 'C' highlights the event entries for the week of February 27-30. The events listed are: 'Celebration' and 'Anniversary' on Sunday (27), 'Birthday' on Monday (28), and 'Vendor Visit on 1pm' on Tuesday (29).



# Annex

As shown in the [E-Exports section](#) of the setting chapter, it can be divided into three report formats according to the user's definition:

## A. Demographic Analysis

Store Name						
Time		This Store		Age (6-8 years old in an interval)		
		Demographic	Percent by Time	Demographic	Percent by Time	Percent by Age
Date/Time (By Day/Hour)	Male					
	Female					

## B. Foot Traffic

	Store				Block		
Time	Foot Traffic	Percent by Time	Passerby	Entering Rate	Foot Traffic	Percent by Time	Percent by Area
Date/Time (By Day/Hour)							

## C. Transaction Analysis

Store Name					
Time	Transaction	Sales Amount	Transaction Quantity	Conversion Rate (%)	Per Customer Transaction