Vizuo Applications LoRAWAN Sensors

Manual For LoRaWAN Sensor as the following link: https://daviteq.com/en/manuals/books/manual-for-lorawan-sensor

1. Introduction

Vizuo is a web-based software application to remotely configure device, parameter, alarm and event. In addition, Vizuo displays current values, historical values of parameters as well as events, alarms. Values of parameter are stored on database of GLOBIOTS server. Below figure describes the system which uses Vizuo application software:

2. User Information and Actions

2.1 Sign in

- Open a web browser (Google Chrome/Firefox/Internet Explorer...).
- Enter address in URL: http://vizuo.globiots.com/
- Sign-in page displays as follow:

  • Enter username and password
  • Click “Sign in” button.

- For user first time sign-in or reset password, user’s password must be changed after successful sign-in
- Screen of change password:

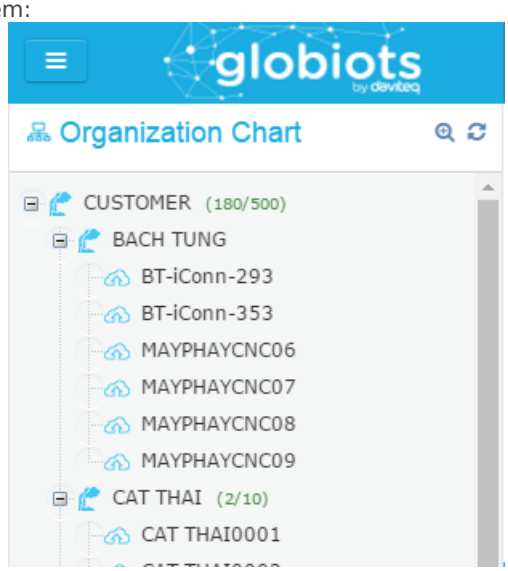
2.2 Configure Node

2.2.1 Node Definition

In Organization Chart Panel, Node is used to create Organization Chart. Node name should be geographical area, type of energy or responsible person. A Node includes one or more sub-Node and Device

2.2.2 Organization Chart

To close or open “Organization Chart” panel, you can click ☰ on left corner of screen Organization Chart page includes all Node and Device in system:



- Node name
- Number using device of account/Max number device of account

Right click on Node name, menu of Node displays:

- New: Create new Node, Device
- Delete: Delete Node
- Assign to account: Assign Node and sub-Node to account
- Rename: Change name of Node

2.2.3 Create a Node

To Create a sub-Node:
(1) Select Node
(2) Right click and select “New”
(3) Click “Node” to create new Node

(4) Enter sub-Node name and click button Save, then click button OK to confirm

2.2.4 Rename Node

To change name of Node, right click on Node name → select Rename Or double click on Node. Enter new name and click button “Save Changes” to complete

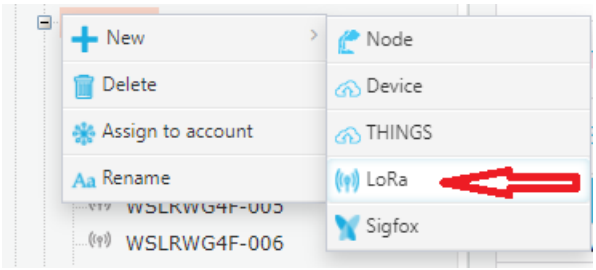
2.2.5 Delete node

In Organization Chart, select Node that you want to delete, right click Node name → select “Delete”, click button OK. Enter Username and Password of Account to confirm
- Do not delete a Node that is assigned to account
- Do not delete a Node that includes sub-node

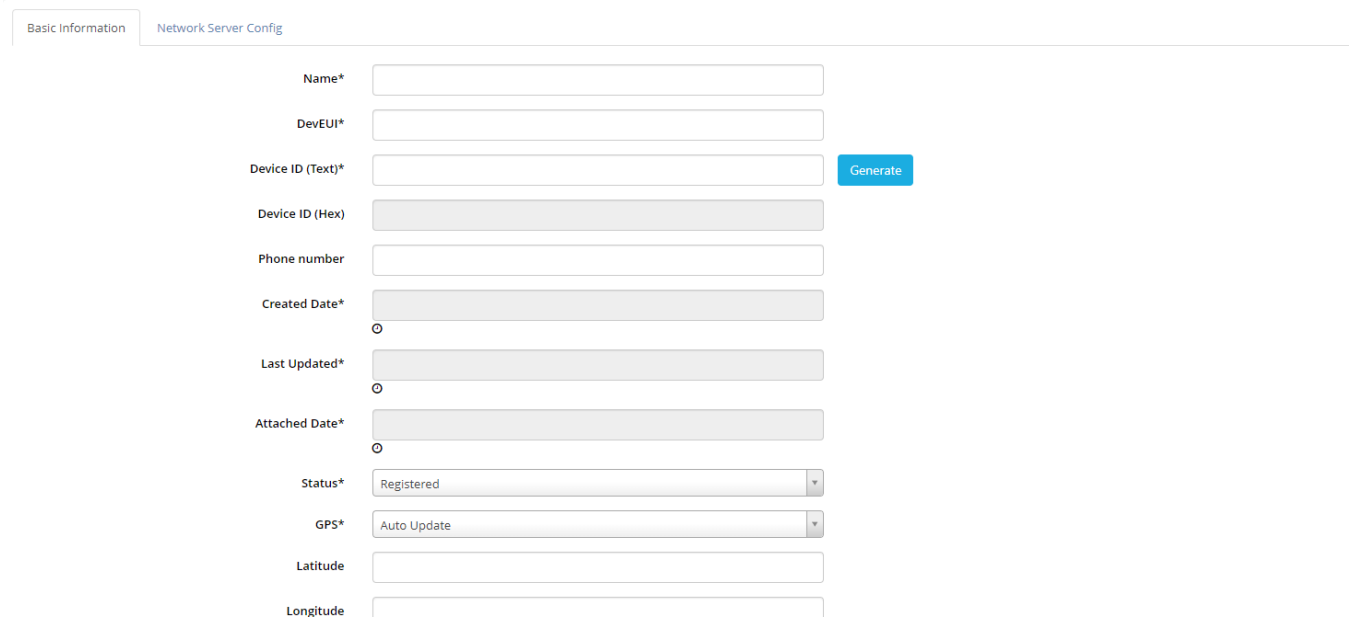
3. Adding the Daviteq LoRAWAN Sensors to Vizuo Globiots

3.1 Create a new Daviteq LoRAWAN Sensors

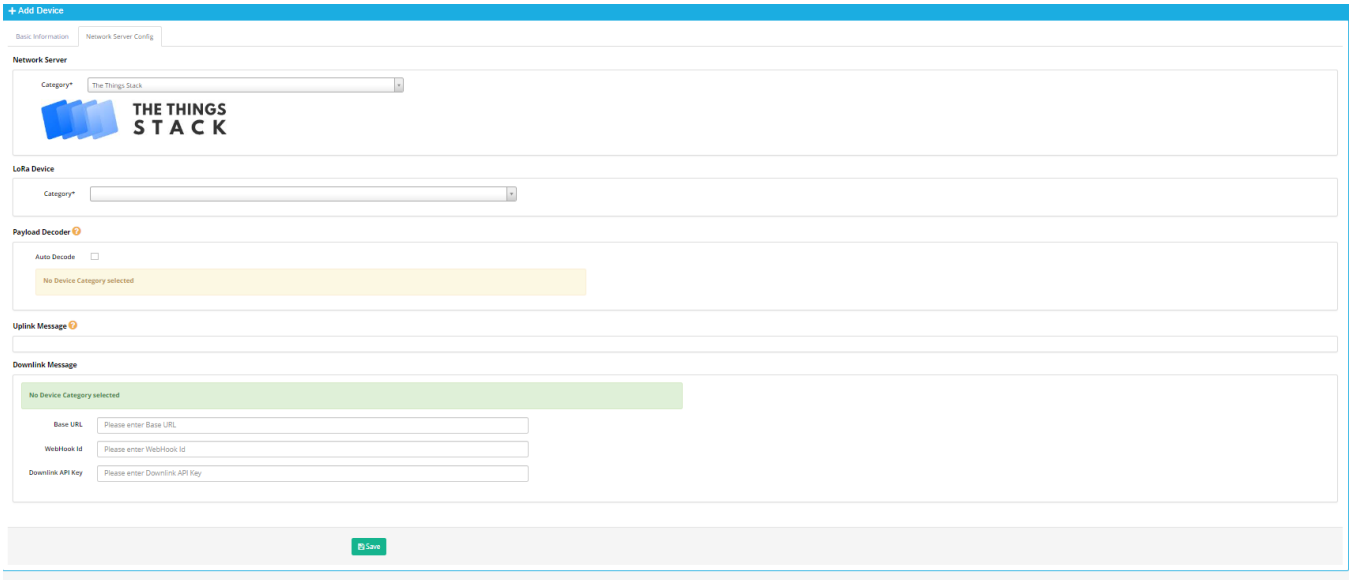
To create a new Daviteq LoRawan Sensors:
(1) Select Node
(2) Right click and select “New”
(3) Click “LoRa” to create a new Device



(4) A box appears:



- At Basic information tab, Enter parameters of Device:
  - Name: Name of Device (require 12 characters)
  - DevEUI: provided by manufacturer.
  - Click “Generate” button to create Device ID or enter ID directly
- At Network Server Config:
  - Network Server: Select the LoraWan Server are using
  - LoRa Device: Choose the right LoRa sensor series. Default is Daviteq Raw Payload Sensor
  - Downlink Message: The fields in this section are taken from the LoraWan Connection Server are using



(5) Click "Save Changes" to finish

o Logging send frequency: Frequency to send logged data from iConnector to server

o Heath send frequency: Frequency to send logged data about iConnector health from iConnector to server

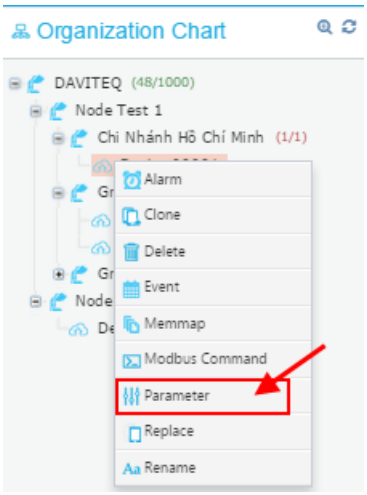
Click “Save” to continue, click button OK to confirm, and enter admin user and password to verify permission

Note: After creating a Daviteq LoraWAN sensor on Vizuo application, the connection between the Network Server and Vizuo to forwarding sensor data must be configured. Refer to the instructions in relevant Network Server document for this configuration.

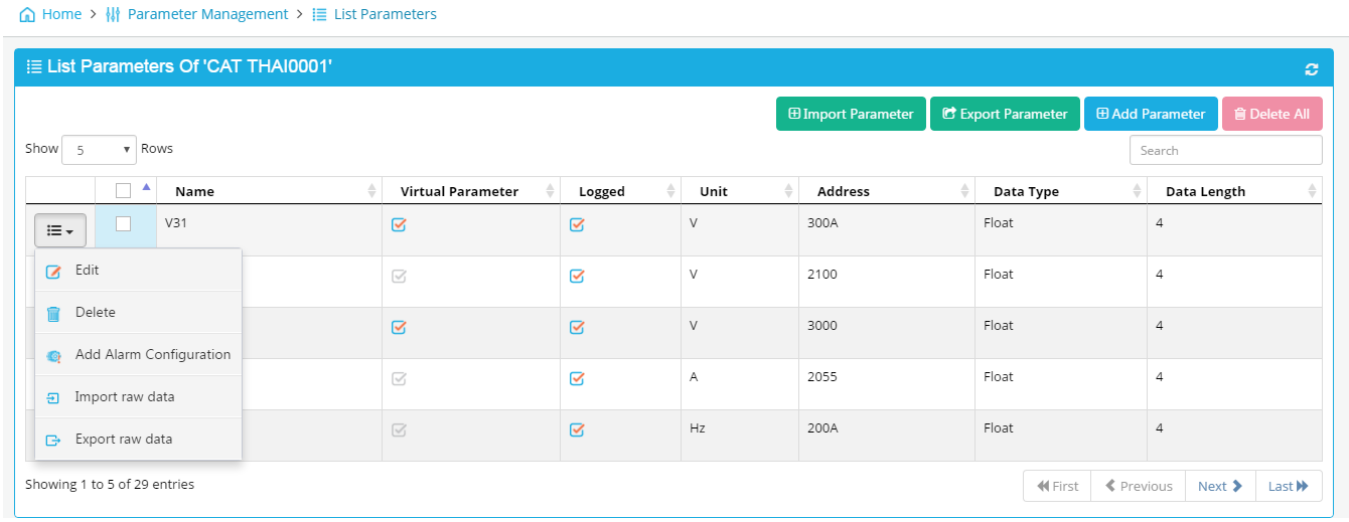
3.2 Configure Parameter

Note: After receiving first uplink message, the default parameters are automatically created.

Click on Device, right-click, select Parameter



In List Parameters Page



- "Import Parameter": click to Import Parameters from excel file. Excel file must have default structure.
- "Export Parameter": click to export parameter to excel file.
- "Add parameter": click to add a new parameter.

o Name: parameter name
o Type: Real Parameter or Virtual parameter
 Real Parameter: Parameter from LoraWAN sensors
 Virtual Parameter: Parameter only in Server. Virtual parameter is create from formula of one or multi real parameter
 If type is Virtual parameter, formula in Expression should be added

Mathematical Operators

Operator	Description
+	Additive operator / Unary plus
-	Subtraction operator / Unary minus
*	Multiplication operator, can be omitted in front of an open bracket
/	Division operator
%	Remainder operator (Modulo)
^	Power operator

Boolean Operators

Operator	Description
=	Equals
==	Equals
!=	Not equals
<>	Not equals
<	Less than

<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
&&	Boolean and
||	Boolean or

Bit Operators

<<	Left-shift bit operator in byte
>>	Right-shift bit operator in byte
&	AND bit operator in byte
|	OR bit operator in byte

Mathematical Functions

Function*	Description
RANDOM()	Produces a random number between 0 and 1
MIN(*e1*,*e2*, ...)	Returns the smallest of the given expressions
MAX(*e1*,*e2*, ...)	Returns the biggest of the given expressions
ABS(*expression*)	Returns the absolute (non-negative) value of the expression
ROUND(*expression*,precision)	Rounds a value to a certain number of digits, uses the current rounding mode
FLOOR(*expression*)	Rounds the value down to the nearest integer
CEILING(*expression*)	Rounds the value up to the nearest integer
LOG(*expression*)	Returns the natural logarithm (base e) of an expression
LOG10(*expression*)	Returns the common logarithm (base 10) of an expression
SQRT(*expression*)	Returns the square root of an expression
SIN(*expression*)	Returns the trigonometric sine of an angle (in degrees)
COS(*expression*)	Returns the trigonometric cosine of an angle (in degrees)
TAN(*expression*)	Returns the trigonometric tangens of an angle (in degrees)
COT(*expression*)	Returns the trigonometric cotangens of an angle (in degrees)
ASIN(*expression*)	Returns the angle of asin (in degrees)
ACOS(*expression*)	Returns the angle of acos (in degrees)
ATAN(*expression*)	Returns the angle of atan (in degrees)
ACOT(*expression*)	Returns the angle of acot (in degrees)
ATAN2(*y*,*x*)	Returns the angle of atan2 (in degrees)
SINH(*expression*)	Returns the hyperbolic sine of a value
COSH(*expression*)	Returns the hyperbolic cosine of a value
TANH(*expression*)	Returns the hyperbolic tangens of a value
COTH(*expression*)	Returns the hyperbolic cotangens of a value
SEC(*expression*)	Returns the secant (in degrees)
CSC(*expression*)	Returns the cosecant (in degrees)
SECH(*expression*)	Returns the hyperbolic secant (in degrees)
CSCH(*expression*)	Returns the hyperbolic cosecant (in degrees)
ASINH(*expression*)	Returns the angle of hyperbolic sine (in degrees)
ACOSH(*expression*)	Returns the angle of hyperbolic cosine (in degrees)
ATANH(*expression*)	Returns the angle of hyperbolic tangens of a value
RAD(*expression*)	Converts an angle measured in degrees to an approximately equivalent angle measured in radians
DEG(*expression*)	Converts an angle measured in radians to an approximately equivalent angle measured in degrees

Data Type Conversion Functions

Function	Description
FLOAT	Converts values into 32-bit floating point number FLOAT(0x02, 0x02, 0x02, 0x02) FLOAT([2000], [2001], [2002], [2003])
UINT8	Converts values into 8-bit unsigned integer number UINT8(22) UINT8([2000])
INT8	Converts values into 8-bit signed 2's complement number INT8(22) INT8([2000])
UINT16	Converts values into 16-bit unsigned integer number UINT16(22, 23) UINT16([2000], [2001])
INT16	Converts values into 16-bit signed 2's complement number INT16(22, 23) INT16([2000], [2001])
UINT32	Converts values into 32-bit unsigned integer number UINT32(0x02, 0x02, 0x02, 0x02) UINT32([2000], [2001], [2002], [2003])
INT32	Converts values into 32-bit signed 2's complement number INT32(0x02, 0x02, 0x02, 0x02) INT32([2000], [2001], [2002], [2003])
GETBYTES	Get bytes from hexadecimal string GETBYTES([Address], position, length) POSITION là thứ tự byte, start là 0, index từ trái sang phải, length số byte cần lấy Example: Hexadecimal parameter with start address of [6100] and hexadecimal value of 0001020304 (00 01 02 03 04): byte 0: 00 byte 1: 01 byte 2: 02 byte 3: 03 byte 4: 04 GETBYTES([6100], 3, 1) => result: 03 GETBYTES([6100], 1, 3) => result: 010203

Logical Functions

Function*	Description
NOT(*expression*)	Boolean negation, 1 (means true) if the expression is not zero
IF(*condition*,*value_if_true*,*value_if_false*)	Returns one value if the condition evaluates to true or the other if it evaluates to false. The IF could be in another IF function
AND(*expression 1, expression 2, expression 3, ..*)	Returns 1 (means true) if all true expressions, return 0 (mean false) if at least one false expression.
OR(e*xpression 1, expression 2, expression 3, ..*)	Returns 1 (means true) if at least one true expression, return 0 (mean false) if all false expressions.

Supported Constants

Constant	Description
e	The value of *e*, exact to 70 digits
PI	The value of *PI*, exact to 100 digits
TRUE	The value one
FALSE	The value zero

NULL	The null value

Example 1:

Value of Virtual Parameter have address at 2012 is calculated as follow [2012] = [2000] + [2002.]In which address 2000 and 2002 are two real parameters

Example 2:

IF [2000]>10 then [2005]=1
IF [2000]<=10 then [2005]=2

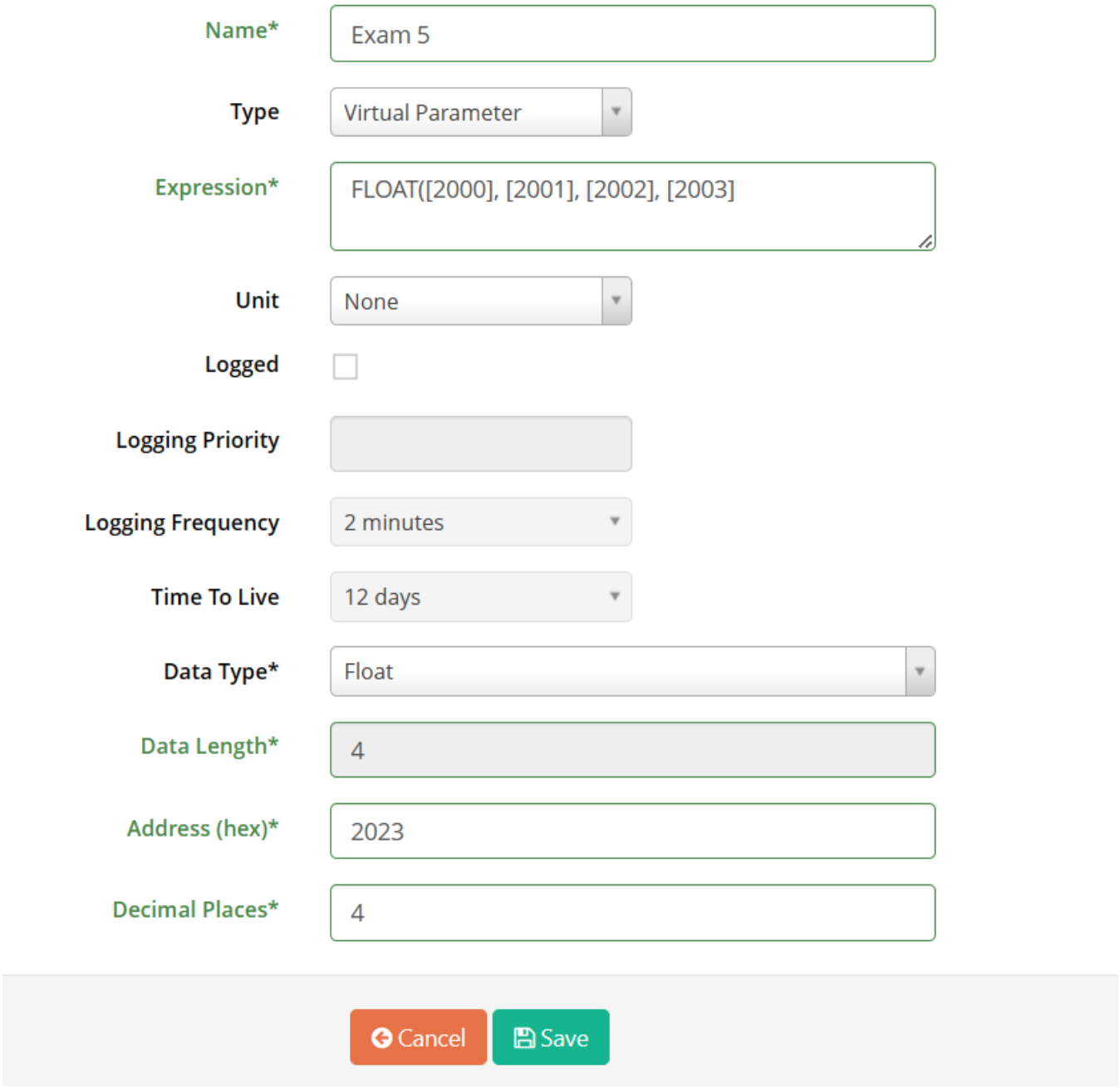
Example 3:

IF [2000]=1 And [2005]=2 then [2010]=5
IF [2000]=!1 And [2005]=!2 then [2010]=[2007]+10

Example 4:

IF [2000]>10 then [200A]=1
IF [2000]<10 And [2010]=1 then [200A]=5
IF [2000]<10 And [2010]=!1 then [200A]=10

Example 5:



If value from [2000] is 0x40, [2001] is 0xb0, [2002] is 0x00 and [2003] is 0x00. Then result form expression FLOAT([2000], [2001], [2002], [2003]) is 5.5

- o Unit: Unit of parameter
- o Logged: Tick to permit saving value of parameter into database
- o Logging Priority: enter any value
- o Time to live: select how long data will be stored in database
- o Data Type: Type of parameter
- o Data Length: Length of data type, byte unit, display automatically with data type. If data type is String, data length should be input
- o Address: Address on the server/cloud to store value of parameter
- o Decimal Places: number of decimal after the comma.

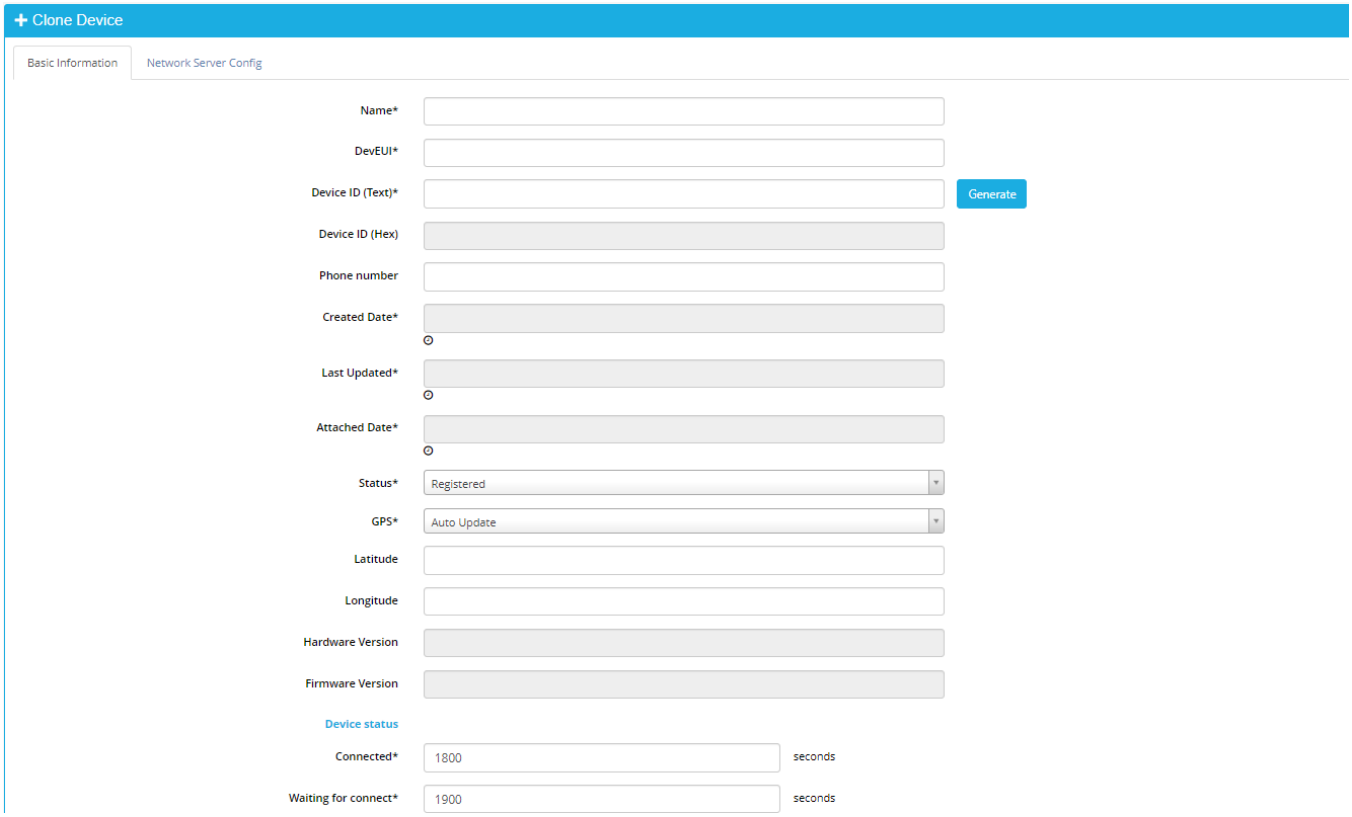
• Save: click to finish
• “Delete All”: click to delete selected parameters
• Edit: click to edit this parameter
• Delete: delete parameter

3.3 Delete Daviteq LoRawan Sensors

To delete a Device: Right click Device name and select Delete and click OK to confirm

3.4 Clone Daviteq LoRawan Sensors

To create a new Device have same Parameters, Alarm Config, Modbus Command, Menmap, Event Configure …, select original Device, right-click, select “clone”. Below page appears

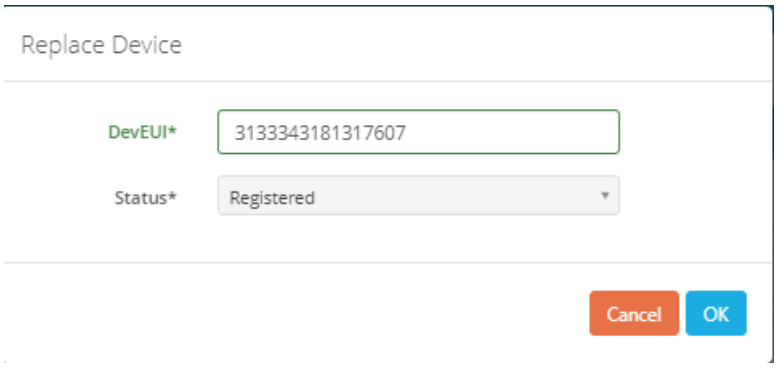


Refer to 3.1 “Create a new Device” for more details.

3.5 Replace Daviteq LoRawan Sensors

To replace Device:

- Right click Device name and select Replace
- A box displays:



  - o Enter the DevEUI of new Device
  - o Click “OK” to continue
- A box appears



Click “Yes” to finish

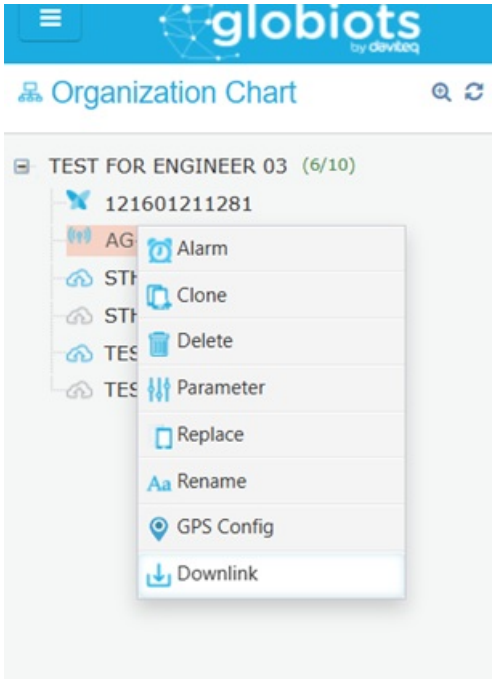
3.6 Rename Daviteq LoRawan Sensors

To change name of Device: Right click Device name, select Rename, and enter new name

3.7 Create and send downlink type 0 and downlink type 5 for LoRaWAN Sensors

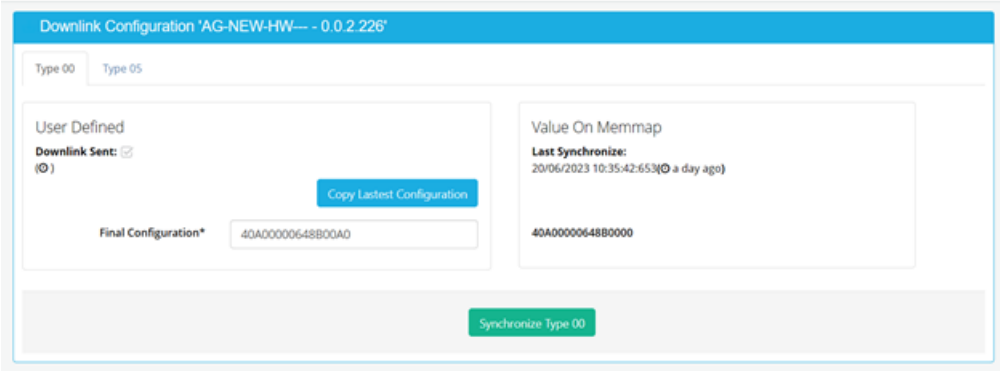
3.7.1 Create and send downlink type 0

At the organizational chart, right click on the LoRaWAN Sensor then select**Downlink**



In **Downlink configuration** page, click tab "**Type 00**"

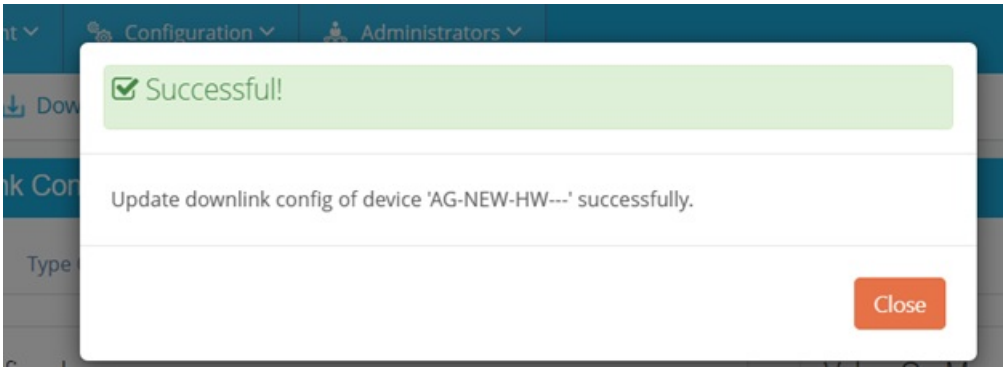
Input the downlink 0 payload (hexa) for the sensor, then click synchronize Type 00, then select OK to complete inputting the downlink 0 configuration.



Note:

User could click **Copy Latest Configuration** button to copy latest configuration and edit this configuration to create new configuration.

The below screen will be showed after clicking**OK** button

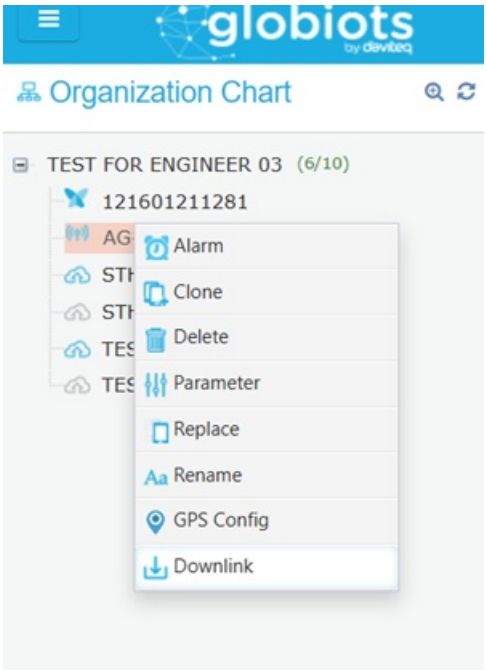


After that, the downlink type 0 will be sent to Network Sever when there is any uplink message from the Network

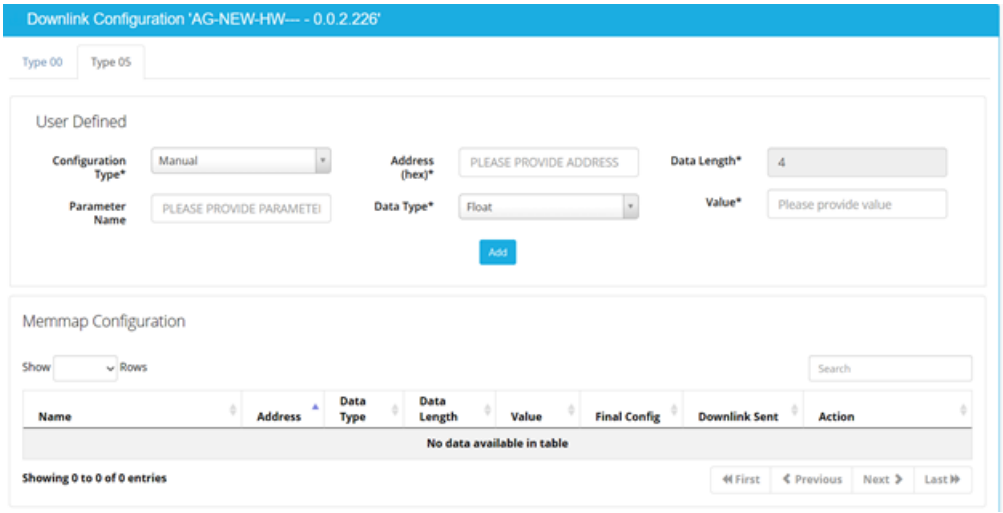
Server to Globiots.

3.7.2 Create and send Downlink type 5

At the organizational chart, right click on LoRaWAN Sensor then select**Downlink.**



In **Downlink configuration** page, select tab "**Type 05"**



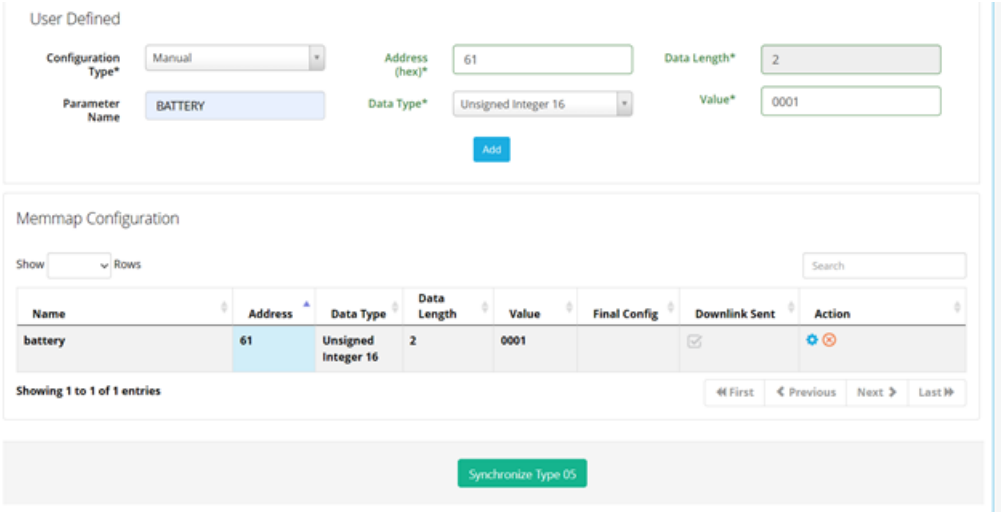
Input parameter address (following the memory map of sensor) in**Address (hex)**

Fill parameter name in **Parameter Name**

Select data type of the parameter in the drop list at**Data Type** field.

Input value of parameter in**Value** field.

Click **Add** button to add input data.



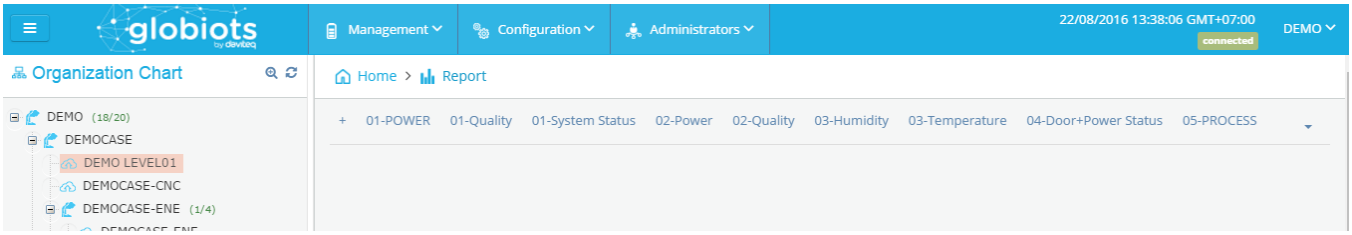
Click on **Synchronize Type 05** button and click OK button confirm the input of downlink type 5.

After that, the downlink type 0 will be sent to Network Sever when there is any uplink message from the Network Server to Globiots.

4. Report

4.1 Create a new report

- To create a new report:
  - In menu Management, select Report
  - In Report page select “+ ” to create a new tab



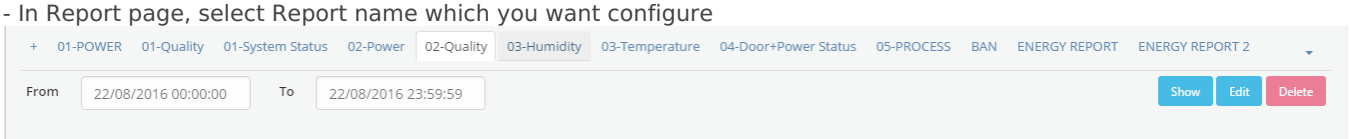
- Report Page will display as follow:



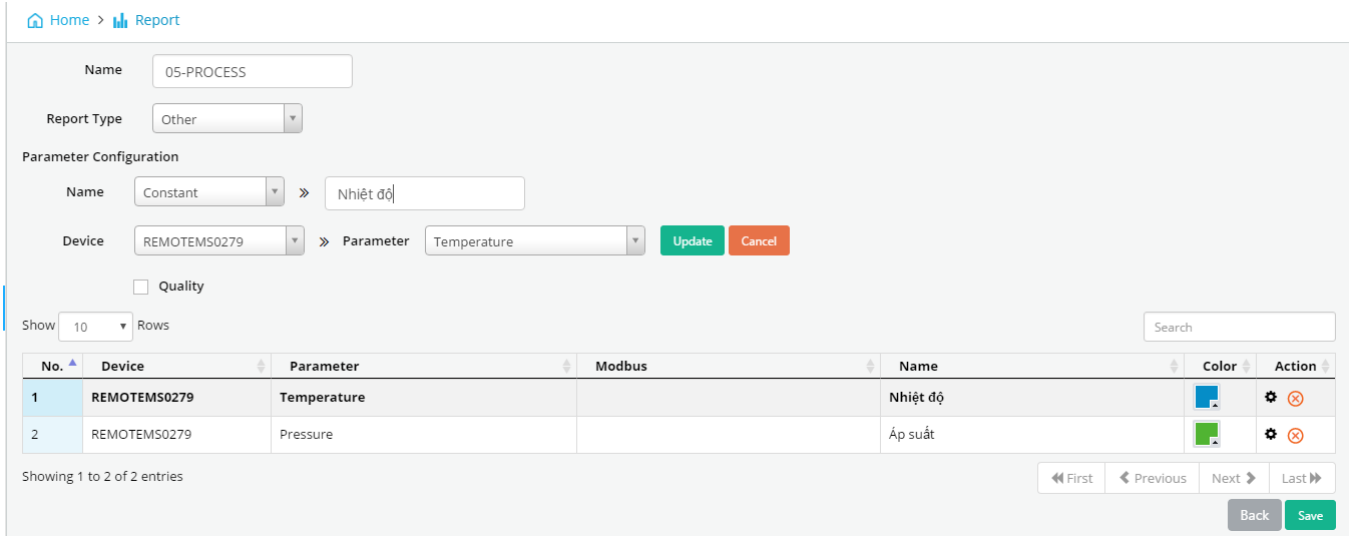
Enter full information:
- o Name: Name of Report tab
- o Report Type: Historical Trending (for parameter trend)
- o Parameter Configuration:
  - Name: Name of parameter which display in report. Name might input text or name of parameter.
  - Device: select Device
  - Parameter: select parameter of device which you want show
  - Click “Add” to add parameter. A report might have some parameters.
- o After completing adding parameter, click “save” to finish

4.2 Configure Report

- In Report page, select Report name which you want configure



- Click “Delete” to delete report
- Click “Edit” to edit report



- To edit available parameter, click in Action column, edit parameter, click Update
- To delete parameter, click in Action
- To Add new parameter: enter full information and click “Add”

4.3 View report

Select Time in “From … To …” and click “Show” to view data of parameters on report tab

Click on name of parameter (at the bottom of the report) to temporarily Show/Hide parameter on the report.

4.4 Export report

After click button Show to view report, click on top right corner of screen, select Export to Excel or Export to pdf or Export to csv

- Click Export to Excel, select version of Excel (2003 or 2007), click Export. The exported file will be store on your PC
- Click Export to csv, select version Date Format in csv file, click OK. The exported file will be store on your PC
- Click Export to pdf, the exported file will be store on your PC

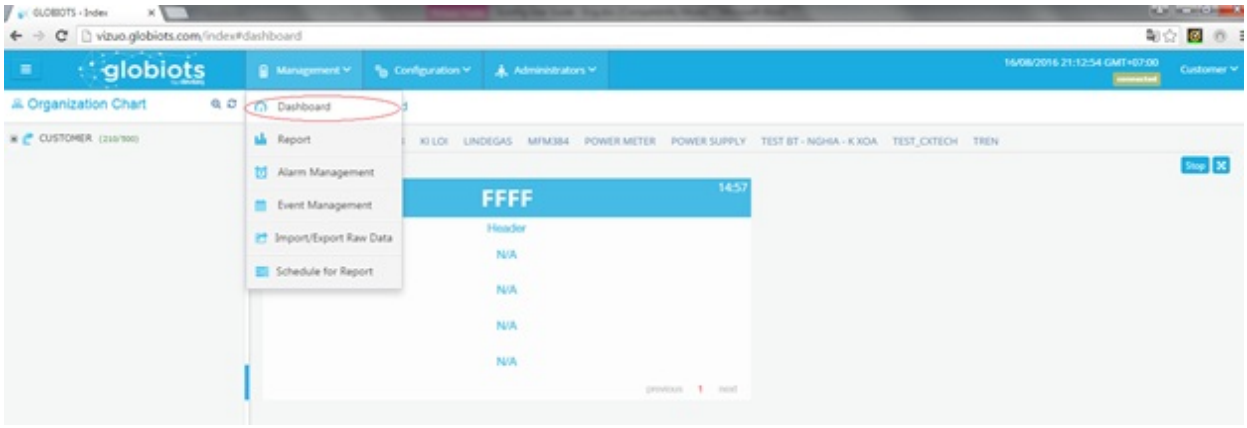
5. Dashboard

5.1 Dashboard Description

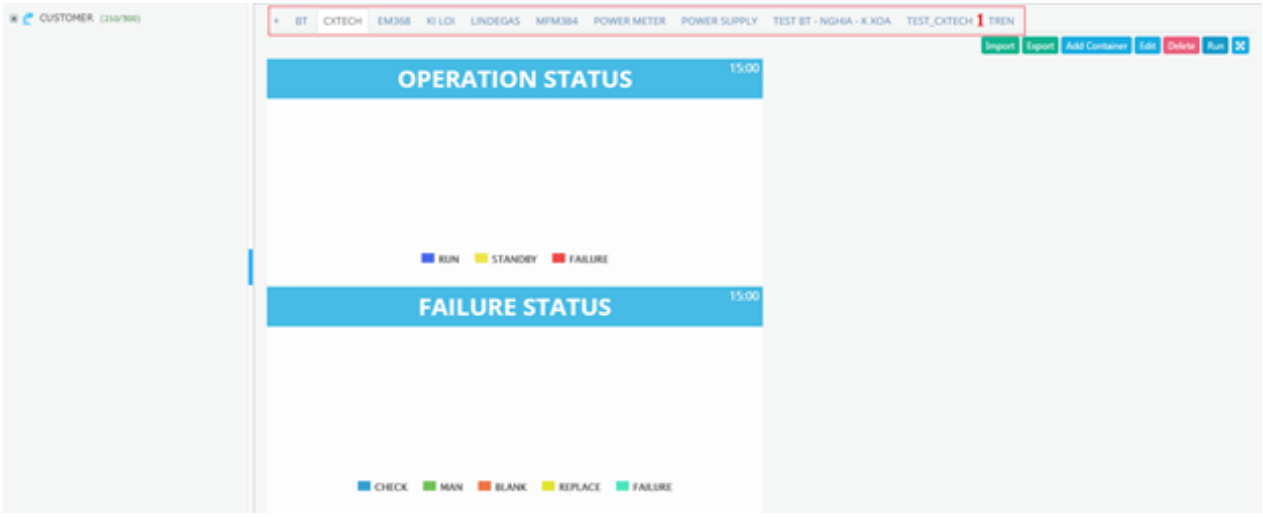
Dashboard views input text, current value and value from database. Each Dashboard is organized in one tab. When value is from database, dashboard will update the value after specific time. Dashboard consists of containers which contain widgets inside.

5.2 View Dashboard

- In Home screen, select menu Management → select sub-menu Dashboard to display current value of parameters.
- Screen of status “Dashboard”:



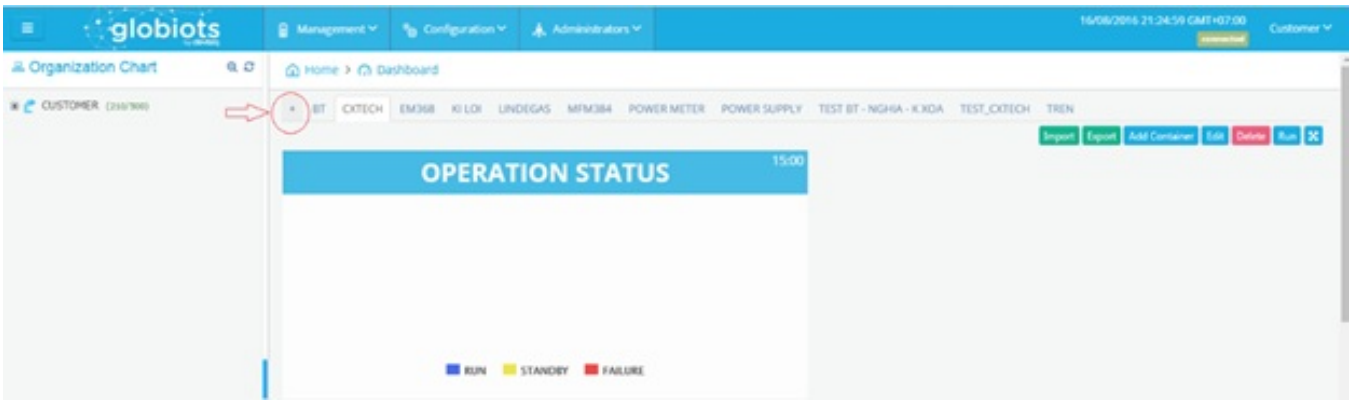
- Screen of status “Stop” of Dashboard:



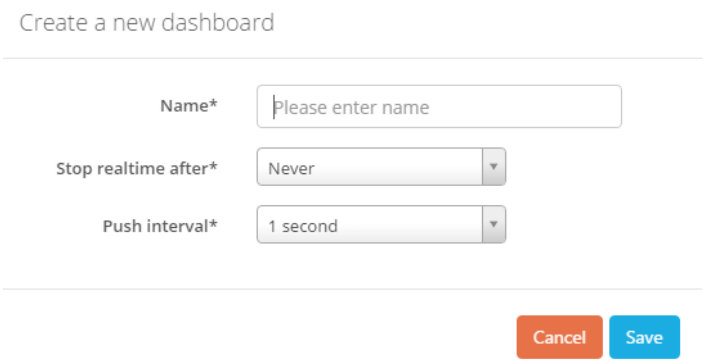
- (1): Display list of Dashboard tabs which user are assigned to view
- Button “Run”: click to run Dashboard.
- Button “Stop”: click to stop selected Dashboard.
- Button “Delete”: click to delete Dashboard
- Button “Edit”: click to edit Dashboard
- Button “Add Container”: click to add new Container in Dashboard
- Button : click to full screen
- Button “Export”: click to export Dashboard to Excel File
- Button “Import”: Click to import Dashboard to Excel File

5.3 Create new Dashboard

- In Dashboard screen, click symbol “+” to create new tab



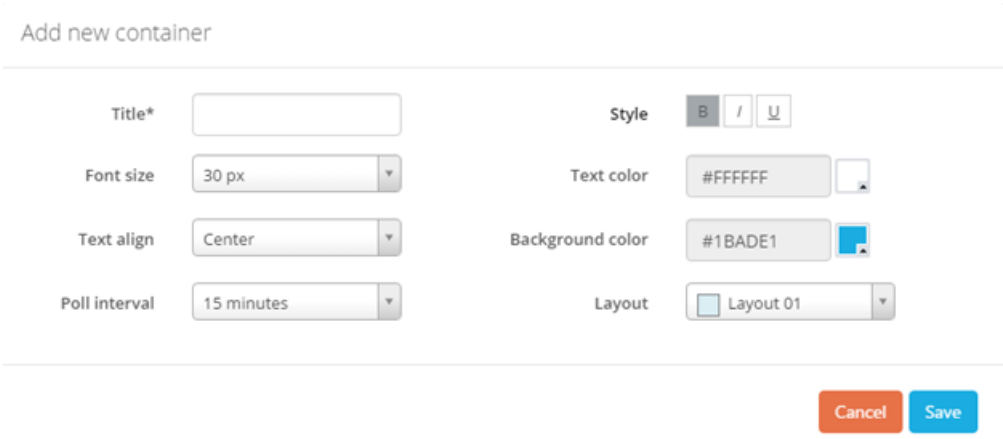
- New window display



• Name: Name of new Dashboard tab
• Stop real time after: Running time of Dashboard to get real time data from iConnector. After this period of time, Dashboard will stop to get real time data from iConnector.
Click button “Run” on top right corner to continue to get real time data
• Push Interval: Frequency to get real time data from iConnector
Click Save to complete creating new Dashboard

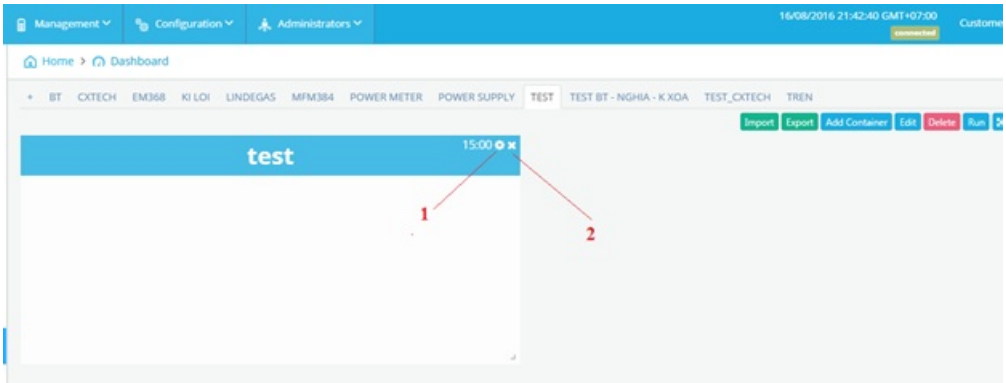
5.4 Create New Container

- In Dashboard tab, click Add Container to add new Container

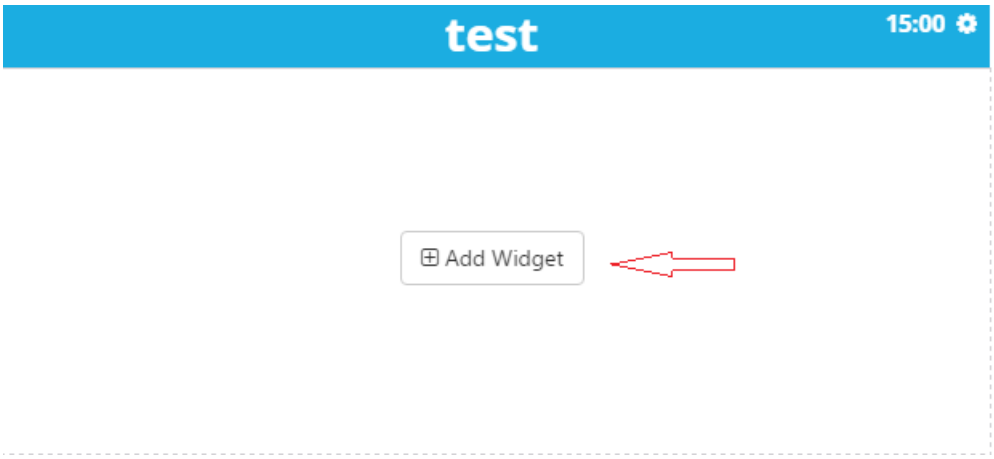


• Title: Name of container
• Format: Font size, Style, Text color, Text align, Background.
• Poll Interval: Frequency to get logged data from database to view on Dashboard
• Layout: Select layout of container. There are 07 layouts select
Click Save to complete creating Container

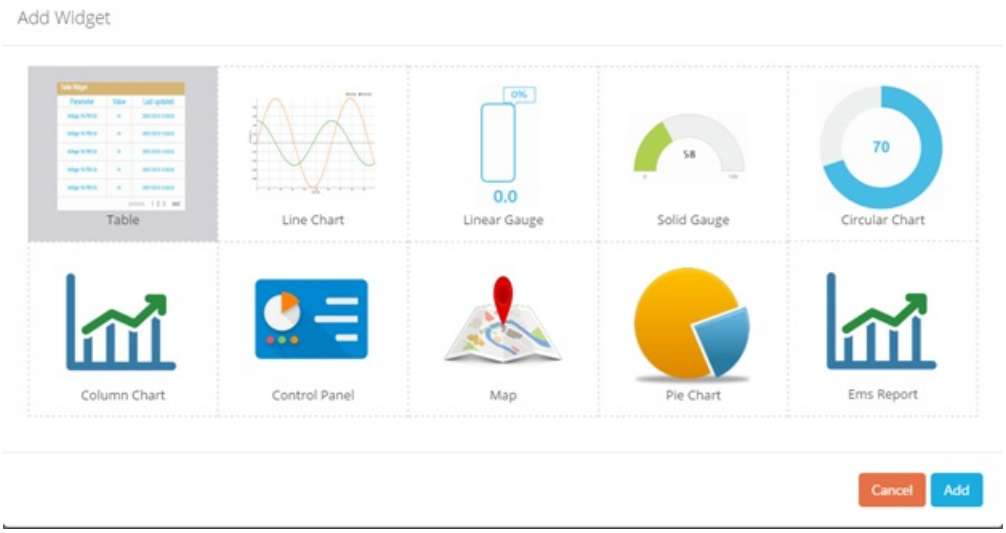
5.5 Configure a Container



(1): Edit Container
(2): Delete container.
Click to Edit Container. Following screen will appear



- Click Add Widget to add new widget

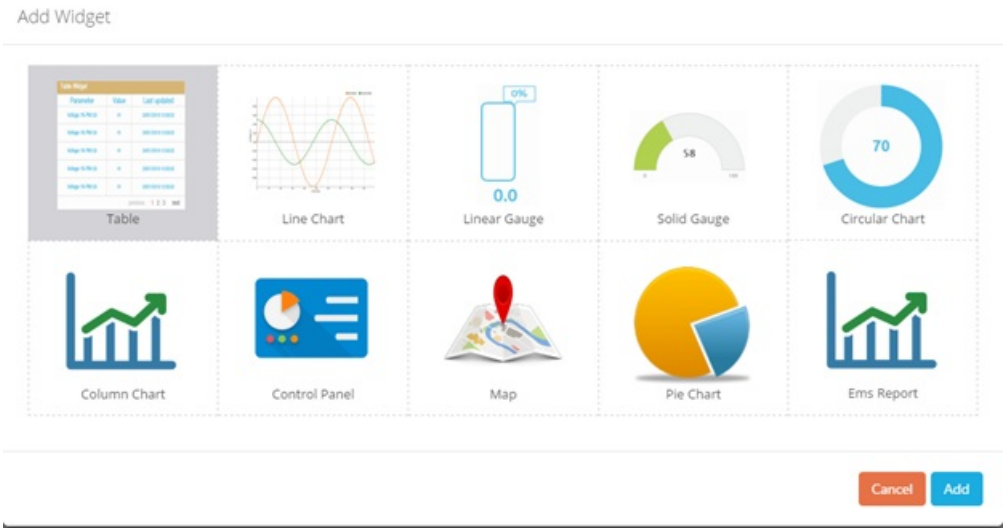


Note: Stop Dashboard before configure Container/Widget

5.6 Widget

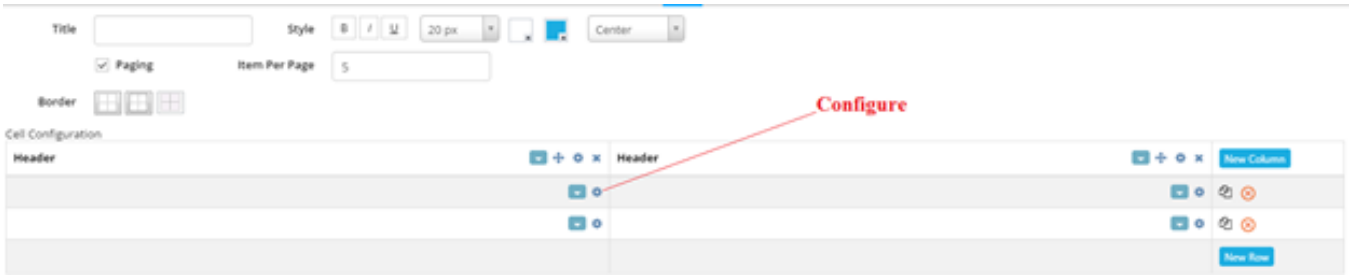
5.6.1 Widget Description

Widget is a basic element of Dashboard to view constant, value of parameter. Currently, Vizuo has below widgets



After select widget click Add to add new widget to Container

5.6.2 Widget Table



- Paging: Tick to view table more than one page
- Border: Select type of border: None, Border and Inside
- New Column: Click to add new column
- New Row: Click to add new row

: Move column

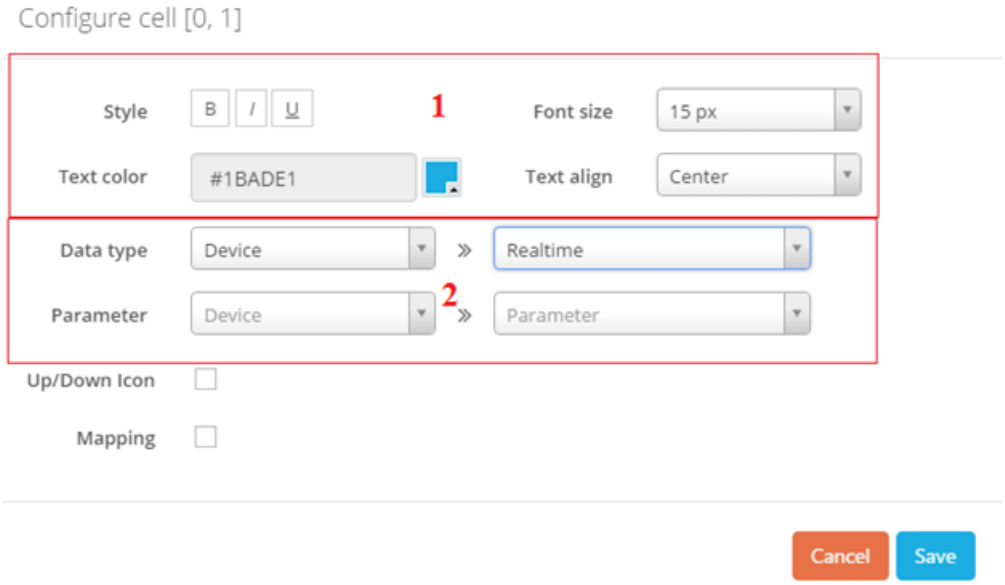
: Configure cell

: Close/Delete column or row

: Copy new row

: Click to select type of border for cell

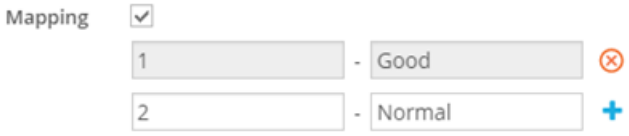
- Configure Row
- After clicking , configuration screen for new row will appear



(1): Format
(2): Configure

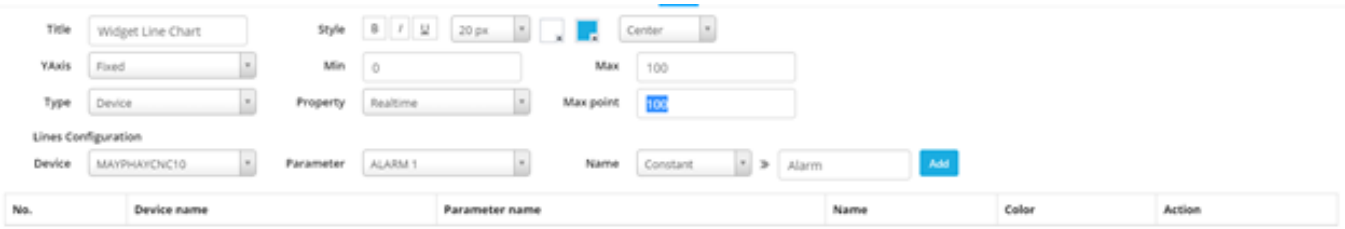
Choose Data type: Constant (input text), Data from Database (Device Name, Parameter Name, Unit of Parameter, Last value of parameter in Database, time stamp of last value

Mapping: tick Mapping and list out value and mapped text, then click to add mapping value. Mapping should be used to view meaningful text instead of value



5.6.3 Widget Line Chart

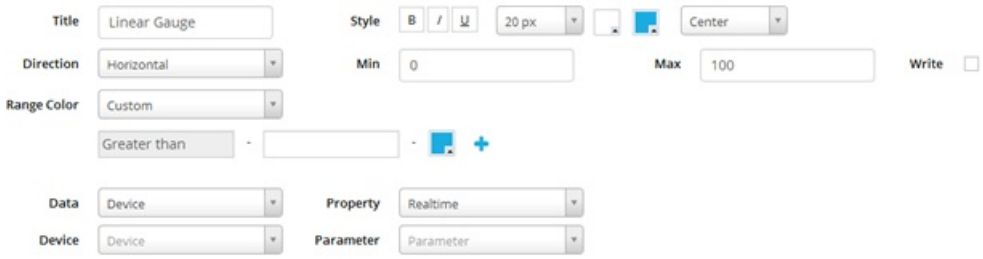
Click to configure widget Line Chart, the following screen appear



• Title: Line Chart name
• Style: Format of Title
• YAxis: Fixed or Auto. If choose Fixed, enter min & max value. If select Auto, software will specify Max of Y axis based on value of displayed parameter.
• Type: Data type of parameter to view (Data from device or from database)
Type Database: Logged data from database, time period include: Today, Yesterday, Last 3 days or Custom (From...To)
• Line configuration: Select displayed parameter and displayed label (input text, parameter name or device name)
Click Add button to add parameter to line chart. A line chart could view some parameters

5.6.4 Linear Gauge

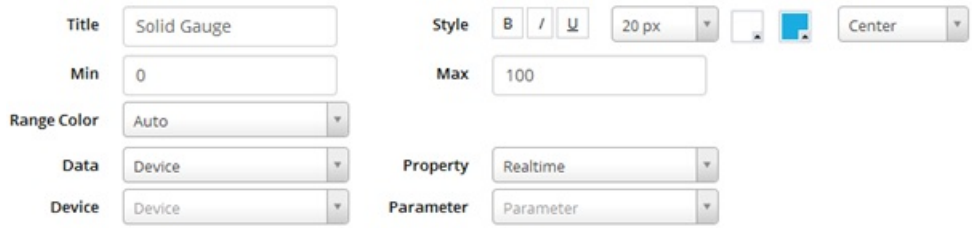
Click ⚙ to configure widget Line Gauge, the following screen appear



• Title: Name
• Style: Format of title
• Direction: Vertical or Horizontal Linear Gauge
• Min, Max: Range of Gauge
• Range Color: Auto or Custom
Auto: Color of Gauge changes according to value of parameter
Custom: Configure specific color to specific range of value of parameter
• Data: Select type of display parameter (last logged data from Database) • Device/Parameter: Select displayed parameter
• Write: Tick to enable to write value to parameter. Writing value to parameter by holding and drag on body of Linear Gauge
Click Save Changes to complete configuration

5.6.5 Solid Gauge

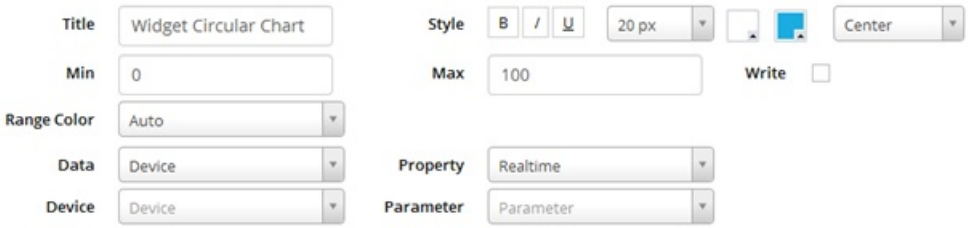
Click ⚙ to configure widget Solid Gauge, the following screen appear



• Title: Name
• Style: Format of title
• Min, Max: Range of Gauge
• Range Color: Auto or Custom
Auto: Color of Gauge changes according to value of parameter
Custom: Configure specific color to specific range of value of parameter
• Data: Select type of display parameter (last logged data from Database) • Device/Parameter: Select displayed parameter
Click Save Changes to complete configuration

5.6.6 Circular Chart

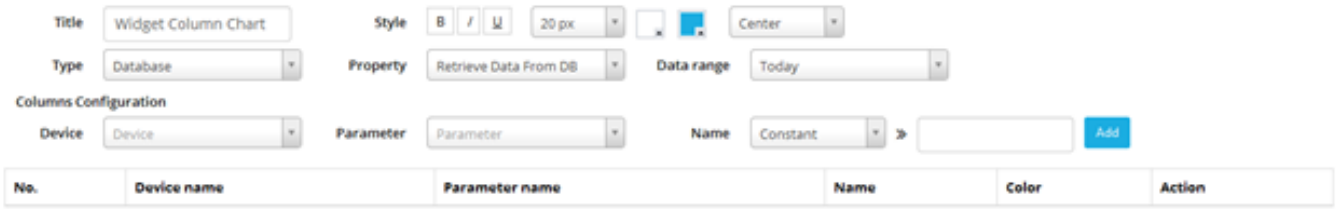
Click ⚙ to configure widget Solid Gauge, the following screen appear



• Title: Name
• Style: Format of title
• Min, Max: Range of Chart
• Range Color: Auto or Custom
• Auto: Color of Chart changes according to value of parameter
• Custom: Configure specific color to specific range of value of parameter
• Data: Select type of display parameter (last logged data from Database) • Device/Parameter: Select displayed parameter
• Write: Tick to enable to write value to parameter. Writing value to parameter by holding and drag on body of Circular Chart
Click Save Changes to complete configuration

5.6.7 Column Chart

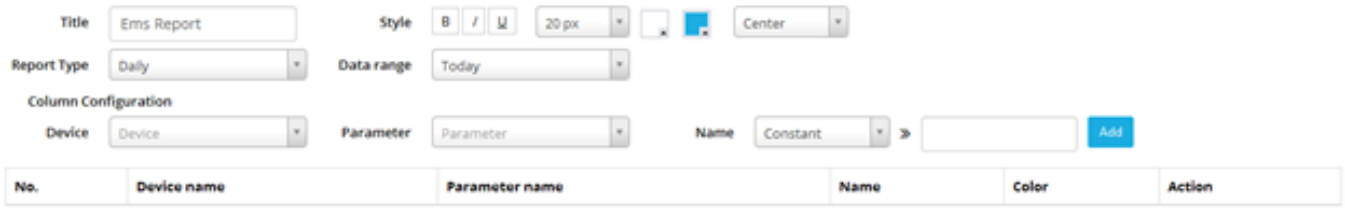
Click ⚙ to configure widget Solid Gauge, the following screen appears



• Title: Column Chart name
• Style: Format of Title
• Type: Data type of parameter to view (Data from database)
• Type Database: Logged data from database, last value or value series in time period include: Today, Yesterday, Last 3 days or Custom (From...To)
• Column configuration: Select displayed parameter and displayed label (input text, parameter name or device name)
Click Add button to add parameter to column chart. A column chart could view some parameters

5.6.8 EMS Report

EMS Report views report for energy consumption during period of time
Click ⚙ to configure widget EMS report, the following screen appears:



• Tittle: Report title
• Style: Format of tittle
• Report type: Daily, Weekly, Monthly
• Data range: Today, yesterday, last month, this month, last week, this week
• Column Configuration: Configure displayed value of parameter and displayed name of parameter
Click Add to add parameter for report

5.6.9 Pie Chart

Pie Chart compares values between some parameters. Click to configure widget EMS report, the following screen appears:

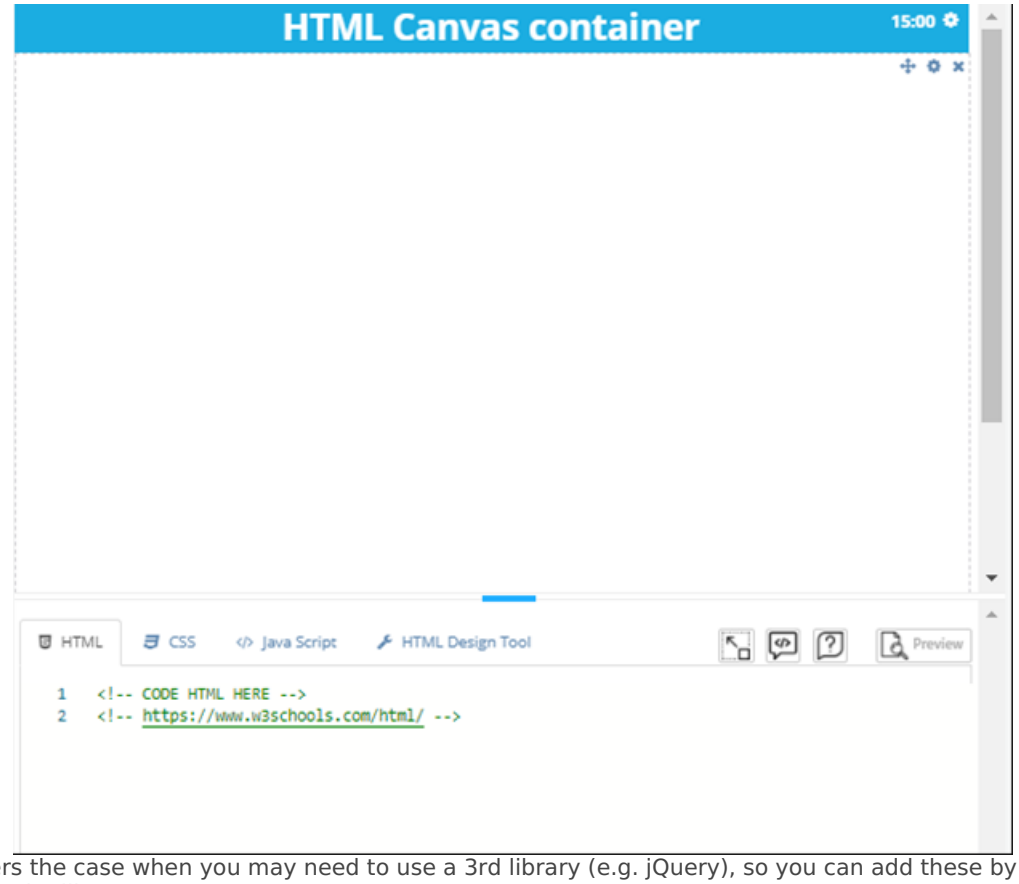


- Tittle: Tittle of pie chart
- Style: Format of tittle
- Type: Data type, last value in database
- Configuration: Configure displayed value and displayed name of parameter

5.6.10 HTML Canvas

How does the HTML Canvas widget work?

When you select the widget, you will find a code editor as depicted in the image below. The widget works with the same HTML/CSS/JS you would code when creating a simple website. There's no need to learn a special API.



It also considers the case when you may need to use a 3rd library (e.g. jQuery), so you can add these by inserting an URL containing the library.

IMPORTANT NOTE:

You should consider when writing code in this widget that all the execution will be made by your browser, we do not do any kind of poly-filling here, so it's up to your browser to support all the features that you make use of.

The HTML code will be:

```
<script src="https://code.jquery.com/jquery-3.5.1.min.js" integrity="sha256-9/aliU8dGd2tb6OSsuzixeV4y/faTqgFtohetphbbj0=" c
<progress id="progress-bar"value="73" max="100" style="margin-bottom:10px;">70 %</progress>

<fieldset>
    <legend>Choose your favorite device</legend>

    <input type="radio" id="kraken" name="monster">
    <label for="kraken">Device 0001</label><br/>

    <input type="radio" id="sasquatch" name="monster">
    <label for="sasquatch">Device 0002</label><br/>

    <input type="radio" id="mothman" name="monster">
    <label for="mothman">Device 0003</label>
</fieldset>
```

The CSS code will be:

```
/* CODE HTML HERE */
/* https://www.w3schools.com/css/ */
legend {
    background-color: #000;
    color: #fff;
    padding: 3px 6px;
}

.output {
    font: 1rem 'Fira Sans', sans-serif;
}

input {
    margin: .4rem;
}
```

The Java Script code will be:

```
alert('Say hello world!!!');
var progressBar = $('#"progress-bar');
```

 Full screen editor code.

 Get embed link: Public link, private link.

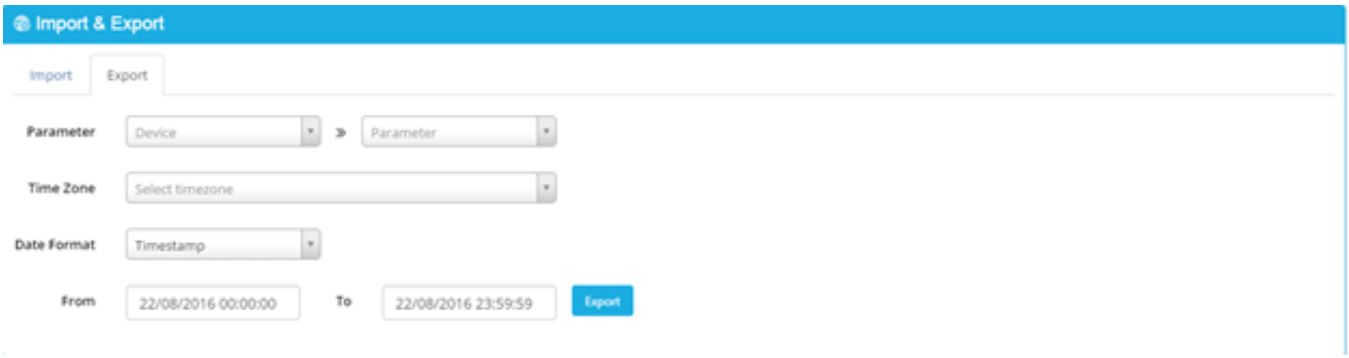


Preview layout with current code before to save change.

HTML Canvas Example	
Show Last Value	Link
Show Historical Trending Data Log	Link
Get Data From API	Link

6. Export Raw Data

- In menu **Management**, select **Import/Export Raw Data**
- Select **Export** tab

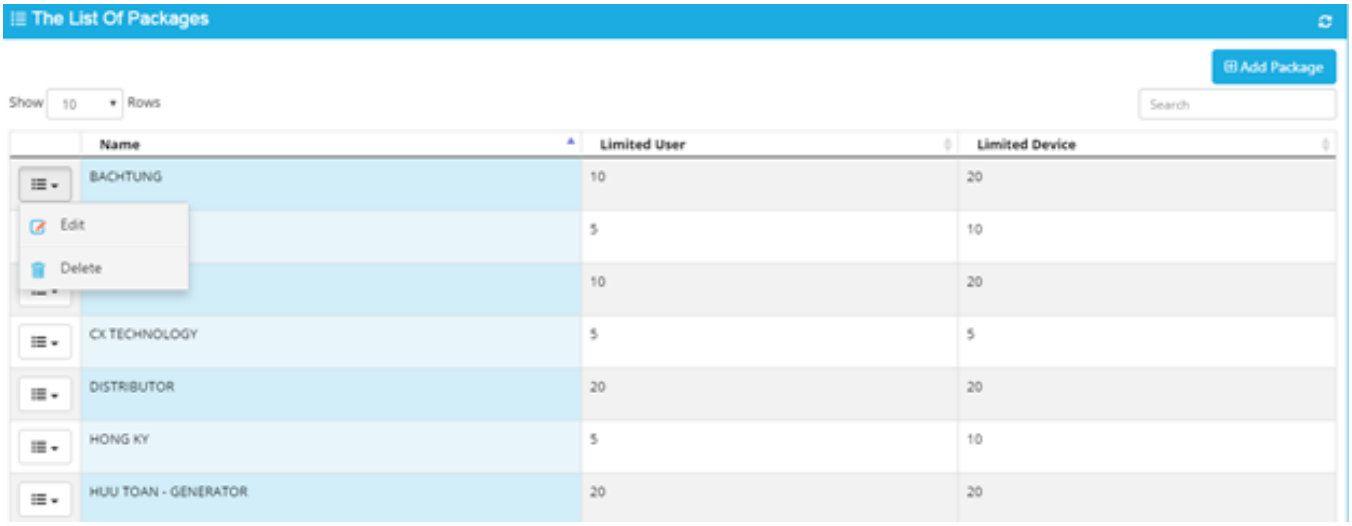


- Parameter: select Device and Parameter
- Time Zone: select time zone
- Data format: select Data format for export time
- From ...To: Duration of time to export

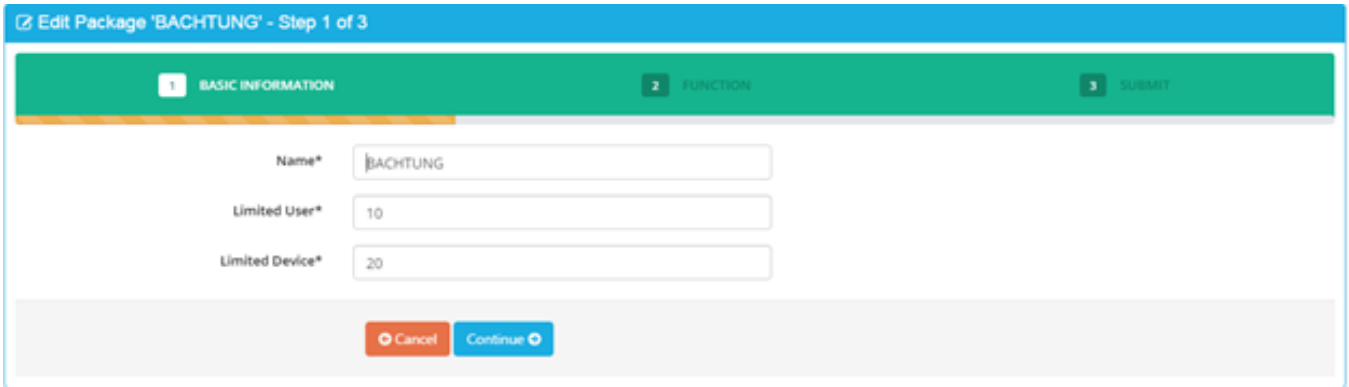
Click **“Export”** to export value of parameter to csv file

7. Package Configuration

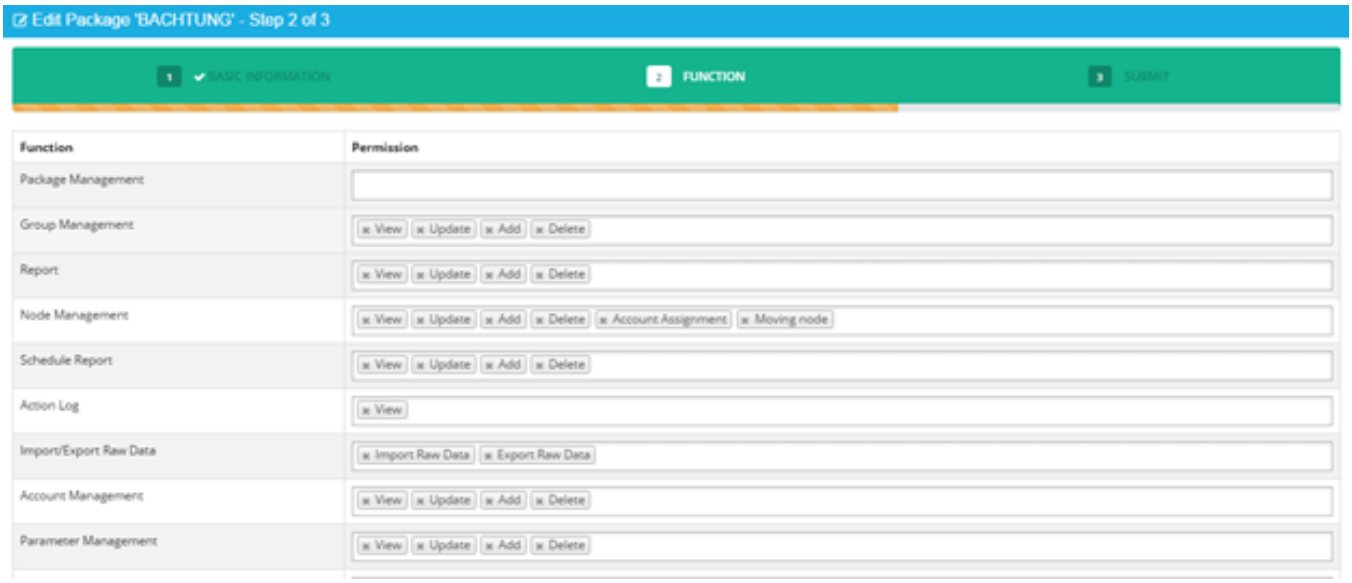
In menu Configuration, select package configuration. The List of Packages displays as follow:



- Click “Add package” to add new Package



- Step 1: Enter basic information and click continue to next step
- Step 2: Select functions for package

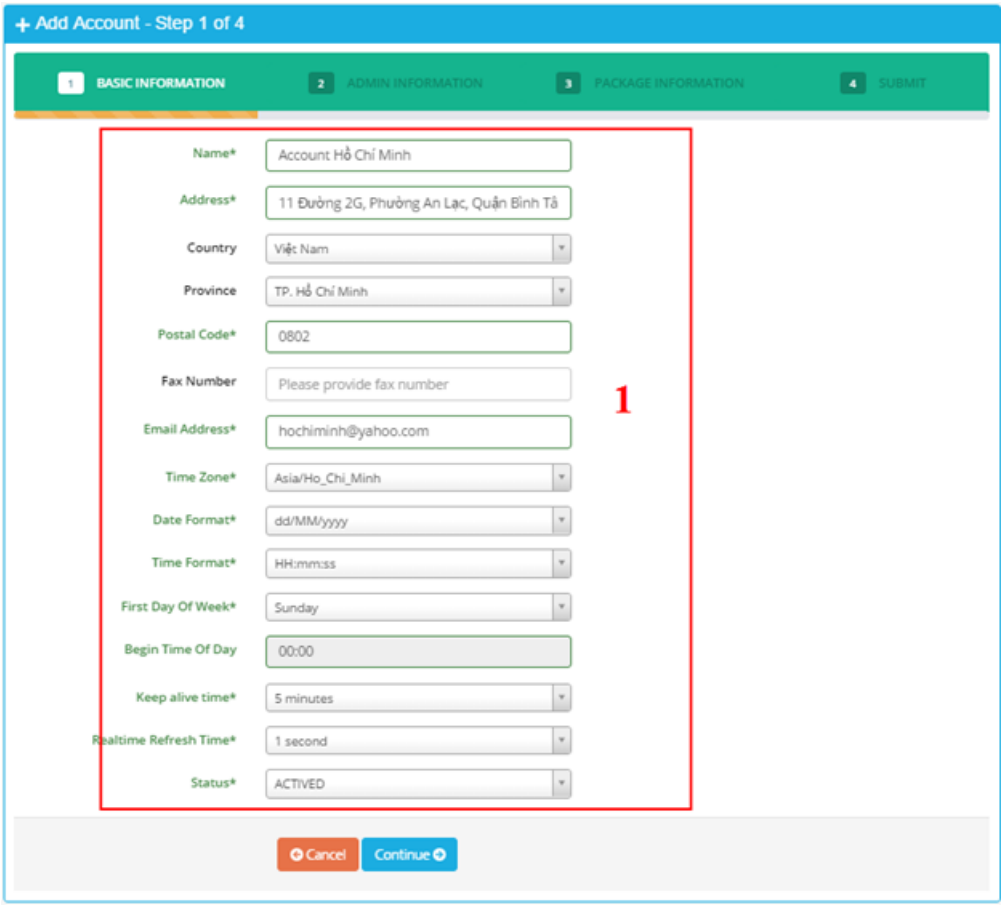


In Permission, select appropriate authorities and click continue to next step
  • Step 3: View information of configuration and click “save changes” to finish
- Click “Edit” to Edit available Package
- Click “Delete” to Delete Package

8. Administrators

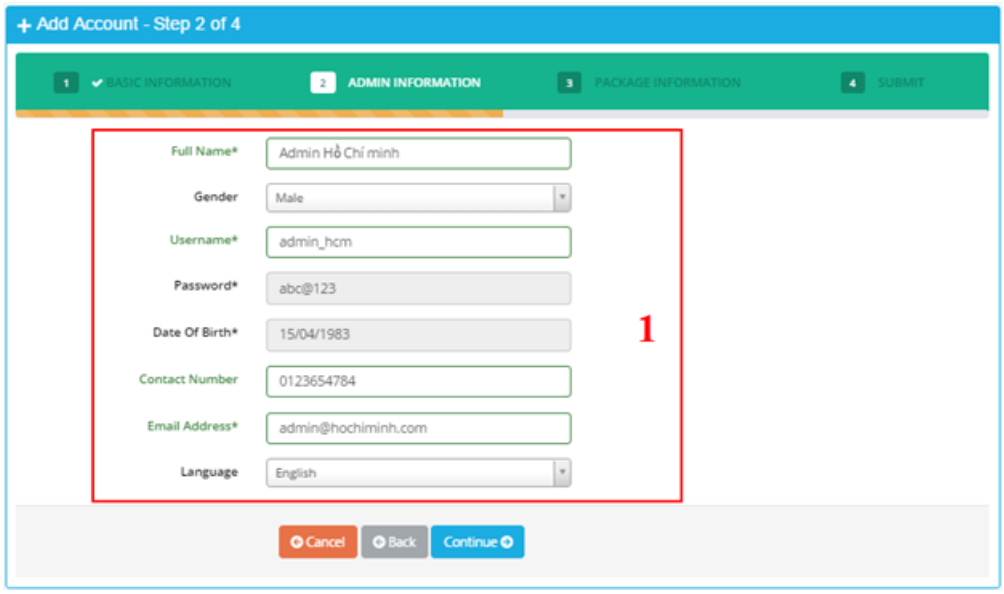
8.1 Account Management

- Account might have sub-account to manage and assign authorities.
- In Home screen, select menu Administrators → select sub-menu Account Management
- In screen of account list, click button “Add account” to create new account.



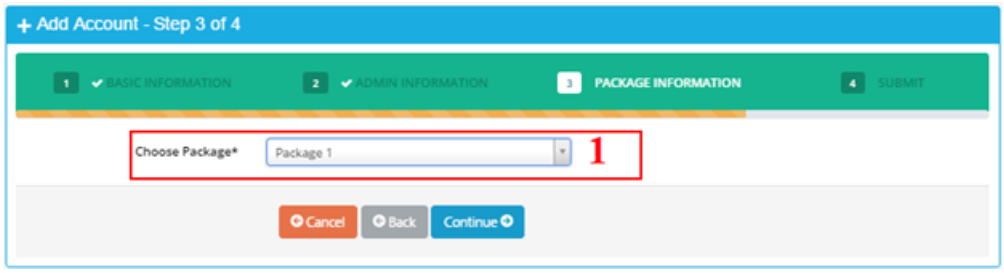
Enter information account into panel (1).
Email: enter email address. Email is unique.
Click button “Continue” to go to step 2.
- Field with mark * must be filled

- In email address, uppercase and lowercase are the same.
- Select right Time Zone for user.
- After click button “Continue”, screen of step 2 should appear:



Enter information of admin user into panel (1):
- Username: Enter username. Username is unique.
- Email: Enter email address. Email is unique.
- Contact Number: Enter phone number. Phone number is unique.
- Click button “Continue” to go to step 3.

- Screen of step 3 should appear:



(1) Select package for account.
Click button “Continue” to go to step 4.

- Screen of step 4 should appear:



(1) Display basic information of account in step 1.
(2) Display information of admin user in step 2.
(3) Display assigned package information in step 3.

Click button “Save” to save configuration.

After click button “Save”, confirmation screen should appear and click “OK” to finish.

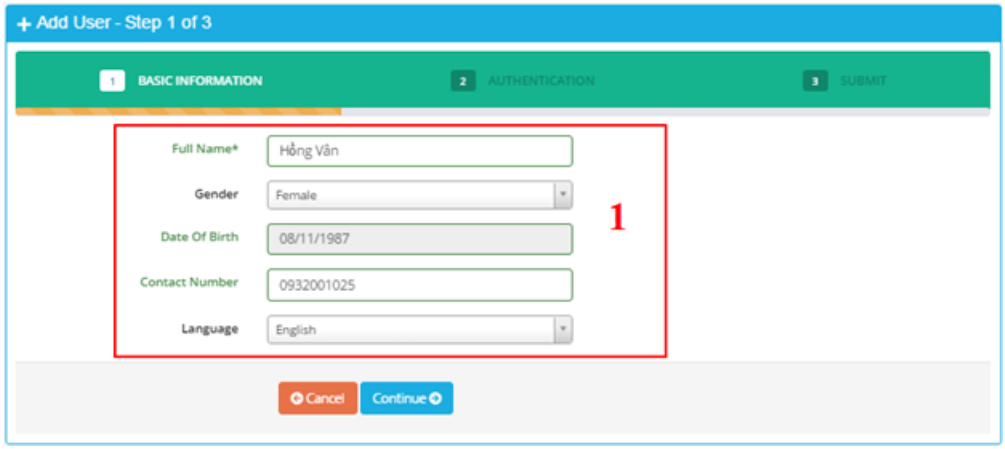
- After successfully create new account, an admin user of account is also created.
- Number of used user of account increases by one for admin user.
- Information of admin user should be in user list.

8.2 User Management

8.2.1 User creation

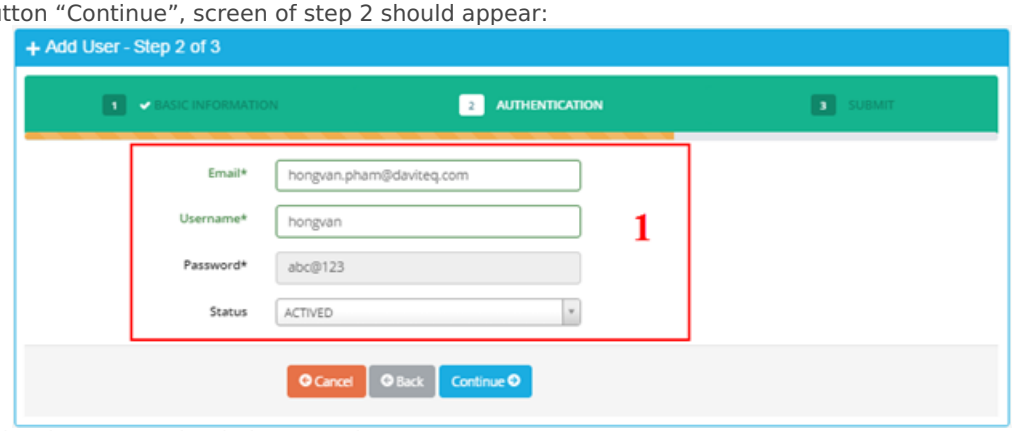
User is created by following steps:

- In Home screen, click menu Administrators → select sub-menu User Management
- In screen of user list, click button “Add user” to add new user.



Enter basic information into panel (1).
- Contact Number: Enter contact number. The number is unique.
- Click button “Continue” to go to step 2.

- After click button “Continue”, screen of step 2 should appear:

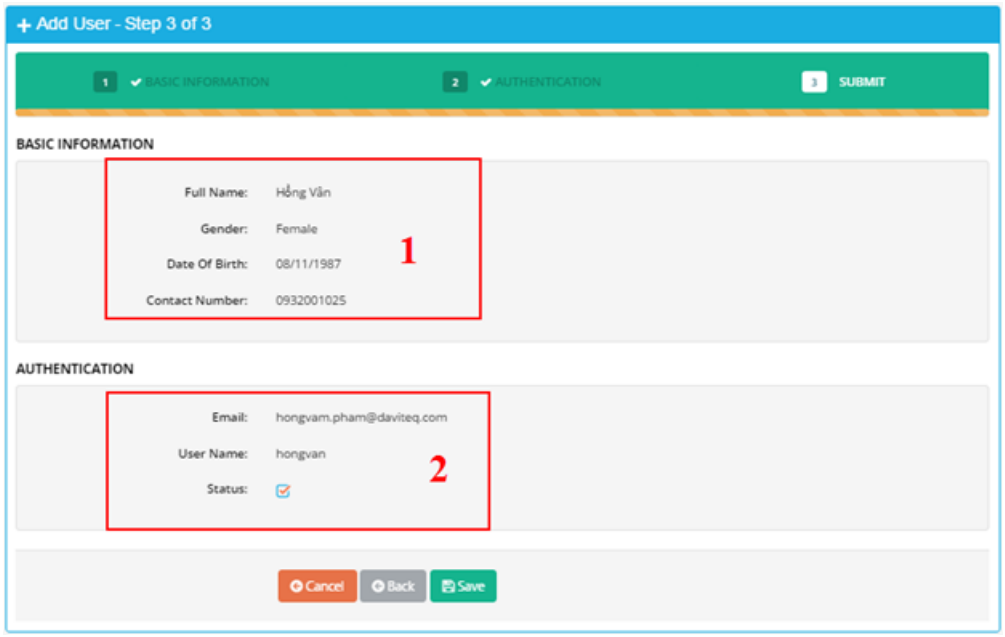


Enter information for user to sign-in into panel (1):
- Email: enter email address. Email is unique.
- Username: enter username for sign in. Username is unique. Username has at least 6 characters.
- Password: default password is “abc@123”. User must change password when user sign in in the first time.
- Click button “Continue” to go to step 3.

- Enter full information for user.
- Uppercase and lowercase of email and username are the same.

Example: username “USERNAME1” is the same as username “username1”.

- Screen of step 3 should appear:



(1) Display basic information of user in step 1.
(2) Display information for sign in in step 2.

Click button “Save” to save information.

After click button “Save”, confirmation screen should appear and click button “OK” to finish.

- If number of unused user of account > 0, user will be created successfully. Number of used user should increase by 1.
- If number of unused user of account is equal to 0, user will not be created successfully.

Screen of notification should appear when number of unused user of account is equal to 0:



8.2.2 Email address update

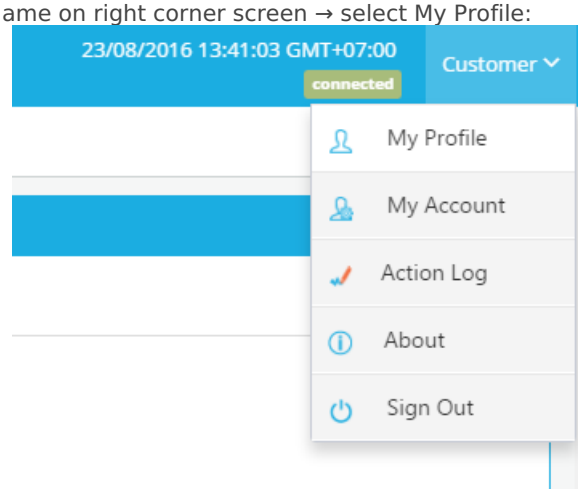
Follow below step to update email address:

Step 1: Login the Vizuo with user and provided password:
- Open a web browser (Google Chrome/Firefox/Internet Explorer...).
- Enter address in URL: http://vizuo.globiots.com/
- Sign-in page displays as follow:

  • Enter username and password
  • Click “Sign in” button.
- After successful sign-in, Dashboard screen will appear

Step 2: Access the menu to update email address and verify

- To view User Profile, click user name on right corner screen → select My Profile:



- My Profile page displays as follow:

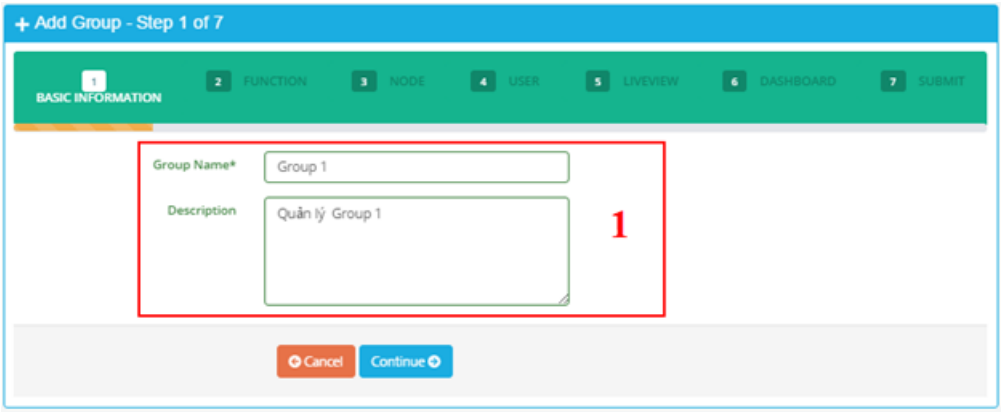
- Input updated email to EMAIL field then click corresponding VERIFY BUTTON. After clicking, verification email will be sent to the email. User logs in email, open verification email and click verification button in email to verify email. If verification is successful, button VERIFY in row email should disappear

Note:

The verification email is valid only 24 hours since clicking VERIFY button. After 24 hours, the clicking verification button does NOT affect. In this case, user must click the VERIFY button again to have new verification email

8.3 Group Management

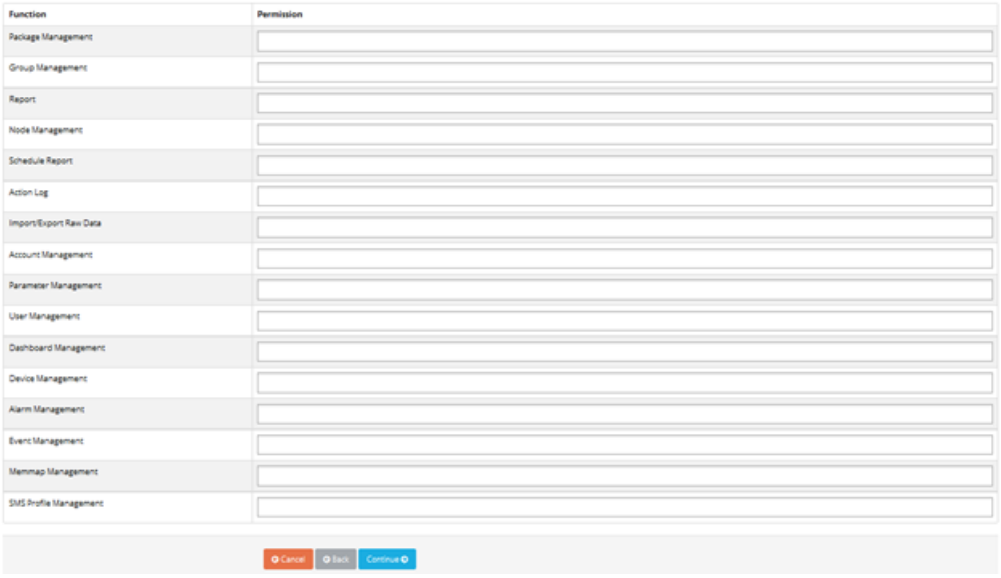
- Group is used to assign authorities to users.
- In Home screen, select menu **Administrators** → select sub-menu **Group Management**
- In screen of group list, click button “Add Group” to create new group of account.



Enter basic information of group into panel (1).

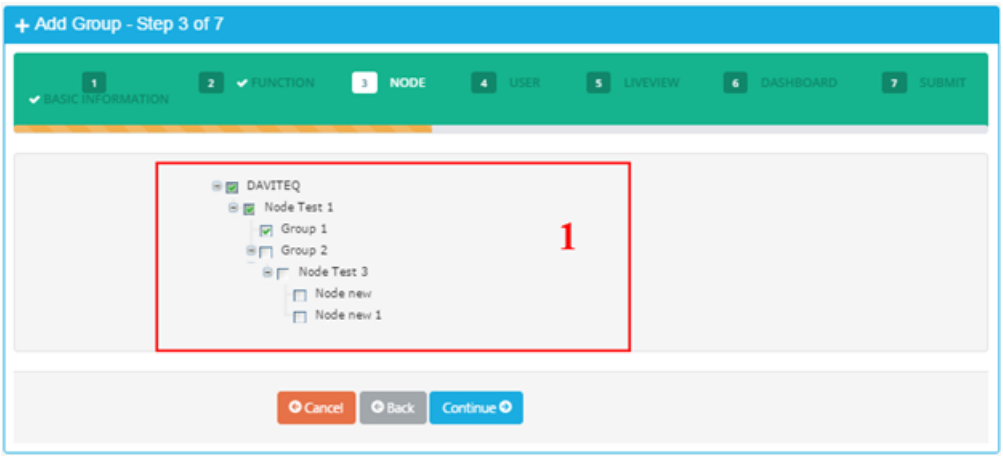
- Group Name: Enter group name. Group name is unique.
- Click button “Continue” to go to step 2.

- After click button “Continue”, screen of step 2 should appear:



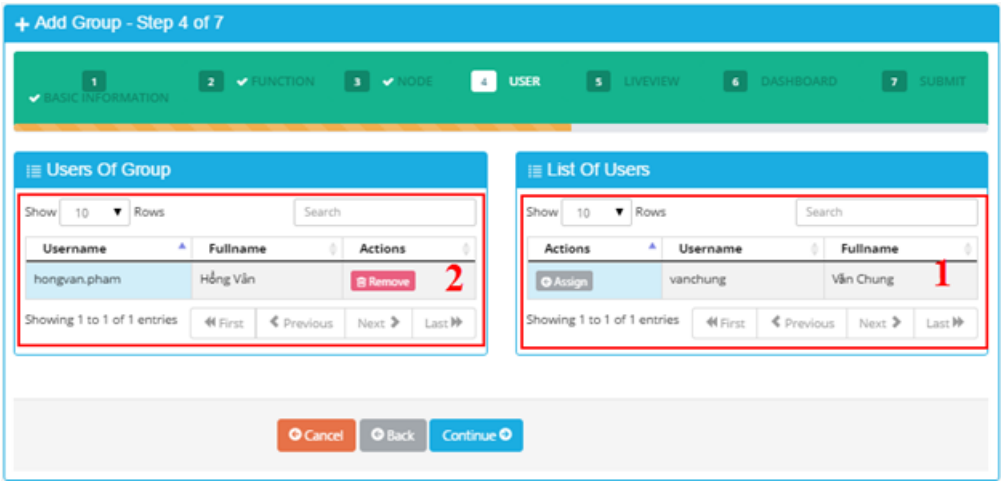
- Select assigned functions for group in area
- Only display assigned functions of account.
- Select one function to assign, then click into area (1) to display authorities of selected function. Click authority to add into group.
- Click mark “x” (2) to remove authority.
- Click button “Continue” to go to step 3.

- Screen of step 3 should appear:



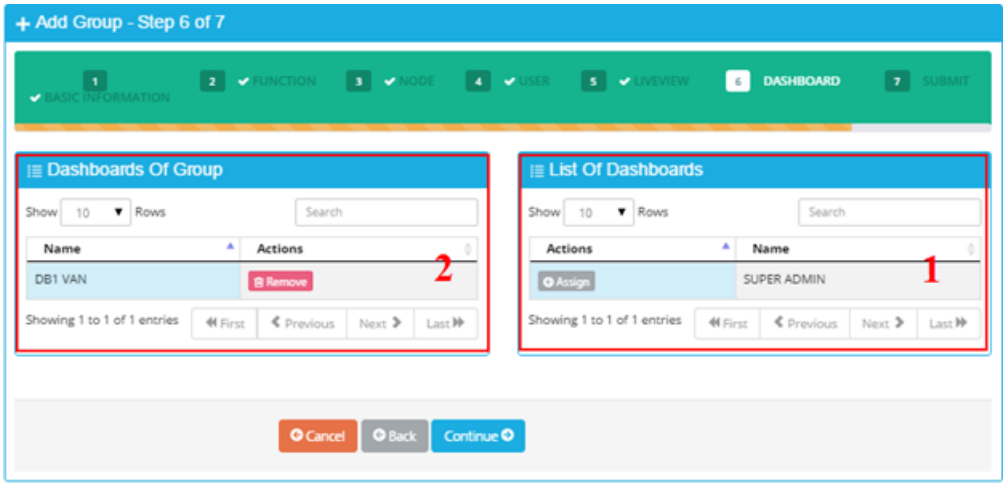
- (1) Display available nodes of account. Tick nodes to assign to group.
- Click button “Continue” to go to step 4.

- Screen of step 4 should appear:



• (1) Display list of users. The users have not been assigned to the group.
• (2) Display list of users which has already been assigned to the group.
• Button “Assign”: click to assign selected user to group. After click “Assign” button, selected user should be in the list in panel (2).
• Button “Remove”: remove user from group. After click button “Remove”, selected user should be in the list in panel (1).
• Click button “Continue” to go to step 5.

- Screen of step 5 should appear:



• (1) Display list of Dashboard of signing in group. The Dashboard has not been assigned to group.
• (2) Display list of Dashboard of signing in group. The Dashboard has already been assigned to group.
• Button “Assign”: click to assign dashboard to group. Assigned dashboard should be in panel (2).
• Button “Remove”: remove dashboard out of group. Removed dashboard should appear in panel (1).
• Click button “Continue” to go to step 6.

- Screen of step 6 should appear to view Summary information of group from step 1 to step 8.
• Click button “Save” to save information.
• After click button “Save”, confirmation screen should appear and click button “OK” to finish.

9. Support contacts

9.

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