



Occupancy Alarm Service SC9133/SC9133-RTL

Revision History

| Doc. Version | PKG Version | Description | Release Date | Contributor |
|--------------|-------------|-------------------------|--------------|-------------|
| V1.0 | 1.2.0.4 | 1 st Release | 2023/08/01 | Aaron.Lin |
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| | | | | |
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Symbols and Statements

| | | |
|---|-------------------------------------|---|
|  | INFORMATION | Provides important messages or advices that might help prevent Inconvenient or problem situations. |
|  | NOTE | Notices. Provide guidance or advices that are related to the functional integrity of the machine. |
|  | Tips | Tips are useful information that helps enhance or facilitate an installation, function, or process. |
|  | WARNING Or IMPORTANT | These statements indicate situations that can be dangerous or hazardous to the machine or you. |
|  | Electrical Hazard | This statement appears when high voltage electrical hazards might occur to an operator. |

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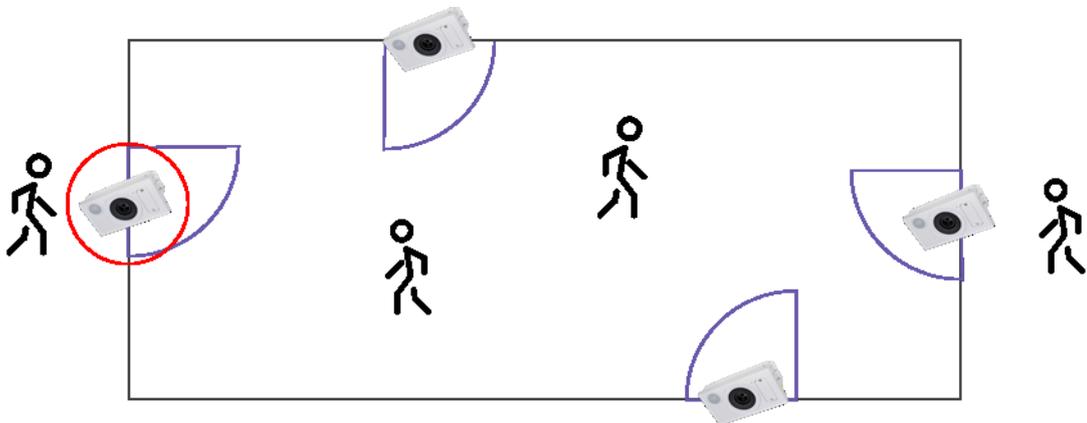
1. Description

Occupancy alarm service is an on-edge service for VIVOITEK smart counter (SC9133/SC9133-RTL) for space occupancy monitoring. With this VADP package, user can setup an on-edge server for accumulating counting data from each entrance for occupancy calculation. Result can be display through web portal or access by API and it can trigger alarm for user-defined occupancy level.

Support Model

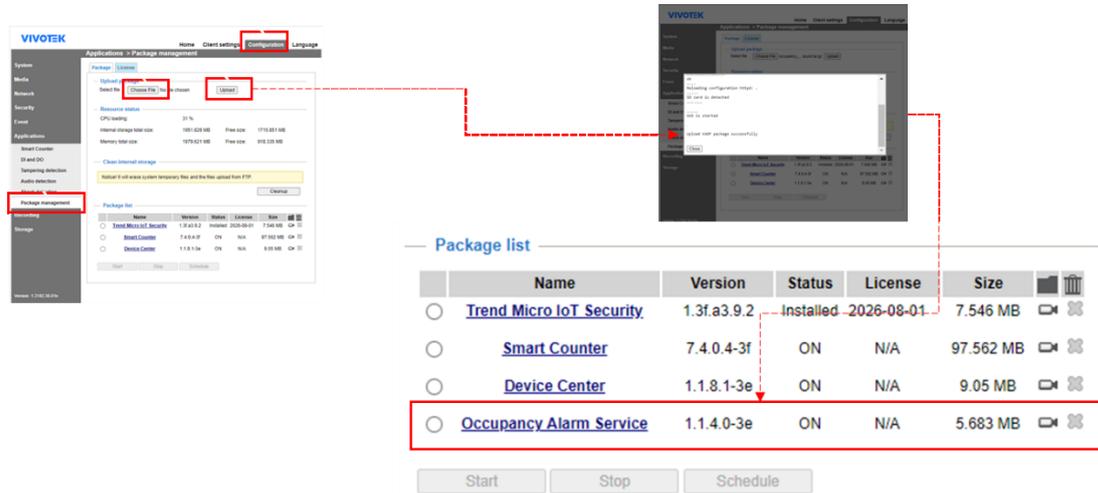
- Edge Server: SC9133, SC9133-RTL
- Counting Data Source: SC9133, SC9133-RTL

2. Installation



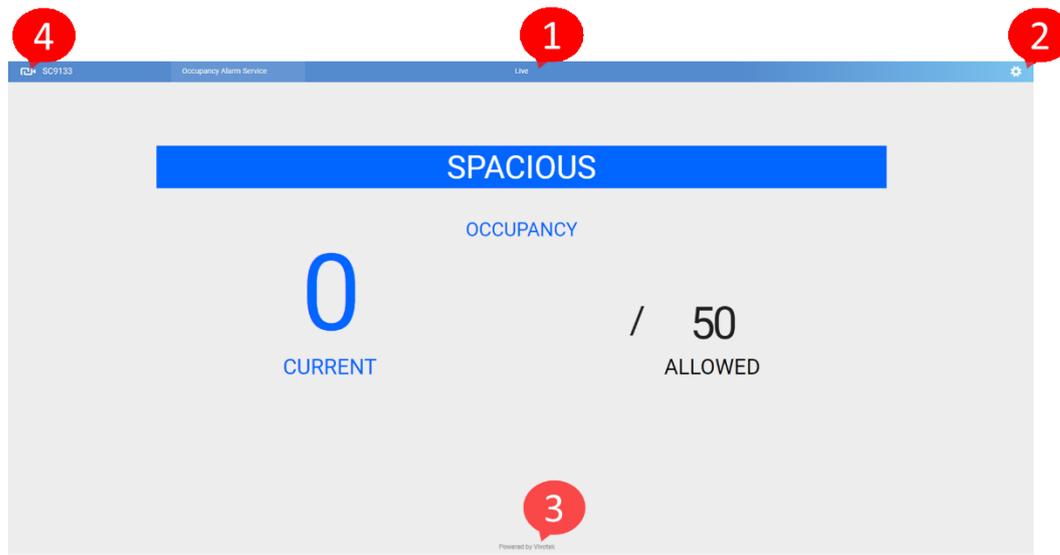
For monitoring the occupancy in one space, user only need to install “occupancy alarm service” VADP package on one smart counter of an entrance. Then, user can register all counting camera of each entrance on this service for accumulating the occupancy level.

How to install



- “Configuration” > “Package Management”
- “Upload package” > “Choose File” > “Upload”
- “Occupancy Alarm Service” shows on the package list.

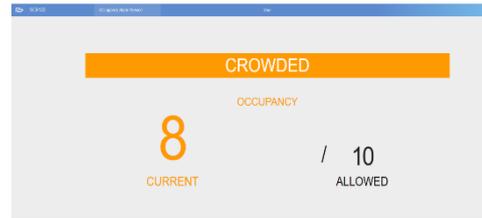
3. User Interface



| | Description |
|---|---|
| 1 | Live View page for occupancy monitoring |
| 2 | Configuration |
| 3 | [Optional] VIVOTEK LOGO |
| 4 | Link to Smart counter firmware portal. |

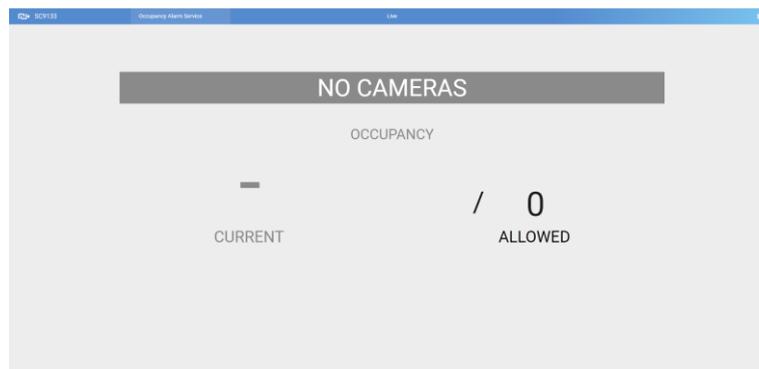
Live View

The live view portal display the occupancy level with current number and allowed number. User can define crowded and full level in the configuration. The live view page will show the real-time data and change the indication bar with different color and predefined info.

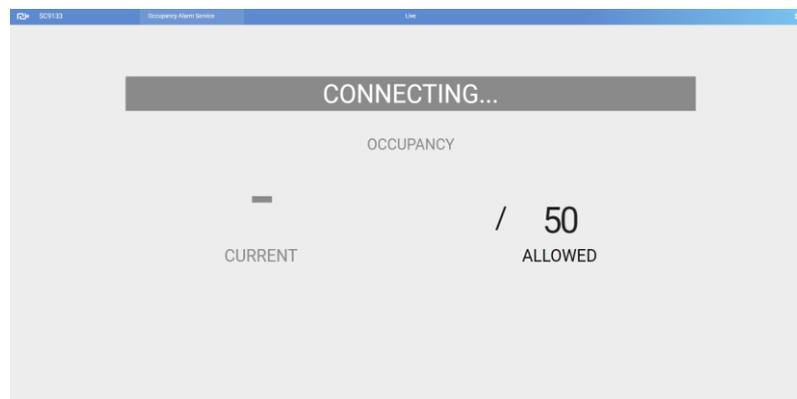


| Current | State |
|-------------------|----------|
| >Allowed | FULL |
| =Allowed | FULL |
| Crowded ~ Allowed | CROWDED |
| = Crowded | CROWDED |
| < Crowded | SPACIOUS |

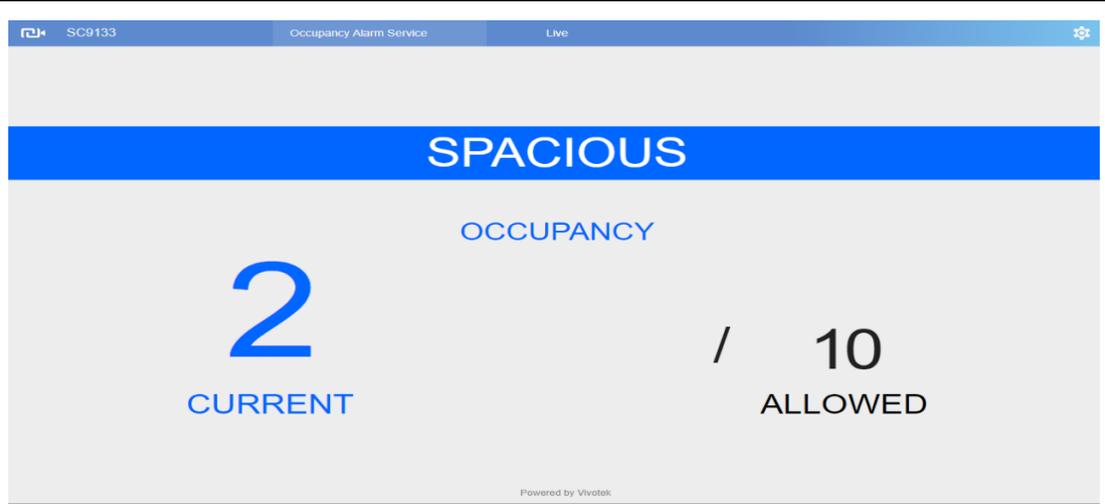
First Visit, no smart counter is registered.



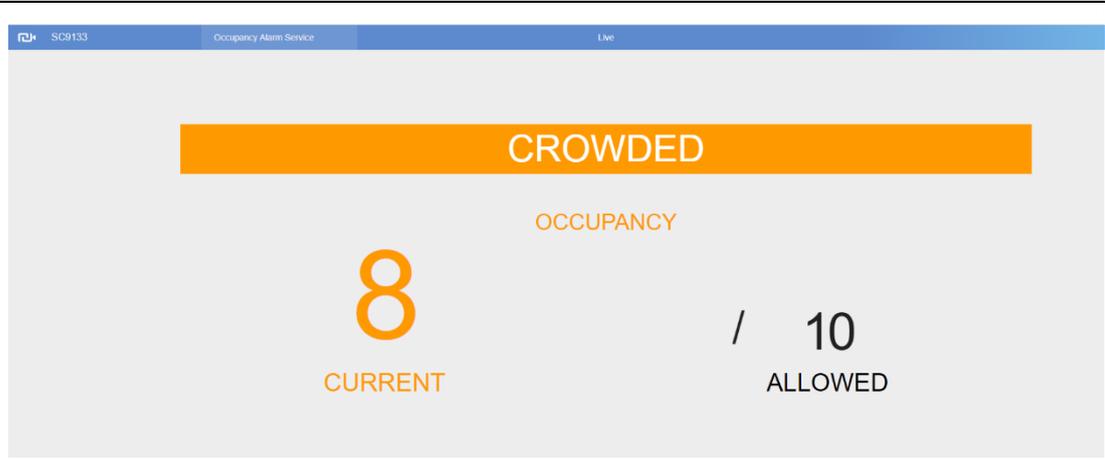
Occupancy Monitoring Start. Connecting all registered counter.



Occupancy in "Spacious" level



Occupancy in "Spacious" level



Occupancy in "FULL" level



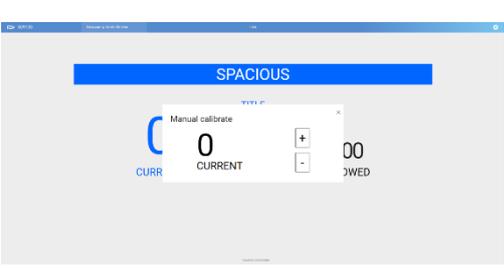
Live View Page Link

http://{OAS_Server_IP}/OAS/www/index.html#/occupancyAlarm/live

User can use a browser to display the occupancy by linking to this live view page and show in fullscreen.

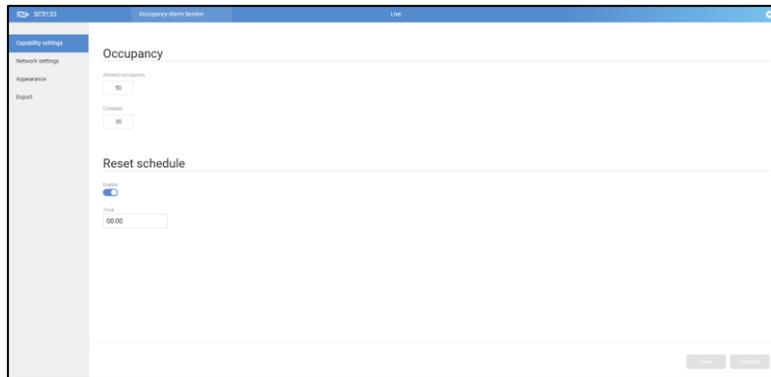
| | |
|--|-------------|
|  | INFORMATION |
| <p>If user want to use an Android-based smart device like smart TV or Android TB box to display the occupancy monitor. User can use the “Dolphin Browser” for display instead of common Chrome browser since Chrome on Android does not support “Full-screen display”.</p> | |

Manual Calibration

| | |
|---|--|
|  |  |
| <p>User can “left click ” the occupancy number on live view to open the “manual calibrarion” panel. User can calibration the number on the control panel.</p> | |
| <p>※Notice: Please refer Ch.6 API table for manual clibration command line.</p> | |

4. Configuration

Capability Setting

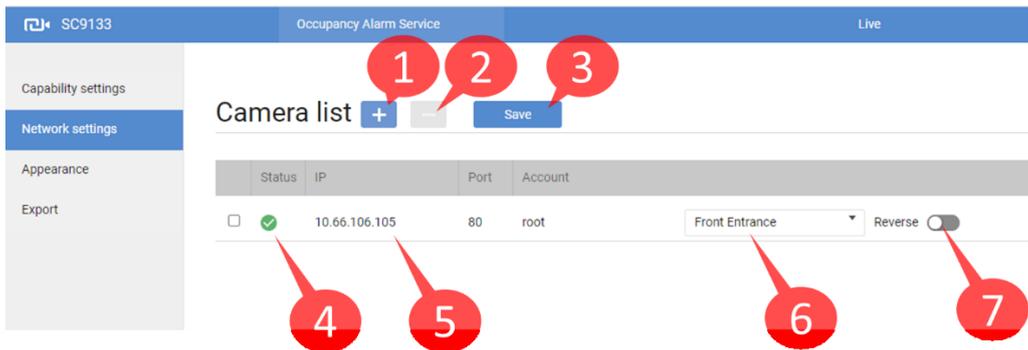


| Crowded Level | Description | Note |
|----------------------|--|---|
| Allowed Occupancy | <p>Define the allowed number for this space.</p> <p>The occupancy limit will display on live view.</p> <p>Once reaching the threshold, an “OccupancyFull” alarm trigger will be announce through VADP event trigger.</p> | <p>The note contains a screenshot of a live view occupancy indicator. It shows a blue bar at the top labeled 'SPACIOUS'. Below it, the word 'OCCUPANCY' is written in small letters. A large blue number '2' is displayed with 'CURRENT' underneath it. To the right, a red dashed box contains the number '50' with 'ALLOWED' underneath it.</p> |
| Crowded | <p>Define the crowded number for this space.</p> <p>Once reaching the threshold, an “OccupancyCrowded” trigger will be announce through VADP event trigger.</p> | |

| Reset Schedule | Description |
|---|---|
| <p>Reset schedule</p> <p>Enable <input checked="" type="checkbox"/></p> <p>Time <input type="text" value="00:00"/></p> | <p>Enable the daily “Reset schedule” and set the reset time. The occupancy number will be reset at the specific schedule.</p> |

| | |
|---|-------------|
|  | NOTE |
| For the occupancy alarm trigger, please refer Ch.5 for detail explanation. | |

Network Setting



| | Function |
|---|--|
| 1 | Add new smart counter into pool |
| 2 | Delete selected device from pool |
| 3 | Save all the changes |
| 4 | Device Connection Status |
| 5 | Device IP |
| 6 | Selected Rule for accumulation |
| 7 | Reverse the in/out number for accumulation |

Add Smart Counter into Pool

Cameras

IP : 80

Authorization

Username

Password

Add

User can add devices with same password in batch.

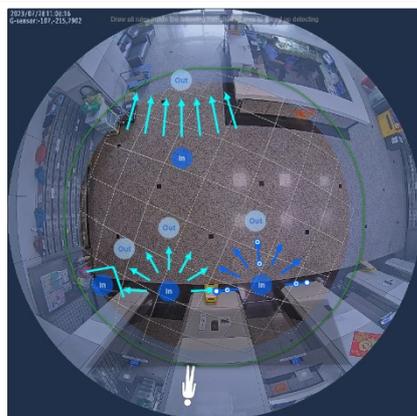
Camera List

Occupancy alarm service support maximum 16 entrance for occupancy accumulation.

Camera list + - Save

| | Status | IP | Port | Account | | Reverse |
|--------------------------|--------|-------------|------|---------|----------------------|---|
| <input type="checkbox"/> | ✓ | 172.20.1.89 | 80 | root | 2 EV and Right Stair | Reverse <input type="checkbox"/> |
| <input type="checkbox"/> | ✓ | 172.20.1.89 | 80 | root | Right Path | Reverse <input type="checkbox"/> |
| <input type="checkbox"/> | ✓ | 172.20.1.90 | 80 | root | Elevator 1 | Reverse <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | ⚠ | 172.20.1.90 | 80 | root | Elevator 2 | Reverse <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | ✓ | 172.20.1.90 | 80 | root | Left Stair | Reverse <input type="checkbox"/> |
| <input type="checkbox"/> | ✓ | 172.20.1.90 | 80 | root | Left Path of Lobby | Reverse <input checked="" type="checkbox"/> |

User can select the specific rule for accumulation from the drop down list.

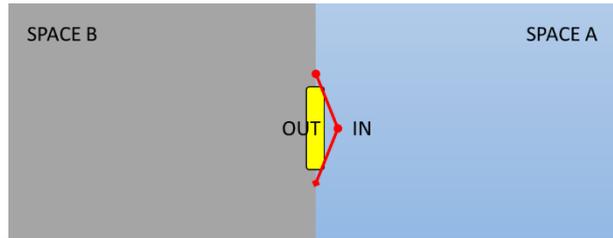


Depend on the IN/OUT definition of each rule, user can set the “Reverse” option on the list for reverse IN/OUT for occupancy accumulation.

It’s also common to use the “Reverse” option for different side of the entrance.

User can add the same rule into an occupancy alarm of SPACE B by simple enable the reverse option.

| | |
|--------------------|---|
| Elevator 1 | Reverse <input checked="" type="checkbox"/> |
| Elevator 2 | Reverse <input checked="" type="checkbox"/> |
| Left Stair | Reverse <input type="checkbox"/> |
| Left Path of Lobby | Reverse <input checked="" type="checkbox"/> |



| | |
|--|---|
| | <p>NOTE</p> |
| | <p>User can add more than 1 counting rule into occupancy alarm service from the same device. For example, the smart counter monitoring the elevator area.</p> |
| | |

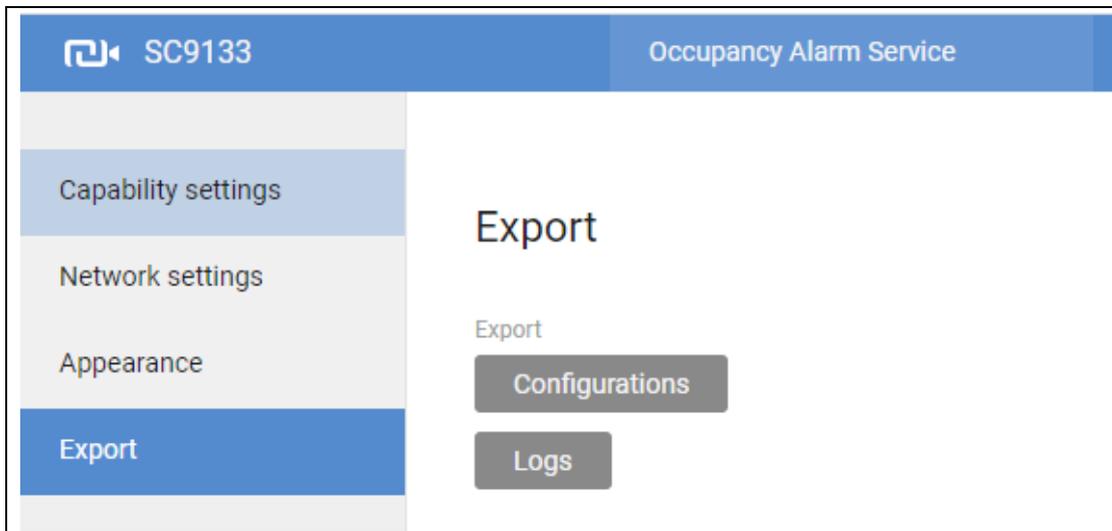
| | |
|---|-------------|
|  | NOTE |
| <p>Once user click the “Save” button, all device and rule will be reconnected and occupancy number will be reset for a new period. User can manually calibrate the remaining people number on live view tab if necessary.</p> | |

Appearance

User can define the “live view” monitor on this appearance configuration.

| | |
|---|--|
| <h3>Footer</h3> <hr/> <p>Powered by Vivotek Show Powered by Vivotek <input checked="" type="checkbox"/></p> |  |
| <h3>Textual</h3> <hr/> <p>Title OCCUPANCY : <input type="text" value="OCCUPANCY"/></p> <p>Capacity CURRENT : <input type="text" value="CURRENT"/> ALLOWED : <input type="text" value="ALLOWED"/> SPACIOUS : <input type="text" value="SPACIOUS"/> CROWDED : <input type="text" value="CROWDED"/> FULL : <input type="text" value="FULL"/></p> |  |

Export



The export function is for bug and troubleshooting purpose. The configuration and log are essential for support team to analysis.



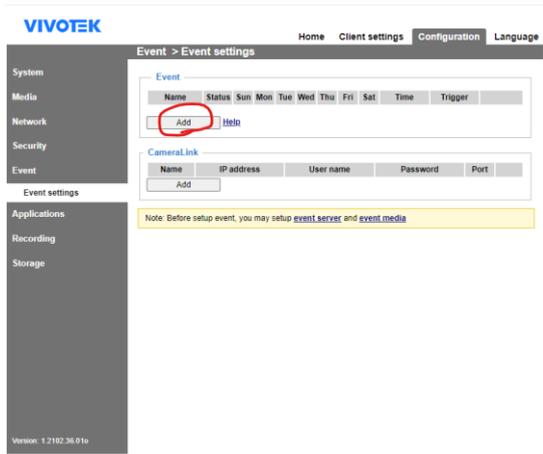
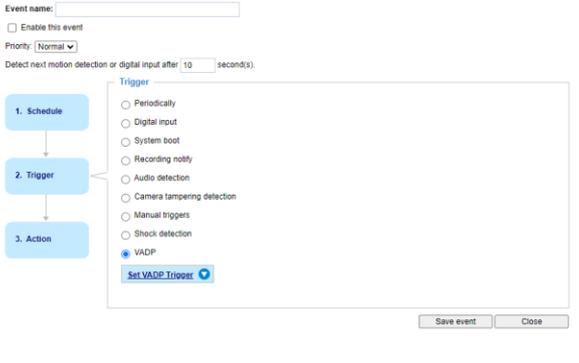
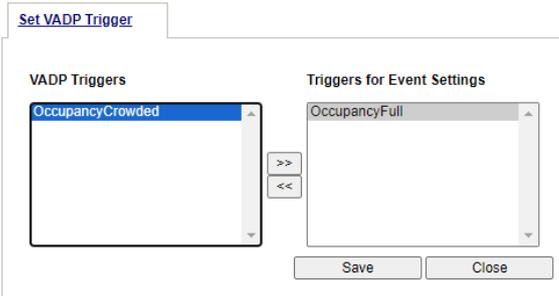
WARNING

The camera will be in relatively high temperature when power on.

Do not hand holding the camera when power on.

5. Occupancy Alarm Trigger

After install the “occupancy alarm service” VADP package, the service will create two event triggers, “OccupancyFull” & “OccupancyCrowded” automatically.

| | |
|--|--|
| <p>“Configuration” > “Event” > “Event settings” > “Add” a new event</p> |  |
| <p>Configure the event > “Set VADP Trigger”</p> |  |
| <p>Add “OccypancyFull” or “OccupancyCrowded” into 『Trigger for Event Setting』 list</p> |  |
| <p>Then, user can set a event based on these two trigger from “occupancy alarm service” once the occupancy reach the specific level thredhold.</p> | |

6. API Table

| |
|--|
| http://{IP}/Occupancy/State |
| get the current number & status EX: {"number":28,"state":"Full"} |
| http://{IP}/Occupancy/DetailState |
| Get the detail of occupancy. 1. Individual Device: In/Out number, rule name, and its source camera IP 2. Summary Data: In/Out number, manual offset, and current status. EX: {"Detail":[{"in":12,"ip":"10.66.108.13","out":0,"port":80,"rule":"Line1"}, {"in":5,"ip":"10.66.106.105","out":8,"port":80,"rule":"Rule-1"}], "in":17,"number":9,"offset":0,"out":8,"state":"Crowded"} |
| http://{IP}/Occupancy/Offset?Add=<Num> |
| Offset for increase the occupancy number <NUM>: positive integer Example: occupancy number + 10 http://10.66.108.13/Occupancy/Offset?Add=10 |
| http://{IP}/Occupancy/Offset?Subtract=<Num> |
| Offset for decrease the occupancy number <NUM>: positive integer Example: occupancy number 減少 5 http://10.66.108.13/Occupancy/Offset?Subtract=5 |
| /Occupancy/ResetCounting |
| Reset the occupancy number |

7. Troubleshooting

1. The occupancy number freeze at "Zero". No change even people enter or leaving the area.
 - Use the Get Detail API (<http://{IP}/Occupancy/DetailState>). Check whether the exit number is larger than entrance. So, the summary is negative number and the occupancy number freeze at "ZERO".

- END of Document-