







Sentrol Cloud User's Guide

Ver. 2.01

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Congratulations for choosing NHR's Sentrol Cloud solution. This manual is designed to help set up and get started using the cloud solution in a few short minutes.

Safety notice: Please read and follow the instructions before using this product

- To prevent electrical shock or fire, do not disassemble or expose the unit to liquids of any kind
- Only use attachments and / or accessories specified by the manufacturer

1 Sentrol Cloud Gateway Register

- a) Open a browser and go to the following URL: http://www.sentrolcloud.com/nhr/view/front/index.php
- b) The LOGIN prompt will appear (if not, just click "Member Login"). Select the desired language. Click "New account".

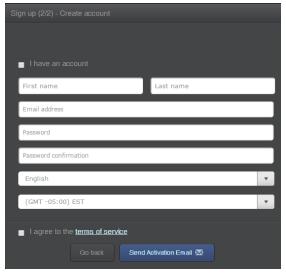


- c) Enter the last 8 digits of G07's MAC address in the space below Gateway Mac.
- d) Enter the Captcha Code according to the page as shown below.
- e) Click "Continue" button to proceed to the next page.





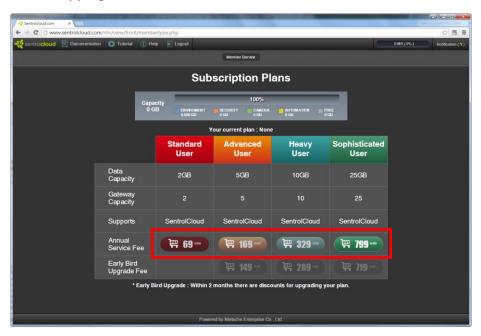
f) Create the account by entering "First Name", "Last Name", "E-Mail Address", "Password", "Confirm Password", select the display language and the time zone of your region, check "I agree to the terms of service", then click "Send Activation Email" as shown below.



g) Log in to the e-mail account that was entered. Open the activation email and click the link "<u>Please click here</u>" to complete the registration process.



h) User will require purchasing a cloud service. Select a desired plan and click its corresponding Annual Service Fee shopping cart button.



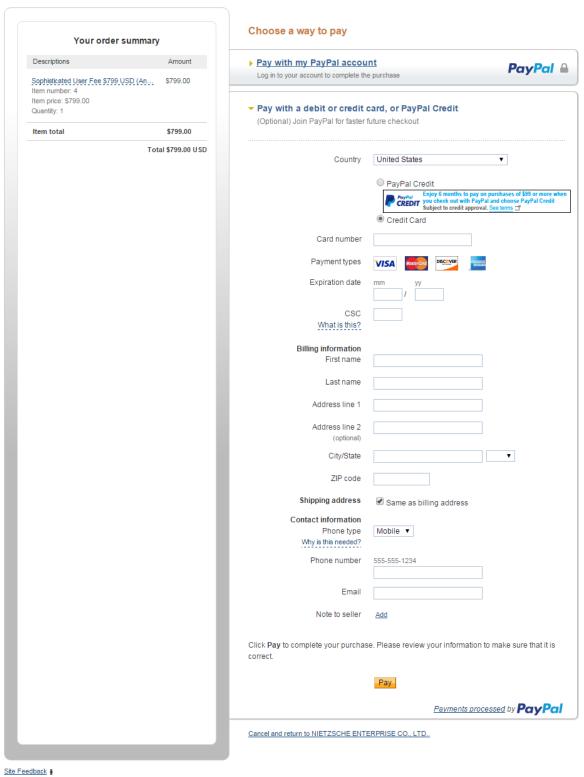
3

English -



i) Please choose the country and fill in the corresponding space using PayPal service as shown below.

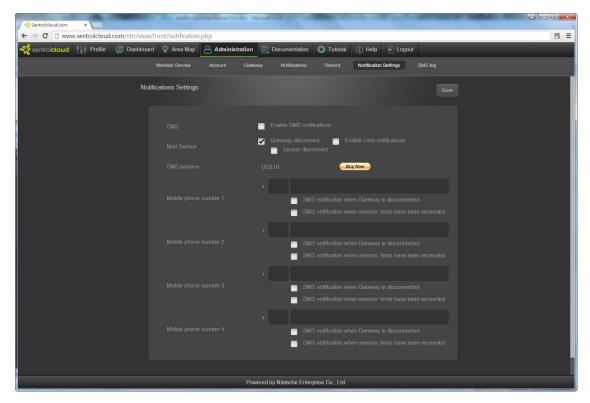
NIETZSCHE ENTERPRISE CO., LTD.



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j) User may purchase SMS notifying service with \$10USD deposit as shown as below.



2 Sentrol Cloud Menu Overview

After you have registered a gateway with a Sentrol Cloud account, you can login to Sentrol Cloud at any time using your account. After you have logged in, the main menu is as follows:

- (1) Sentrol Cloud startup page: Click this link to access the Sentrol Cloud startup page.
- (2) Main menu items: Profile, Dashboard, Area Map, Administration, Documentation, Tutorial, Help, Logout. These items will be explained in detail in the following sections.
- (3) Storage status: Displays the amount of storage space (bytes and total space percentage used) currently used for storing data.
- (4) Notification: Displays the number of newly occurred device events. Click this link to access the *notification* report under "Administration" → "Notifications" → Notification.



5



3 Profile

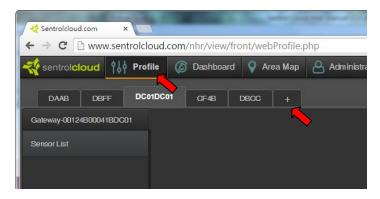
A profile is an inclusion of sensors and/or output devices joined to the IoT (Internet of Things) network of a particular gateway (which also acts as a coordinator), plus a complete set of associated logic control settings via sensor(s), sometimes many types of sensors in one profile, in which limit point, trigger point, buffer point can be defined quickly and intuitively.

A profile precisely defines the ways that the sensor/output devices communicate with the user(s) via the Sentrol Cloud web-based interface or the Sentrol Cloud app.

A sensor and an output device that belong to the same profile can be grouped together to interact with each other. For example, you can group a siren (output device), a door sensor (security safety device), and a smoke detector (safety device) together. Whenever a security/safety device (door sensor, smoke detector, etc.) reports *alert* activities (e.g. an intruder is detected by the door sensor, or the smoke detector detects dangerous smoke level in the air), the siren receives the *alert* and sound the alarm. An additional example is that you can set up a smart power switch to automatically turn on the plant irrigation device when the soil moisture sensor's detected moisture level falls below a dangerously low level.

To create a profile, please follow instructions below.

a) Click "Profile" and then "+" as shown below.



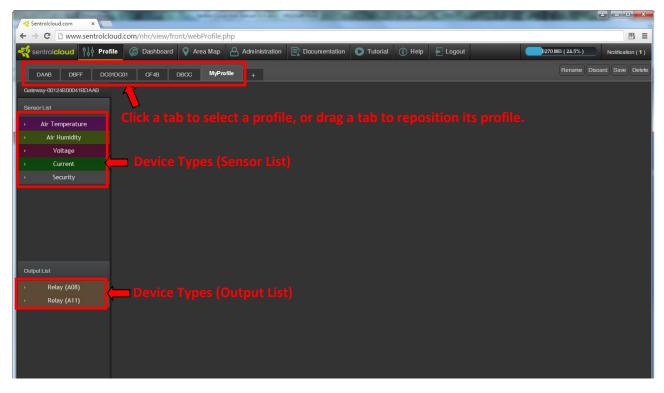
b) Enter a profile name, choose a gateway, and click the "save" button as shown below.



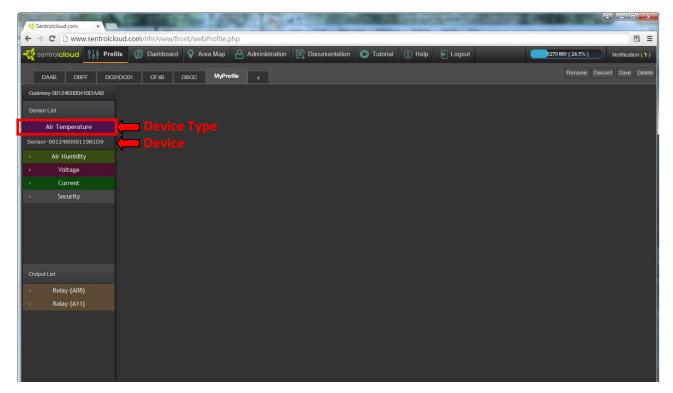
6



c) The new profile is created, displaying all device types connected to the chosen gateway in two lists – **Sensor List** and **Output List**. You can select any profile by clicking its tab or rearrange the profiles by dragging each profile to the desired position.

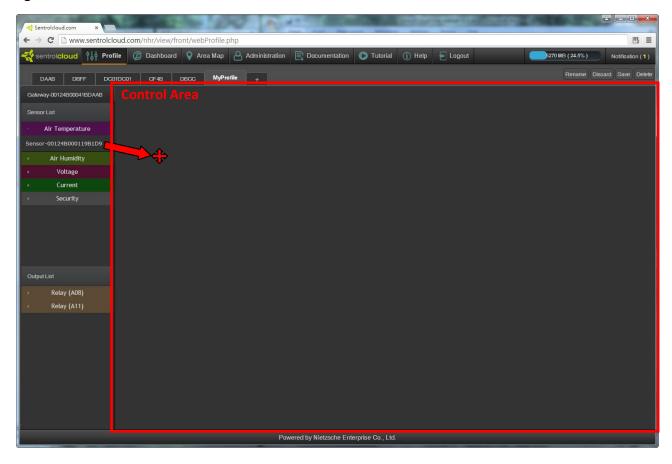


d) Expand a device type by clicking its tab, and its associated devices will be listed by their MAC addresses (in the example below, the device type "Air Temperature" is expanded):



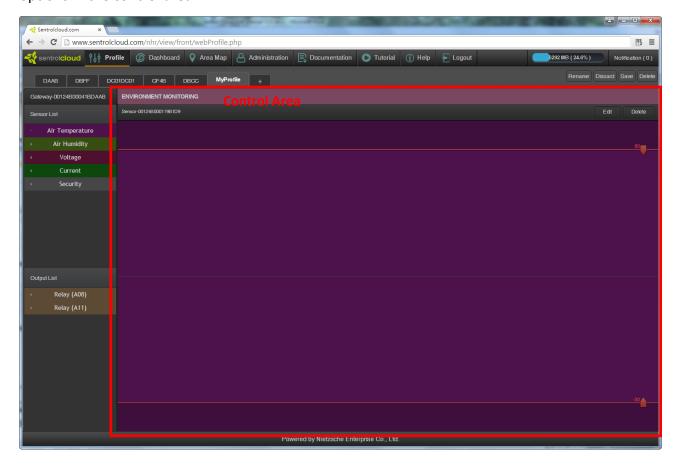


e) Drag a device ("Sensor-00124B000119B1D9" in the example below) to the control area on the right.



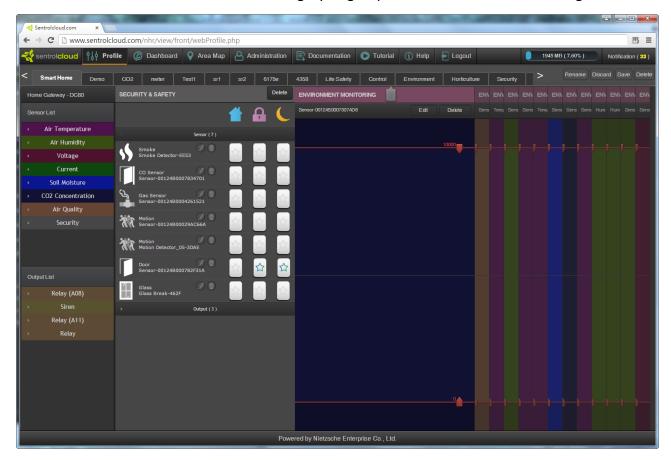


f) The dragged device ("Sensor-00124B000119B1D9" in the example below) will display its control options in the control area.



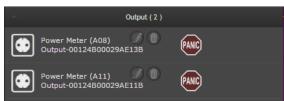


g) Similarly, you can add additional devices to the control area. A Sensor device will be classified as one of the two control categories in the control area: SECURITY & SAFETY or ENVIRONMENT MONITORING. On the other hand, an Output device can be added to an existing SECURITY & SAFETY control category to group with security/safety sensors, or it can be added to an ENVIRONMENT MONITORING control category to group with environment-monitoring sensors.



h) **SECURITY & SAFETY**: This control category is for grouping and managing **Sensor** and **Output** devices. Click the "Sensor" tab to expand the control options of the **Sensor** devices (e.g. Door Sensor devices), or click the "Output" tab to expand the control options of the **Output** devices (e.g. Power Meter devices).





The control options are as follows:

: Delete this control category.





: Edit a device.



: Delete a device.



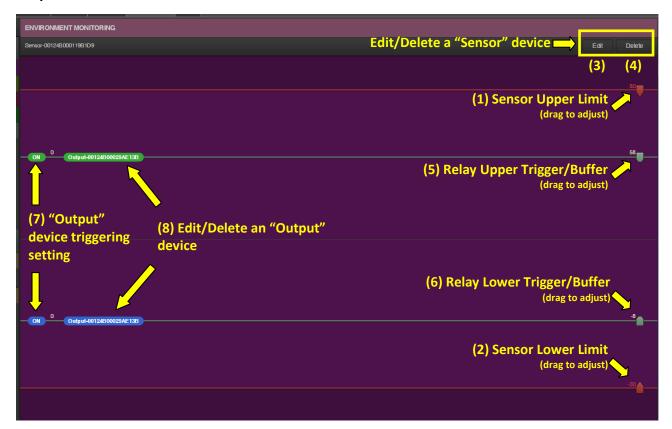
: Invoke a PANIC test for the **Output** device.



: Enable or disable the *notification* and alarm feature of a security mode.

NOTE: A **Security** device must be added to the category before adding an **Output** device.

i) **ENVIRONMENT MONITORING**: This control category is for setting real-time sensor data limits of the **Sensor** device type (except **Security** device type): "Air Temperature", "Air Humidity", "Voltage", "Current", "Soil Moisture", "CO2 Concentration", "Air Quality" devices and more. When real-time sensor data breaches a defined limit, a *notification event* is dispatched. Additionally, you can also add an **Output** device to use real-time sensor data to control the power output of the **Output** device.

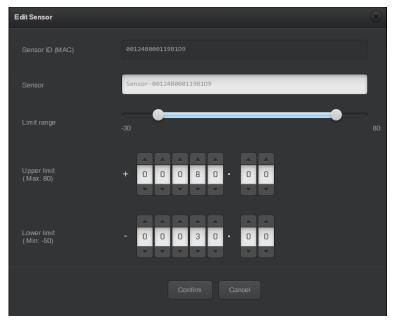


The **ENVIRONMENTAL MONITORING** setting options are as follows:

- (1) Sensor Upper Limit: Drag the anchor to set the upper limit for the sensor. When real-time sensor data rises above this value, a *notification event* of exceeding a limit is dispatched.
- (2) Sensor Lower Limit: Drag the anchor to set the lower limit for the sensor. When real-time sensor data falls below this value, a *notification event* of exceeding a limit is dispatched.



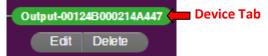
(3) Edit a **Sensor** device: To rename the **Sensor** device or to set the limits more precisely, click "Edit". The dialog window **Edit Sensor** will appear. After you have renamed the **Sensor** device or readjusted the limits, click "Confirm" to save the changes.



- (4) To delete this **ENVIRONMENTAL MONITORING** category, click "Delete" and follow screen instructions.
- (5) Output Upper Trigger/Buffer: Drag the anchor to set the upper limit for the sensor. When real-time sensor data rises above this value, a *notification event* of output triggering is dispatched.
- (6) Output Lower Trigger/Buffer: Drag the anchor to set the upper limit for the sensor. When real-time sensor data falls below this value, a *notification event* of output triggering is dispatched.
- (7) Output triggering setting: Sets the output mode when real-time sensor data is beyond the limit range (upper limit defined by (5) and lower limit defined by (6)). Click to toggle between ON and OFF. On the other hand, when real-time sensor data is within the limit range, the output mode is set as <u>the opposite</u> of the output trigger setting.

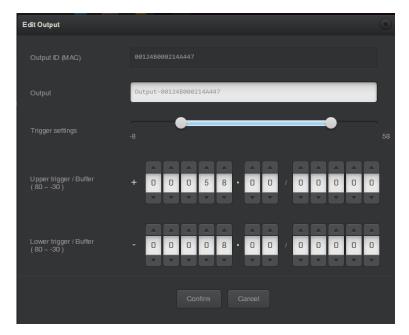
Output triggering setting	Relay device output when real-time sensor data is <u>beyond</u> the limit range defined by (5) and (6)	Relay device output when real-time sensor data is within the limit range defined by (5) and (6)
ON	Output is set ON.	Output is set OFF.
OFF	Output is set OFF.	Output is set ON.

(8) Edit/delete an Output device:



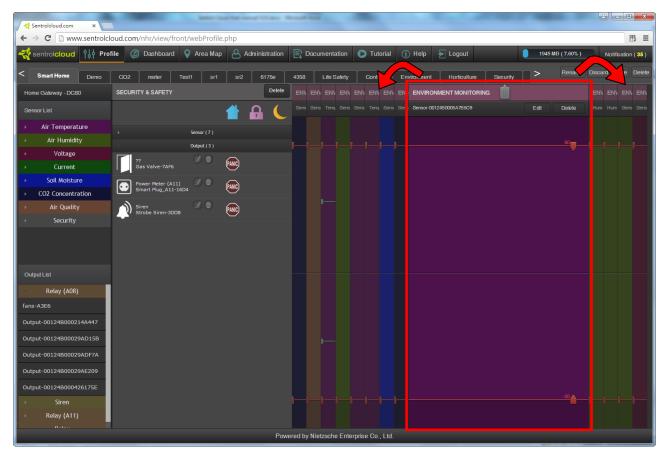
To rename the **Output** device or to set the limits more precisely, click the device tab and then "Edit". The dialog window **Edit Output** will appear. After you have renamed the **Output** device or readjusted the limits, click "Confirm" to save the changes.





To remove the **Output** device from the **ENVIRONMENTAL MONITORING** category, click the device tab and then "Delete".

There can be multiple instances of the **ENVIRONMENTAL MONITORING** category (as shown in the example below). Click any instance to expand/collapse it. Each instance can also rearranged by dragging it to another location.





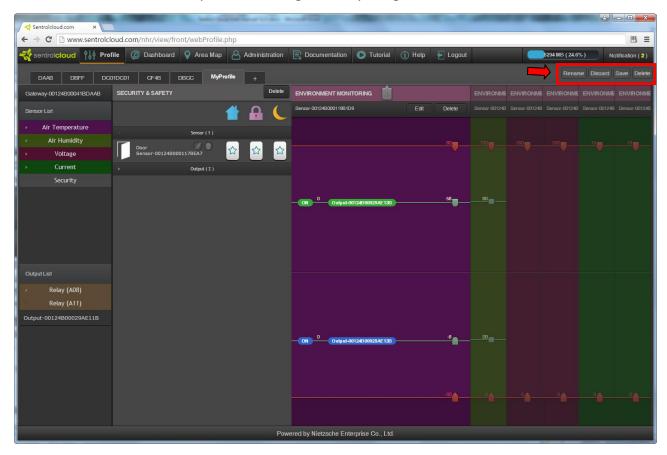
j) Profile Management

"Rename": Rename the current profile.

"Discard": Discard changes made to the current profile. A dialog will ask you again for confirmation.

"Save": (Important!) Click "Save" to save changes made to the current profile.

"Delete": Delete the current profile. A dialog will ask you again for confirmation.

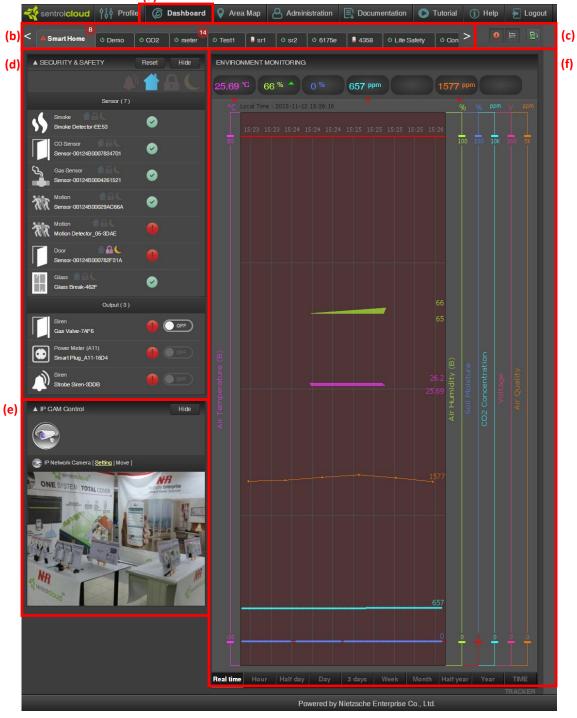




4 Dashboard

Dashboard is a place where you can select a pre-defined profile (as defined under the "Profile" main menu) and monitor all sensor information graphically and numerically in real-time. Additionally you can track real-time statuses reported by security and safety sensor and output devices. Moreover, if there is an IP camera connected to a gateway, you can concurrently monitor IP camera video in real-time.

The main interface for Dashboard is as follows:





- a) Click "Dashboard" to access the Dashboard interface.
- b) Profile tab: Loads the profile when the tab is selected. In the example below, the profile Smart Home is selected with its real-time device data and statistics.



The main controls and indicators for the profile tabs are as follows:

- (1) Click "<" or ">" to browse a profile tab not being displayed.
- (2) Profile status symbol: Displays overall status of devices under the given profile. The symbols and their meanings are as follows:

Symbol	Meaning
ð	Normal
A	Over limit (i.e. limit range breached)
•	Output trigger (i.e. buffer range breached)
	Battery low

- (3) Profile name
- (4) Notification symbol: This symbol appears whenever there is one or more new notifications from devices of this profile. The number on the symbol indicates number of new notifications that has occurred. Click this symbol to read the notifications under "Administration" → "Notifications".
- c) Control options:



- (1) Click to enable/disable trigger symbol display.
- (2) Click to enable/disable gridlines in the timeline display (see Part (f)) **ENVIRONMENTAL MONITORING** area.
- (3) Click to export sensor data. You will be redirected to the submenu "Administration" → "Record".
- d) **SECURITY & SAFETY** area: This area is for setting security and safety device modes, plus viewing security and safety device information in real-time.

The main controls and indicators for the **SECURITY & SAFETY** area are as follows:



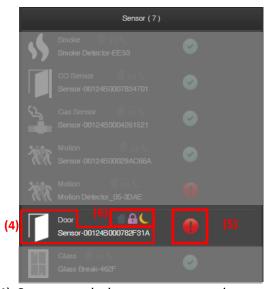
(1) Click to expand/collapse the **SECURITY & SAFETY** area.



(2) Click to reset the SECURITY & SAFETY area.

(3) Set the security mode: Click a symbol to activate the security mode. Only one mode can be active at any time.

Symbol	Security Mode
	PANIC alarm test for all applicable security & safety devices
	Home
A	Away
	Night



- (4) Sensor symbol, sensor type, and sensor name
- (5) Sensor status:

Symbol	Sensor Status
	Normal
	A <i>notification event</i> or an alarm has occurred.

(6) The symbol(s) of the security mode(s) with alarm enabled will light up. The security mode alarm feature is set under the main menu "Profile".

Symbol	Security Mode
	Home
<u> </u>	Away
	Night

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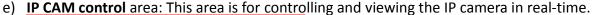




- (7) Output device symbol, output device type, and output device name
- (8) Output device status:

Symbol	Output Device Status
	Normal
	A <i>notification event</i> or an alarm has occurred.

(9) Output device switch: When this switch lights up, it is under *Manual Mode*, and you can manually toggle this switch to turn ON/OFF the device output (e.g. power output for a Power Meter device). If the switch is grayed out, the switch is under *Preservation Mode* (i.e. the switch is turned on/off automatically via the associated sensor output set in the **ENVIRONMENTAL MONITORING** category). If you click a grayed-out switch, a dialog will ask if you want to switch from *Preservation Mode* to *Manual Mode*. Click "OK" to force *Manual Mode* or click "Cancel" to stay with *Preservation Mode*.





The main controls and displays for the **IP CAM control** area are as follows:

- (1) Click to expand/collapse the IP CAM control area.
- (2) Click the symbol to enable/disable the IP camera's real-time surveillance video.
- (3) Click for IP camera setup, plus a larger view of the IP camera's real-time surveillance video.
- (4) Displays the IP camera's real-time surveillance video.

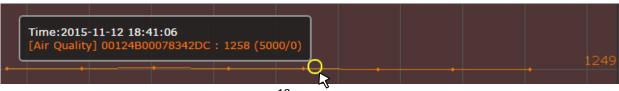


f) ENVIRONMENTAL MONITORING area: This area is for controlling and viewing sensor information graphically in real-time. Sensor information from different devices will be displayed in different colors.



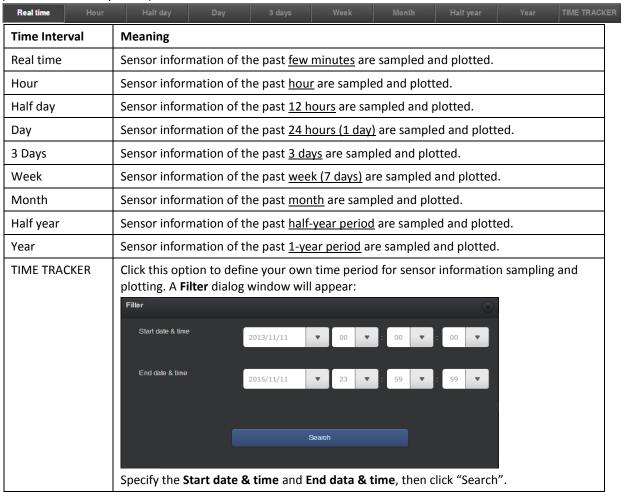
The main controls and displays for the **ENVIRONMENTAL MONITORING** area are as follows:

- (1) Warning message area: Important warning messages, such as "Your Gateway Disconnect!!", "Your sensor voltage is too low, replace the battery as soon as possible!", etc., may appear in this area.
- (2) Numerical display of real-time sensor information: A green up arrow indicates a positive value change, whereas a red down arrow indicates a negative value change.
- (3) Real-time timeline display: Graphically displays all sensor information in the timeline form. The gridline can be turned on/off via control options as defined in Part (c). Additionally, you can move the cursor to a particular data point to show its relevant information (see example below).





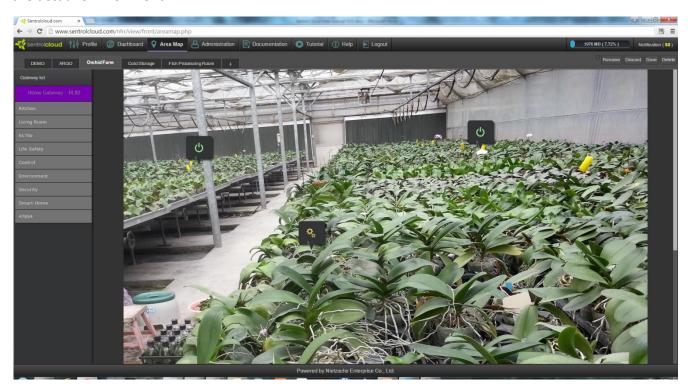
- (4) Information line enable and limit range display: Each vertical line with an assigned color represents an information line with a particular information type from a particular device. If a device has multiple sensors, an identification letter will also be appended to applicable information lines from the same device (e.g. Air Temperature (B) in purple color and Air Humidity (B) in green color).
 - Click the name of an information line to enable/disable timeline display of that information type.
- (5) Click an appropriate time period option for the real-time timeline display of sensor information (i.e. sensor data points).





5 Area Map

The "Area Map" main menu allows you to <u>pictorially map and monitor</u> your profile(s) as if you are in the actual environment.

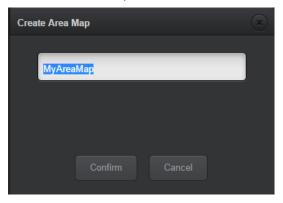


To add an area map, please follow instructions below.

a) Click "Area Map" and then the "+" tab.



b) Enter the area map name and click "Confirm".

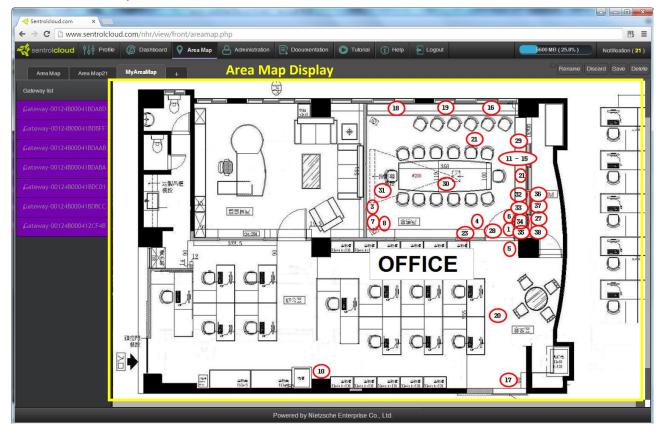




c) Browse for an image or picture to be used as the area map, then click "Open".



d) Your new area map is now added.



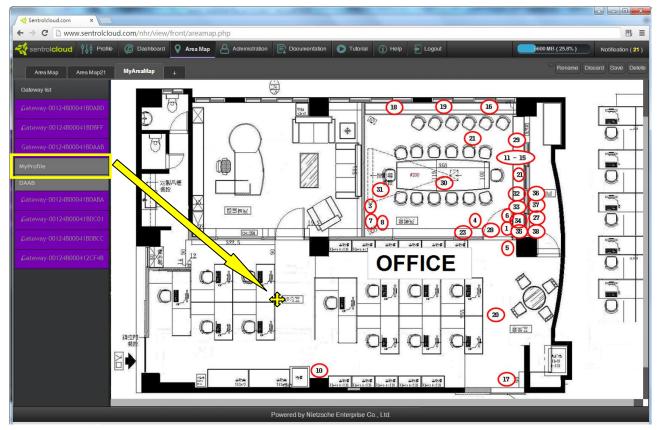


To add your profile to the area map, please follow instructions below.

e) Click the gateway that contains your profile to add, then click your profile to add:



f) Drag your profile onto the desired location on the area map:





g) Your profile is now added to the area map as an icon displaying its real-time status just like its tab in the "Dashboard":

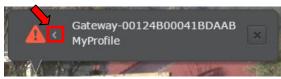


h) Click ">" to expand the profile icon:



The gateway name and the profile name are displayed.

i) When the profile icon is expanded, single-click "<" to collapse the icon, or double-click "<" to change the icon to annotated mode (gateway name and the profile name being the annotation).

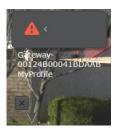






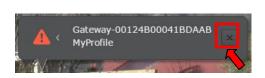
Double-click







j) While the profile icon is expanded or is in the annotated mode, you can click "x" to remove the profile icon from the area map.



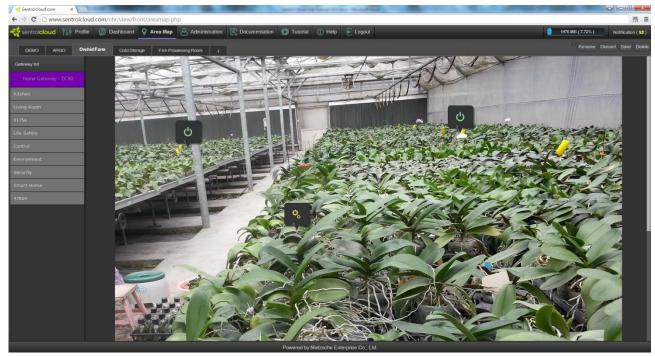


k) The real-time profile icon statuses are as follows:



Symbol	Meaning
心	Normal
A	Over limit (i.e. limit range breached)
Q	Output trigger (i.e. buffer range breached)
	Battery low
*×	Gateway disconnected

) More than one profile icon can be added to the area map as shown in the example below:





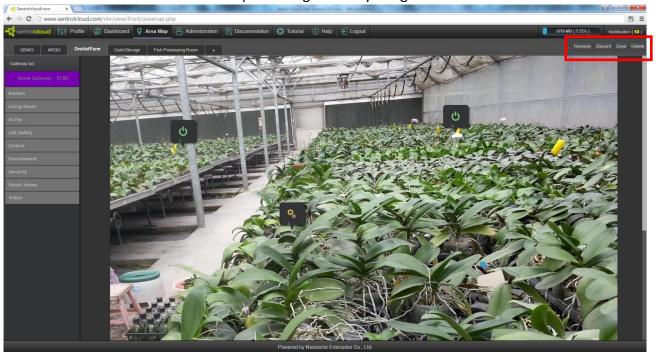
m) Area Map Management:

"Rename": Rename the current area map.

"Discard": Discard changes made to the area map. A dialog will ask you again for confirmation.

"Save": (Important!) Click "Save" to save changes made to the current area map.

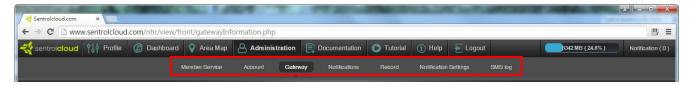
"Delete": Delete the current area map. A dialog will ask you again for confirmation.



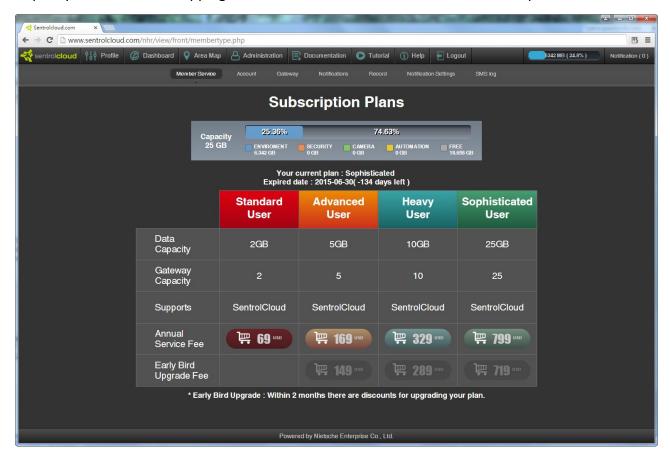


6 Administration

The "Administration" main menu item hosts the following administrative submenu items: "Member Service", "Account", "Gateway", "Notifications", "Record", "Notification Settings", and "SMS log".

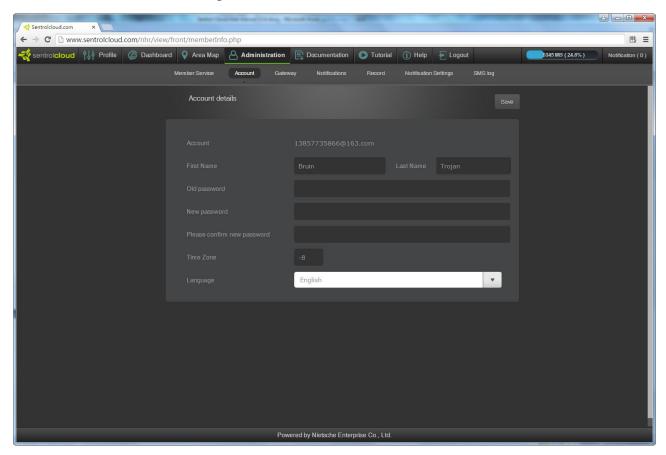


a) "Member Service": This submenu item allows you to purchase a Sentrol Cloud plan for your Sentrol Cloud devices. Choose a suitable plan according to your data storage and gateway capacity needs. Click a shopping cart and follow screen directions to make the purchase.





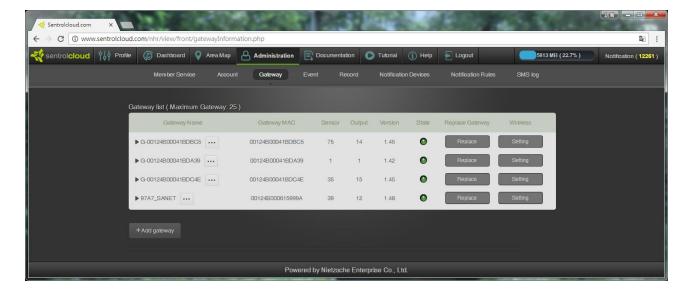
b) "Account": This submenu item allows you to view and modify your account information. Here you can change your first name and last name, change the account password, set the time zone, and set the Sentrol Cloud web user interface language. After you have made any changes, please click "Save" to save these changes.





c) "Gateway": This submenu item allows you to view and manage gateways in the Gateway list. For each gateway, the available information/options are as follows:

Information/Options	Descriptions
Gateway Name	The gateway's display name (changeable) and an expandable list of all devices
	connected to the gateway
Gateway MAC	The gateway MAC address
Sensor	Number of Sensor devices connected to the gateway
Output	Number of Output devices connected to the gateway
Version	Gateway version
State	Gateway state:
	: The gateway is in good state.
	. The gateway is in abnormal state and needs attention.
Replace Gateway	Click "Replace" button and follow screen instructions to replace the corresponding
	gateway with a new one.
Wireless	Click "Setting" button to select and connect to an available Wi-Fi station for
	wireless intranet/internet (WLAN/WWAN) connection.



- (1) To add a gateway, click "+Add gateway" and follow screen instructions.
- (2) To rename a gateway, click "...", enter a new gateway name, and click "Save".







(3) To view and manage devices connected to the gateway, click "▶" to expand the device list. For each device, the available information are as follows:

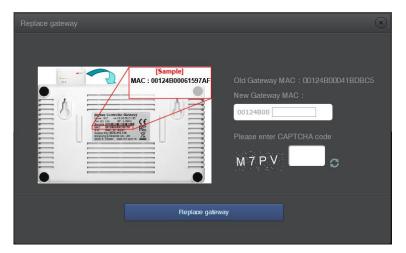
Information Type	Descriptions
No	Device number
Device Type	The device's type
Device Name	The device's name
Device MAC	The device's MAC address
Voltage*	Reported voltage event
Report Time*	Time of the reported event
Bat.low*	LED indicator for battery status.
	: The battery is in good state.
	The battery is low and needs to be replaced.

^{*:} Voltage device only

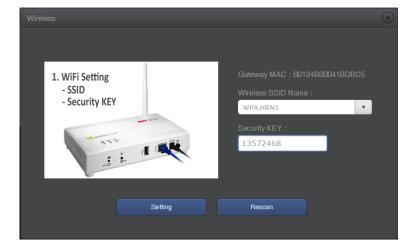




(4) To replace an old gateway with a new one, click old gateway's "Replace" button. Enter the last 8 digits of your new gateway's MAC address (under "New Gateway MAC") and the onscreen CAPTCHA code, then click "Replace Gateway". All profiles that have been using the old gateway for IoT communications will now use the new gateway for the same IoT communications.



- (5) To access the intranet and internet wirelessly (WLAN/WWAN), click "Setting" button in the Gateway list. The Wireless dialog window will appear, then do the following:
 - Click "Rescan" to actively scan for all available nearby Wi-Fi stations' SSIDs.
 - Select a Wi-Fi station listed in the Wireless SSID Name drop-down menu.
 - Enter the Wi-Fi station's corresponding security KEY.
 - Click "Setting" button in the Wireless dialog window.



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- Reboot your gateway for the wireless intranet/internet (WLAN/WWAN) access to take effect.

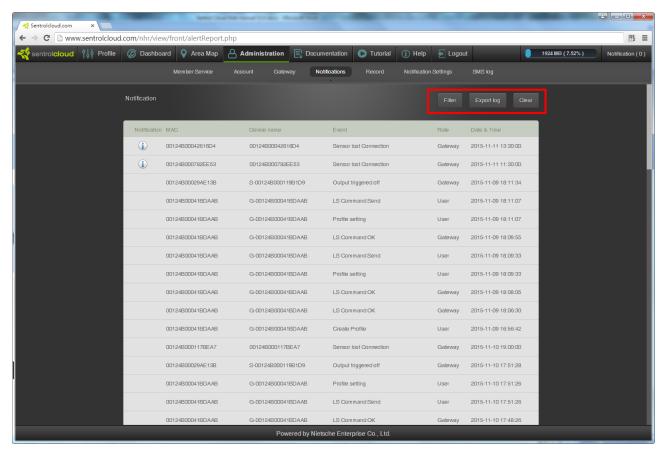


d) "Notification": This submenu item lets you view a list of device *notification events*, such as profile setting changes, device connection events, device command events, etc. This list is useful for monitoring devices or troubleshooting problems.

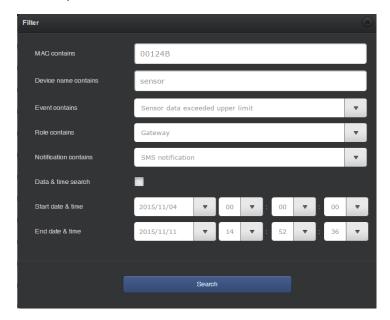
Each *notification* yields the following information:

Information Type	Descriptions
Notification	If this field is blank, then the <i>event</i> has been read as is no longer regarded as a <i>notification</i> . If this field shows the symbol, then this <i>event</i> is recent (not read) and is therefore regarded as a <i>notification</i> .
MAC	Device MAC address
Event	Event occurred
Role	The device/user that invokes the event
Date & Time	Date and time of the <i>event</i> occurred



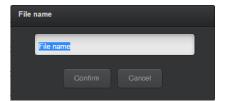


To search within the *notification* list, click "Filter", compile the search criterion in the **Filter** dialog window, and then click "Search".



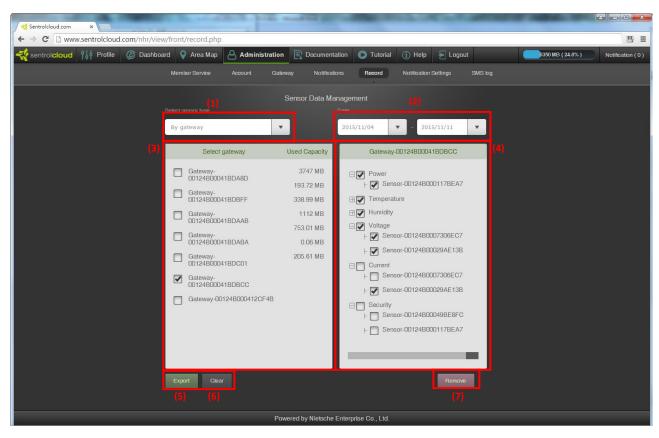
To export the *Notification* list as a ZIP file, click "Export log", select "OK" in the popup confirmation message, enter a filename for the ZIP file, and click "Confirm". The *Notification* list will be downloaded as a ZIP file to your browser's download directory.





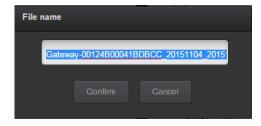
To clear the *Notification* list, click "Clear". A popup confirmation message will appear. Click "OK" to proceed with the clearing, or click "Cancel" if you change your mind.

e) "Record": This submenu item lets you manage sensor data.



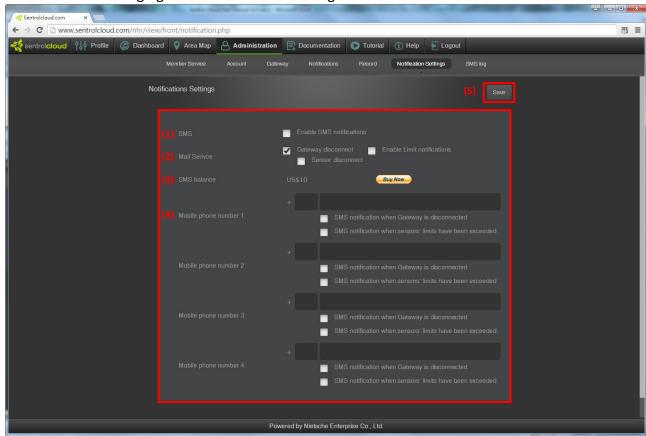
To manage sensor data:

- (1) From the dropdown list, select the sensor type by gateway or by profile.
- (2) Using the dropdown lists, set the start and end dates for sensor data to be managed.
- (3) Select a gateway or a profile to manage (only one can be selected).
- (4) Select any device or device type to manage (more than one can be selected).
- (5) If you want to export sensor data, click "Export", enter a filename for exported sensor data, click "Confirm", and follow screen instructions.





- (6) If you want to clear the selection and start over again, click "Clear". All selections will be cleared. Restart from Step (1) to make another selection.
- (7) If you want to remove sensor data, click "Remove" and follow screen instructions.
- f) "Notification Settings": This submenu item lets you set up and use SMS notifications. Note that there is a text messaging cost for each SMS message sent.

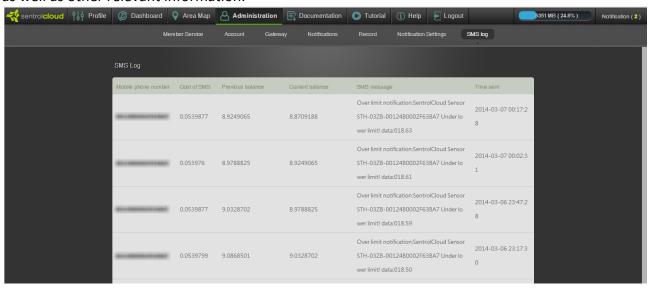


Notification Settings for *SMS notifications* are as follows:

- (1) **SMS**: Enable or disable the *SMS notifications* feature.
- (2) **Mail Service**: Select the event types to be reported by email **Gateway disconnect**, **Enable** Limit *notifications*, and/or **Sensor disconnect**.
- (3) **SMS balance**: Shows the amount of money available for *SMS notifications*. To deposit additional money for *SMS notifications*, click "Buy Now" and follow screen instructions.
- (4) **Mobile phone number 1-4**: Enter a mobile phone number for *SMS notifications*. For each mobile phone, you can select whether or not to receive SMS messages for the following events:
 - SMS notification when Gateway is disconnected
 - SMS notification when sensors' limits have been exceeded
- (5) Be sure to click "Save" to save SMS notifications setting changes.



g) "SMS log": This submenu item displays *Notification events* sent out as SMS text messages as well as well as other relevant information.



The **SMS** Log is organized as follows:

Mobile phone number: The mobile phone number that the SMS notification is sent to

Cost of SMS: The cost of sending the SMS notification

Previous balance: The SMS balance before the SMS *notification* is sent **Current balance**: The SMS balance after the SMS *notification* is sent

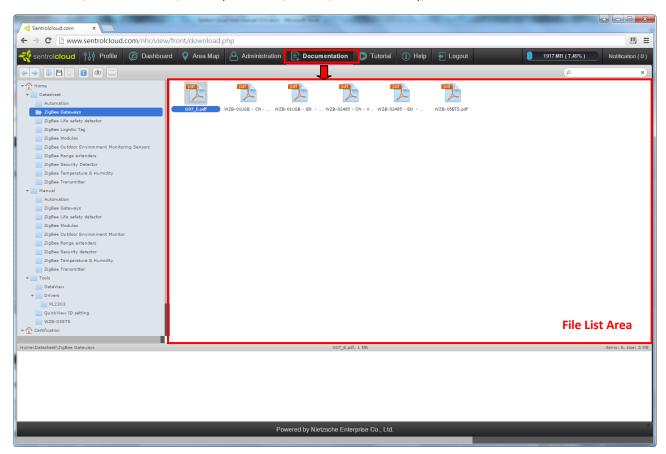
SMS message: The SMS notification that is sent

Time sent: The date and time that the SMS notification is sent



7 Documentation

Click "Documentation" and navigate through the data folders to access NHR's latest product datasheets, user manuals, tools (software, driver, user manual), and Certifications.



The main control items for the "Documentation" menu are as follows:

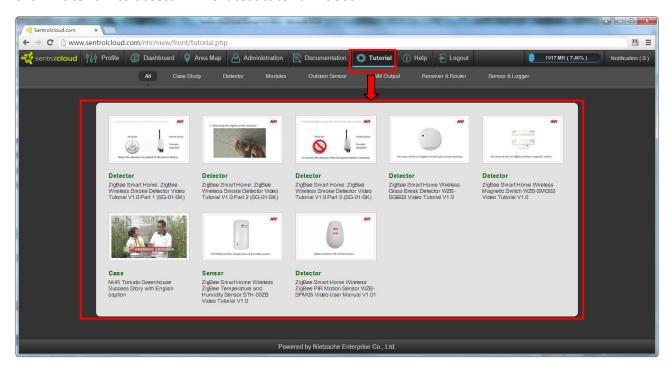


- (1) Navigate back.
- (2) Navigate forward.
- (3) Open the selected document/file.
- (4) Save the selected document/file to your computer.
- (5) (Not clickable) Use the cursor to select a document/file in the file list area.
- (6) Get document/file information.
- (7) Preview the selected document/file.
- (8) Click to toggle the file list area between icon view and file details view.
- (9) Search Box: Enter keywords to search for a matching document/file.



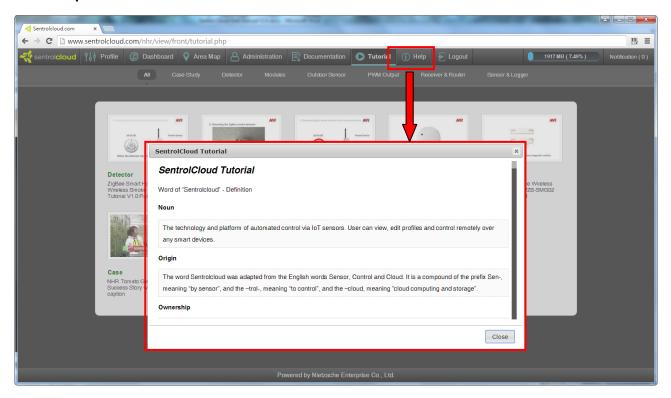
8 Tutorial

Click "Tutorial" to access NHR's latest tutorial videos.



9 Help

Click "Help" to access the online Sentrol Cloud tutorial.





10 Logout

Click "Logout" to logout your Sentrol Cloud account.



11 Sentrol Cloud App

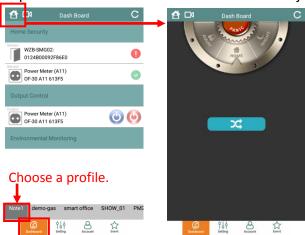
a) On your mobile device, download, install, and launch "Sentrol Cloud App".



b) Login with your Sentrol Cloud account.

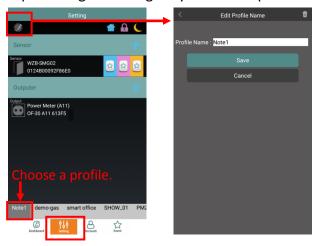


c) Tap "Dashboard" to monitor statistics and adjust settings (security mode and more).

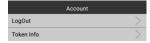




d) Tap "Setting" to configure your device profiles.



e) Manage your account. You can LogOut or view Token Info.





f) Tap "Event" to view device events. You can delete any device event by tapping the "Clear" button.

