

# NOVUS Cloud

## INSTRUCTION MANUAL V1.0x B

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## 1. NOVUS CLOUD PLATFORM

**NOVUS Cloud** is a platform focused on the Internet of Things and expands the horizons of data presentation. Applied with **NOVUS** products, this platform receives, stores, analyzes, and presents on the Internet measurements of temperature, humidity, pressure, location, or any other quantity. The Internet access to physical measurement data is especially beneficial for the industrial, building, logistics, health, energy, sanitation, and agribusiness sectors.

The platform is secure, scalable, and offers an environment for fast application development even for people with no programming experience. The cloud applications are customizable, so you can create multiple dashboards with widgets to display data, configure alarms and send notifications by email or SMS.

## 2. ACCESS TO THE NOVUS CLOUD PLATFORM

It is possible to access the **NOVUS Cloud** platform through any browser at <https://iot2.novusautomation.com> address, which will display a screen like the following:

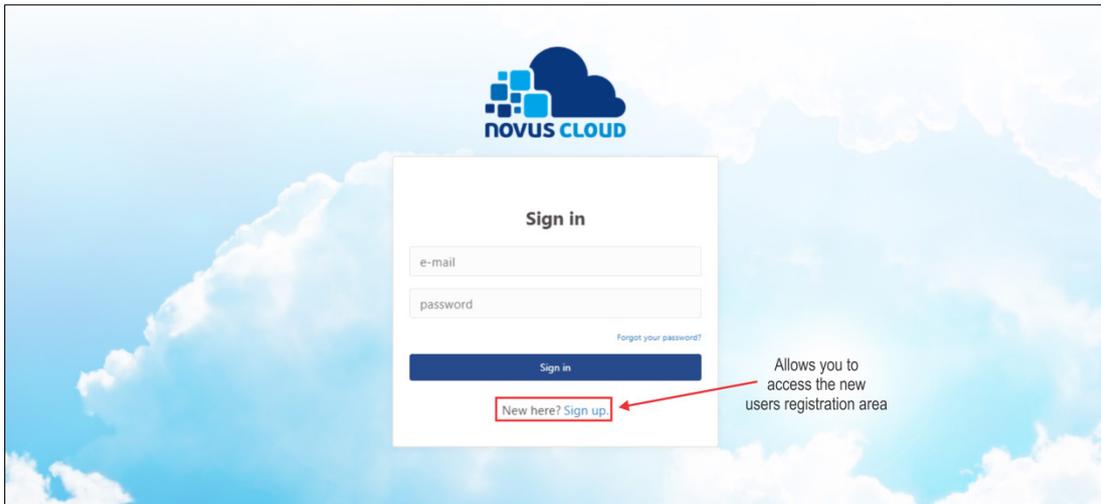


Figure 1 – Home page

On this page, you can authenticate (if you already have an account) or create a registration (if this is your first access).

### 2.1 ACCOUNT REGISTER

To create an account, you must click the **Sign up** button, located at the bottom of the **NOVUS Cloud** home page, as shown in **Figure 1**. After that, you must fill in the **First Name**, **Last Name** and **Email** fields and enter a password with up to six characters in the **Password** field:

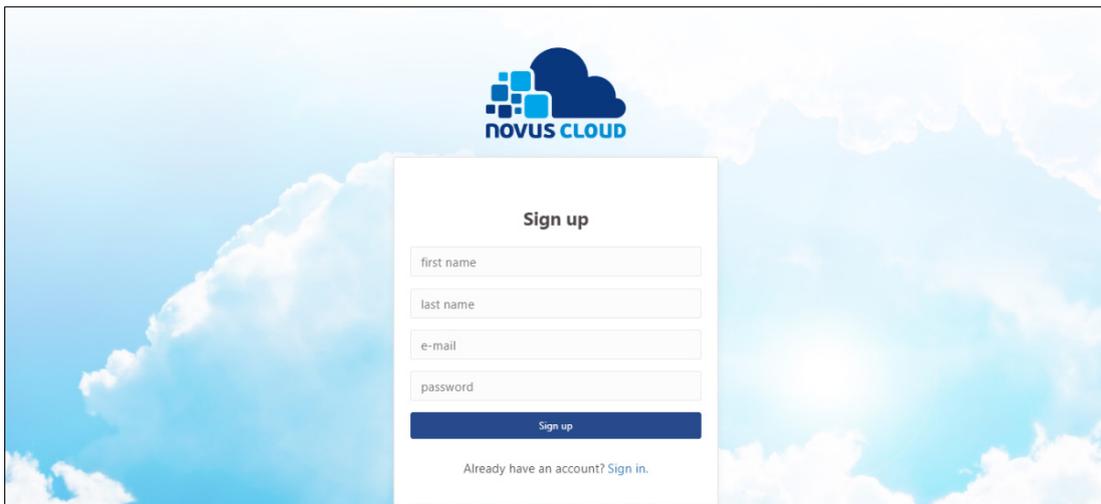


Figure 2 – Creating an account

Once the fields have been filled, you must click the **Sign up** button. If the process has occurred successfully, the platform will show the following pop-up, asking the user to check the email and confirm the registration:

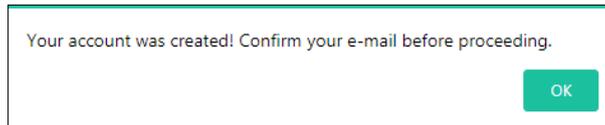


Figure 3 – Successfully created account

The registration confirmation email contains a link to activate the account. Once it is clicked, you will be redirected to the NOVUS Cloud page, which will display a success message:

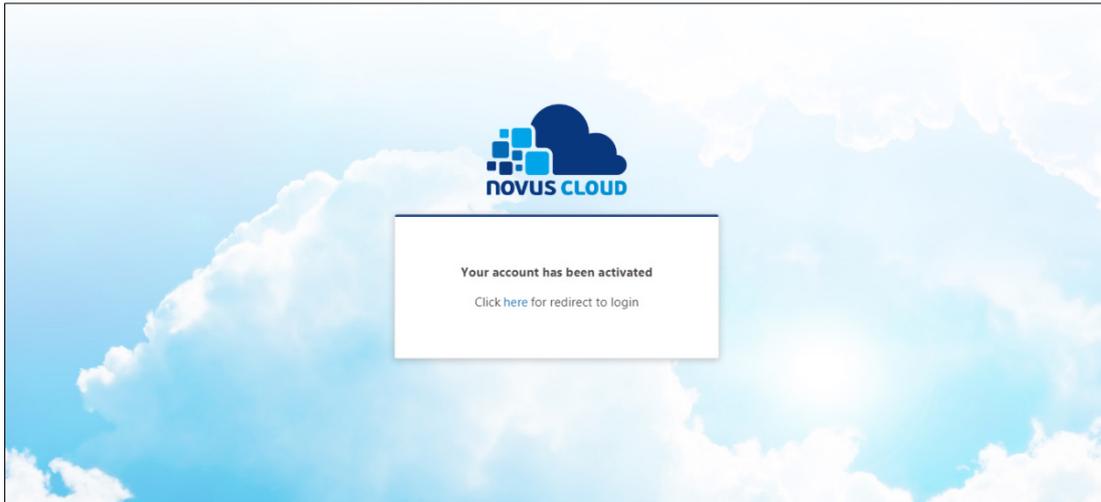


Figure 4 – Account activation

After that, you can login through the authentication page by entering the registered email and password:

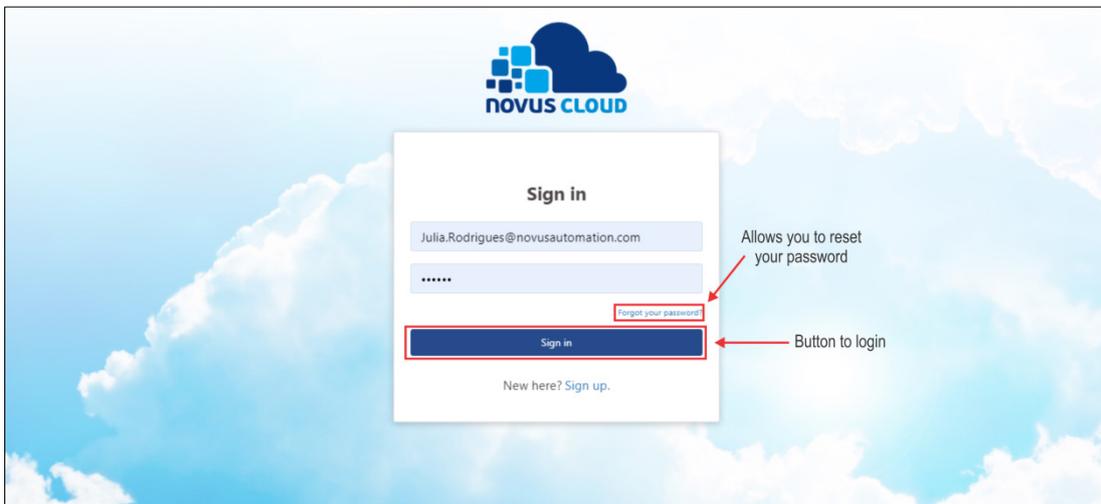


Figure 5 – User Authentication

Once the authentication data is entered, you must click the **Sign in** button to be redirected to the **NOVUS Cloud** platform homepage. To reset your password, you must click on the **Forgot your password?** link, enter the email address of the registered user and click the **Reset password** button to confirm the process. Once you have done this, you should check your email to obtain the password reset link.

### 3. REGISTERING A DEVICE

After login, you will be redirected to the **NOVUS Cloud** homepage, which will allow you to add a device to the platform:

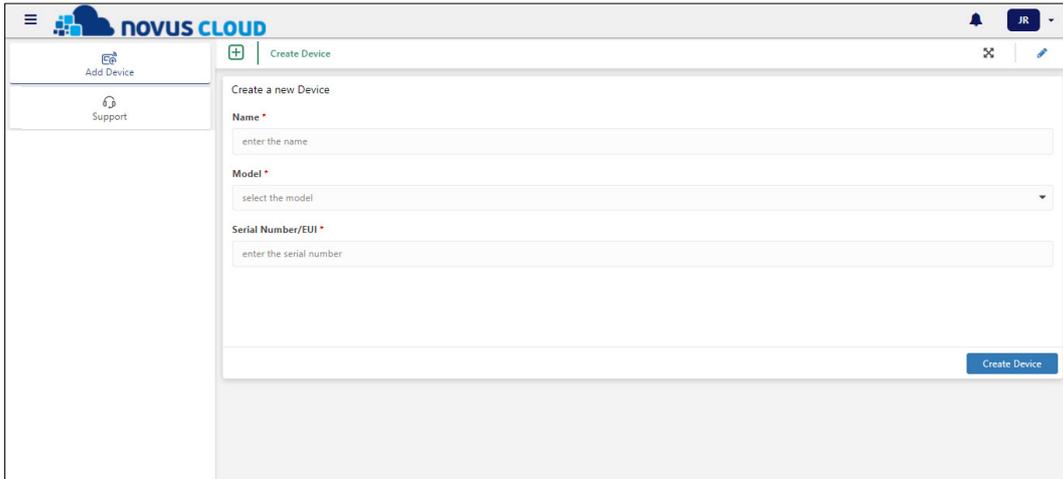


Figure 6 – Adding a device

To perform the process, you must fill in the following fields: **Name**, which allows you to define a specific name for the device to be added, and **Serial Number/EUI**, which is normally located on the device label. In addition, you need to select the model in the **Model** parameter and click the **Create Device** button to complete the process, as shown in the figure below:



Figure 7 – Filling in the form

This way, the **NOVUS Cloud** platform will begin the creation process of the requested device. This process can take a few minutes and then the following messages will be shown:



Figure 8 – Creating a device



Figure 9 – Device successfully created

If the device is successfully registered, it will be named according to the configuration you chose and will be displayed on the side guide of the screen, as shown in the following figure:

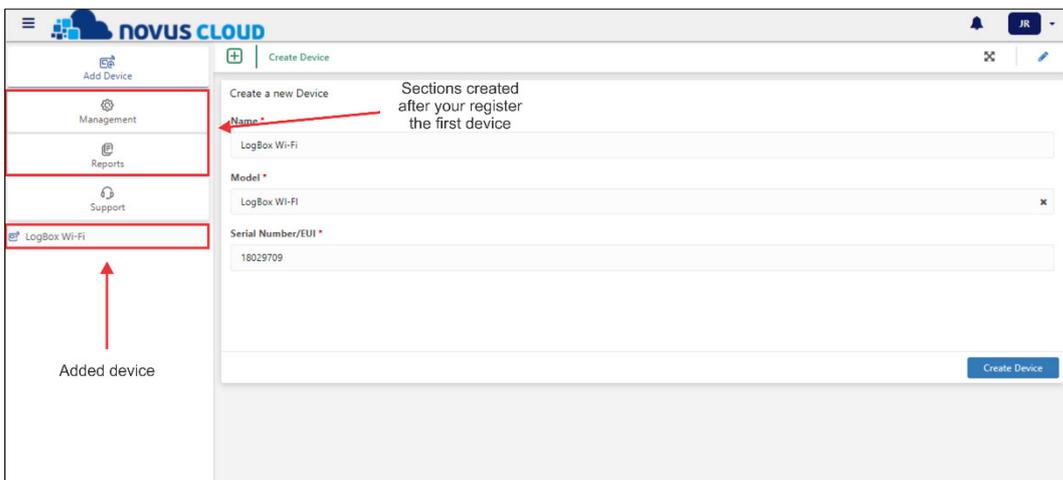


Figure 10 – Device icons

Icons regarding the platform configuration will be displayed next to the device name (see the [CONFIGURING NOVUS CLOUD PLATFORM](#) chapter) and reports (see [CREATING REPORTS](#) chapter).

To be successful during configuration, the device to be registered must be able to communicate with the platform in the cloud. This means that before performing a registration on the platform, it is necessary to use the device configuration software to enable sending data to **NOVUS Cloud** (For more information on how to do this, check the device configuration software manual or the manual of the device to be registered).

If the registered serial number is invalid, the platform it will show the following message:



**Figure 11** – Invalid serial number

To add new devices to the platform, you must follow the process described in this chapter. If you have changed screens, clicking the **Add Device** button, located on the top left of the screen, will allow you to return to this section.

## 4. VIEWING DATA FROM A DEVICE

Once the device has been successfully registered, clicking on its name in the left side tab will allow you to view a dashboard with charts and values that were sent to **NOVUS Cloud**:

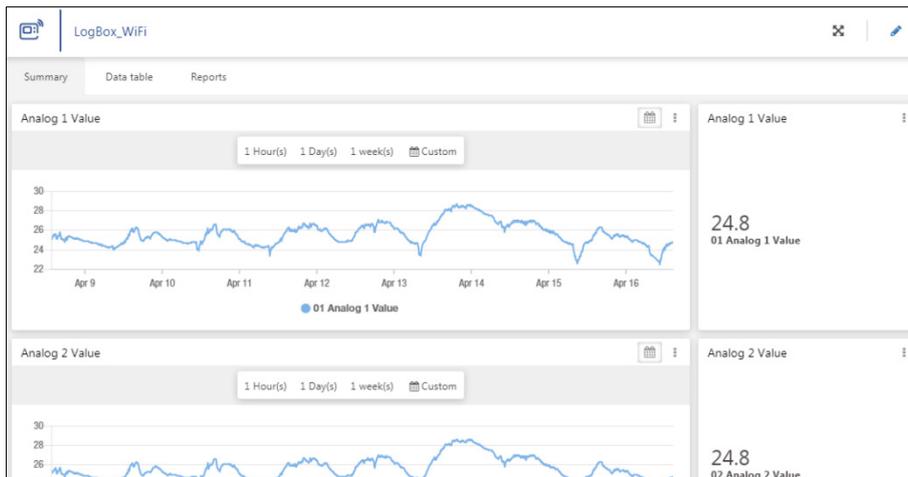


Figure 12 – Main Dashboard

This screen is individual for each device connected to the platform and has the tabs "Summary", "Data Table" and "Reports", which will be better explained within this chapter.

### 4.1 "SUMMARY" TAB

As shown in **Figure 12**, this tab brings charts and value information about the configured channels of the connected device. You can view the chart according to data downloaded for 1 hour, 1 day, 1 week or according to a custom filter, as shown in the examples below:

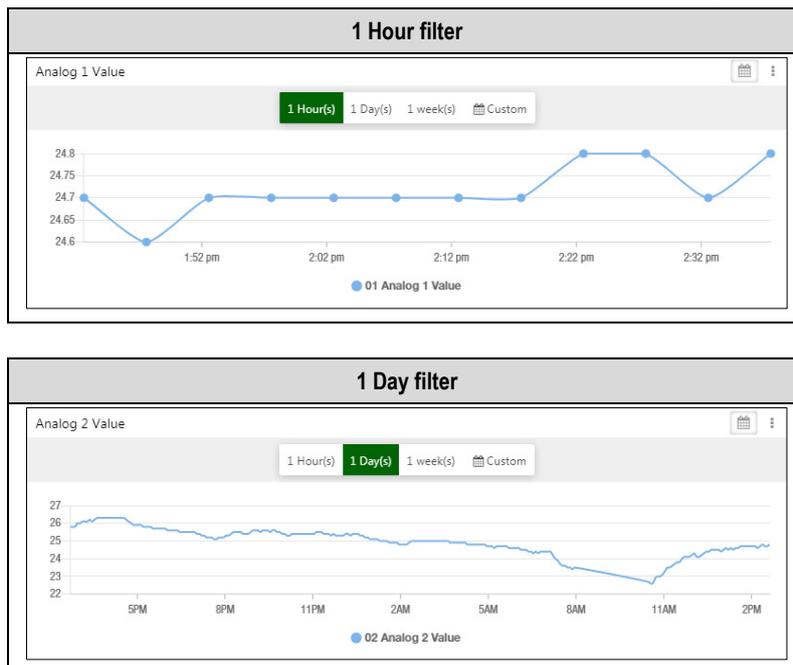


Figure 13 – Chart filters

You can click the **Custom** button to set a specific filter period and then select the start and end date to be used. After that, simply click on the **Ok** button.

Positioning the mouse over a point on the chart allows you to observe more detailed information about the data downloaded during this period:

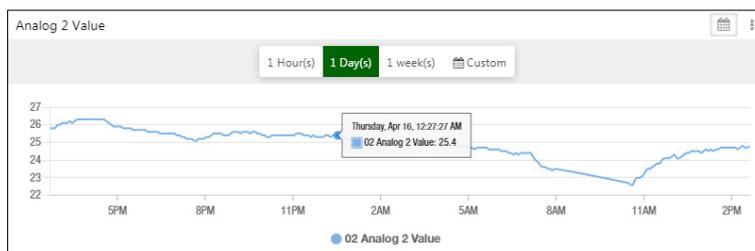


Figure 14 – Selecting a specific point

To zoom in a specific point of the chart, you can click on the chart with the left mouse button and drag the mouse to the desired point. This movement will create a selection area, which will bring more accurate time and value information, as shown in the examples below:



Figure 15 – Chart zoom

To undo the zoom area, you can click the **Reset Zoom** button, as shown above.

Positioned on the right side of the screen, the "Summary" tab also contains a side box that brings information about the last value downloaded by the displayed channel:

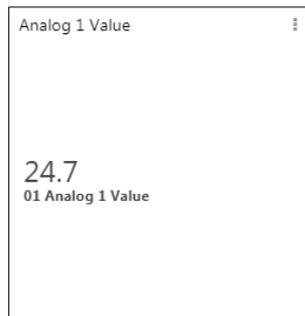


Figure 16 – Last downloaded value

Clicking on the  button, positioned in the right corner of this box, allows you to view the period in which the last update occurred:

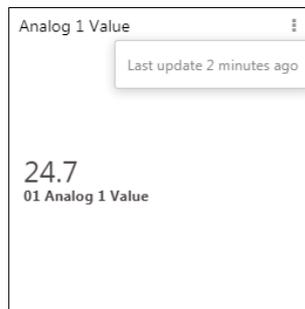


Figure 17 – Last update

## 4.2 "DATA TABLE" TAB

This tab has information about the last values of the main variables sent by the device, as shown in the figure below:

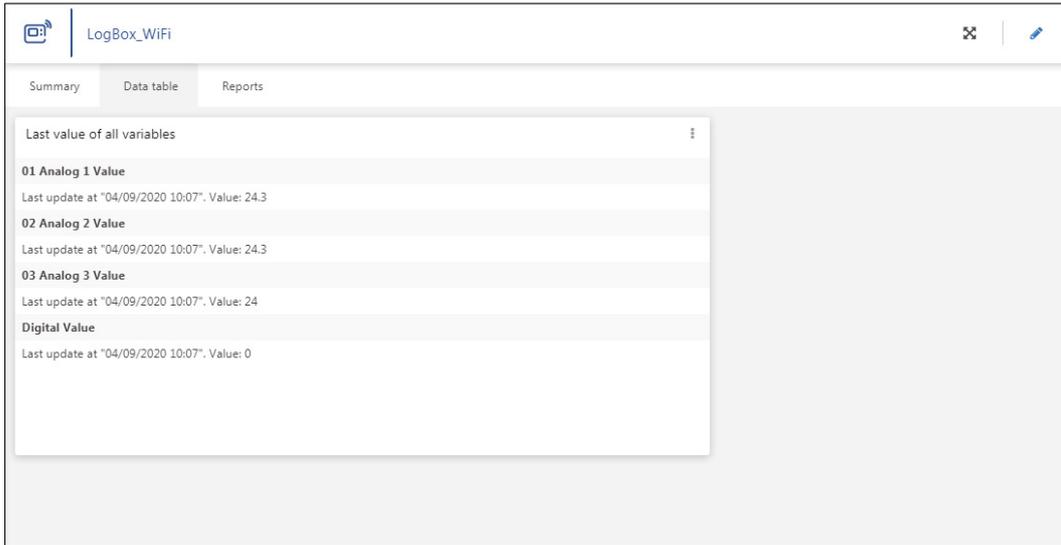


Figure 18 – "Data Table" tab

Clicking on the button , positioned in the right corner of this box, allows you to view the period in which the last update occurred and export the downloaded data to the selected format:

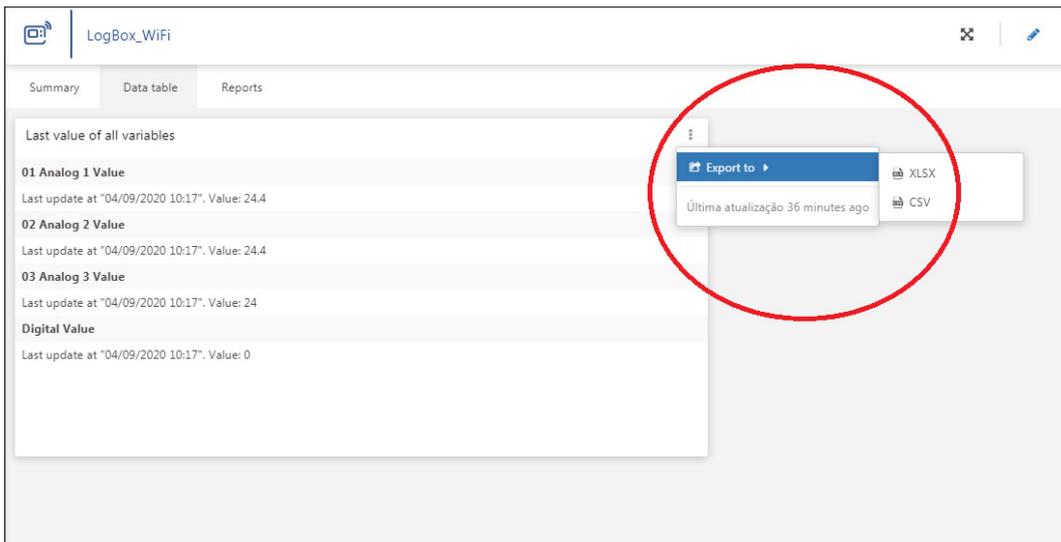


Figure 19 – Exporting the downloaded data

The download will start automatically if you have selected the \*.xls extension. If you have selected the \*.csv extension, you will need to select the method to separate the file values: Comma or semicolon.



Figure 20 – File value separator

Exporting the data using this option means exporting only the data presented on this screen. To create more complete reports, it is necessary to do it through the functionality of the "Reports" tab of each device, as shown in the ["REPORTS" TAB](#) section of this chapter, or through the **Reports** button, located on the left side tab of the platform, as shown in the chapter [CREATING REPORTS](#).

### 4.3 "REPORTS" TAB

This tab allows you to create reports on the information downloaded. To do so, you must fill in the following fields: **Variables**, which allows you to add one or all of the available variables; **Separator**, which allows you to define a specific character to separate the report information (such as comma or semicolon); **Start Date** and **End Date**, which allows you to select the date and time for the start and end of the collection, in order to filter the data to be presented, and **Email**.

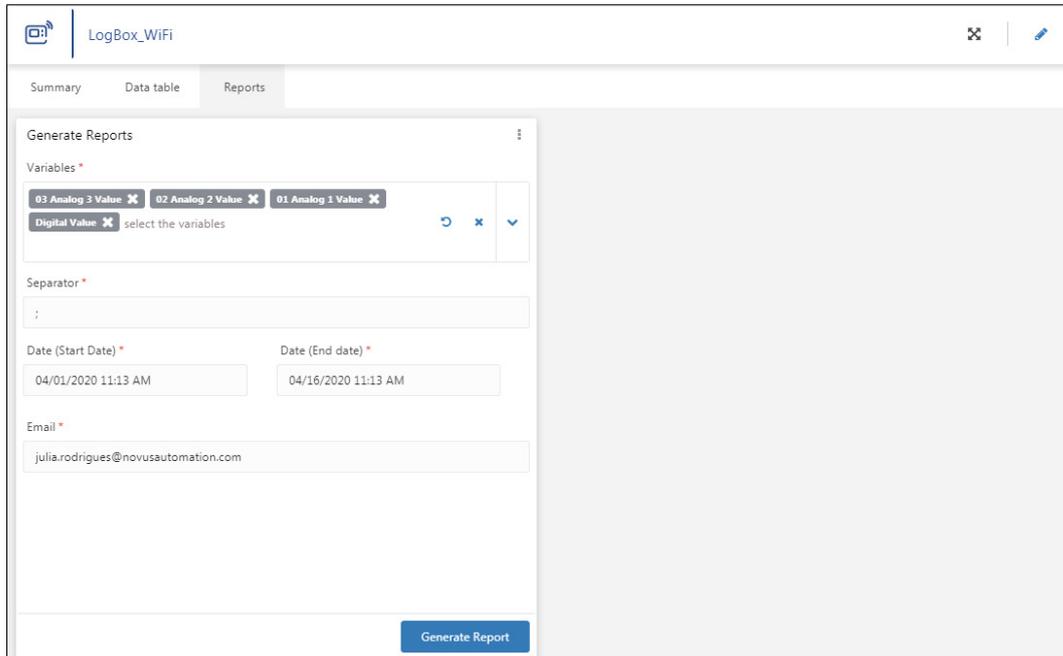


Figure 21 – Creating a report

Once the desired information has been filled in, you must click the **Generate Report** button to complete the process.

If the required information has not been filled out or there is an error in its completion, the platform will display the fields in red and prevent the process from continuing until they are completed or corrected.

If the platform is successful in generating and sending the report, it will display the following message:



Figure 22 – Report successfully generated

Once the above message has been displayed, you should receive an email like the one shown in **Figure 24**. In this e-mail you can click on **Download File** to download:

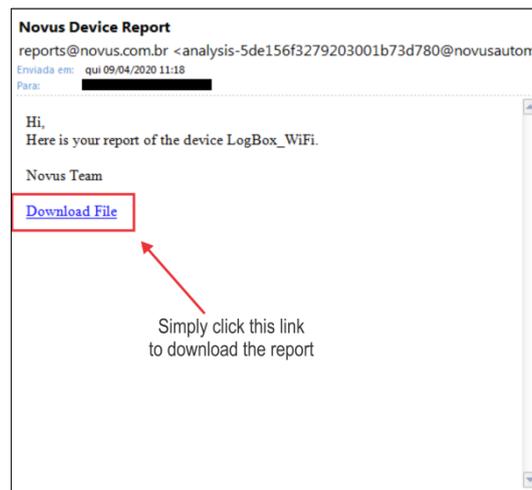


Figure 23 – Email example

The generated report will have extension \*.csv and must present the data of all variables selected in the **Variables** parameter of **Figure 21**. The information will be separated according to the separator defined during the report creation.

## 5. CONFIGURING THE NOVUS CLOUD PLATFORM

This screen allows you to configure the **NOVUS Cloud** platform. You can change the settings of registered devices, create dashboards and alerts, or manage users. As shown in **Figure 24**, you can access it by clicking the **Management** button, located on the left side of the screen.

Divided into 6 tabs, this screen includes the "General", "Create Dashboards and Widgets", "Users", "Alerts", "Billing" and "Advanced" tabs, which will be further explained in this chapter.

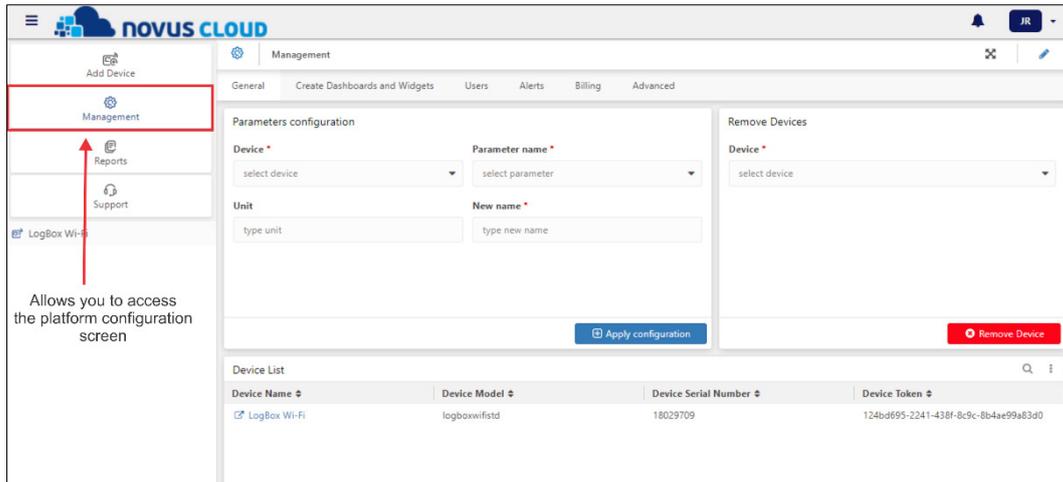


Figure 24 – Platform Configuration

### 5.1 "GENERAL" TAB

First screen of the "General" section, this tab allows you to change one or more parameters of the selected device and remove devices previously connected to the **NOVUS Cloud** platform. In addition, this tab also displays a list of all connected devices, as shown in **Figure 24**.

In the "Parameters Configuration" section of this tab you can configure parameters specific to a device connected to the **NOVUS Cloud** platform:

Figure 25 – ABA "General"

You must type or select the desired device in the **Device** field, type or select the name of the parameter to be configured in the **Parameter Name** field, type the unit in the **Unit** field, and type the new name to be used in the **New Name** field.

Once this is done, you must click the **Apply Configuration** button to complete the process, which may take a few seconds.

In the "Remove Devices" section you can remove a device previously connected to the **NOVUS Cloud**. To remove a device, you must click on the box in the **Device** field and select the device, as shown below:

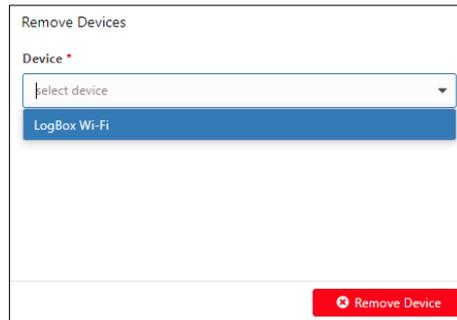


Figure 26 – Removing a device

You must click the **Remove Device** button to complete the process, which may take a few seconds. **However, it is important to note that all data on the device will be lost as soon as you remove it from the NOVUS Cloud.** If you want to keep the downloaded information, you must export the device data before removing it from the platform.

Once the device has been removed from the currently connected **NOVUS Cloud** account, it can be registered to any other account. A device that has been removed from a **NOVUS Cloud** account may also be added back to the same account.

The "Device List" section, in turn, displays a list of all devices registered in the platform, as shown in the example below:



Device Name	Device Model	Device Serial Number	Device Token
<a href="#">LogBox Wi-Fi</a>	logboxwifistd	18029709	124bd695-

Figure 27 – Device list

This section displays the device name in the **Device Name** field, the model in the **Device Model** field, its serial number in the **Device Serial Number** field and the token in the **Device Token**. This section also has a filter that allows you to search more easily for a specific device if the list of connected devices is long. Clicking the **Expand** button allows you to show an expanded version of this list.

Clicking on the device name will redirect you to the device's data view page (See chapter [VIEWING DATA FROM A DEVICE](#)).

Clicking on the  button in the right corner of this box allows you to view information about the period of the last update and to export the data in this section to the selected format:

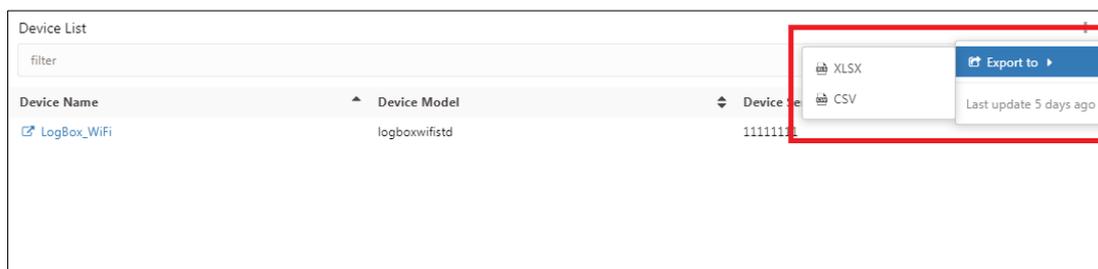


Figure 28 – Exporting the device list data

Once you have chosen the file extension, the download will start automatically. The file will contain information identical to that presented in this section.

## 5.2 "CREATE DASHBOARDS AND WIDGETS" TAB

This tab allows you to create dashboards and widgets for devices connected to the platform. Both aim to provide a more dynamic and clear view of the downloaded data and enhance your experience.

You must click the button **Create Dashboard** in the "Dashboard List" section to create a dashboard, as shown in the figure below:

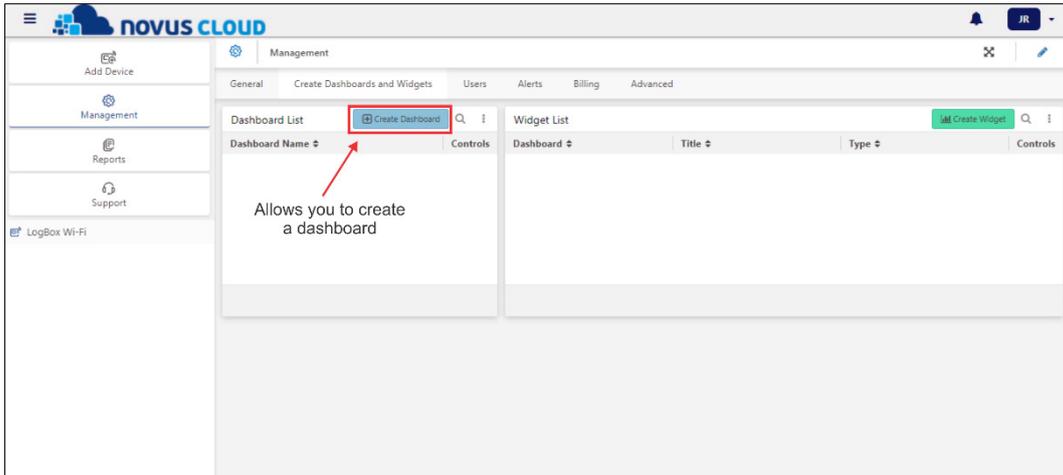


Figure 29 – "Create Dashboards and Widgets" tab

You will need to enter a name for the dashboard to be created and click on the **Create Dashboard** button, as shown in the example below:

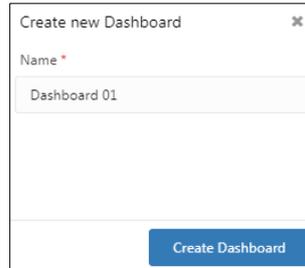


Figure 30 – Creating a new dashboard

The process may take a few seconds, but once completed, the platform will display a success message. Once it has been created, the dashboard will have access links both in the side menu of the platform and in the "Dashboard List" section of the "Create Dashboards and Widgets" tab, as the figure below shows:

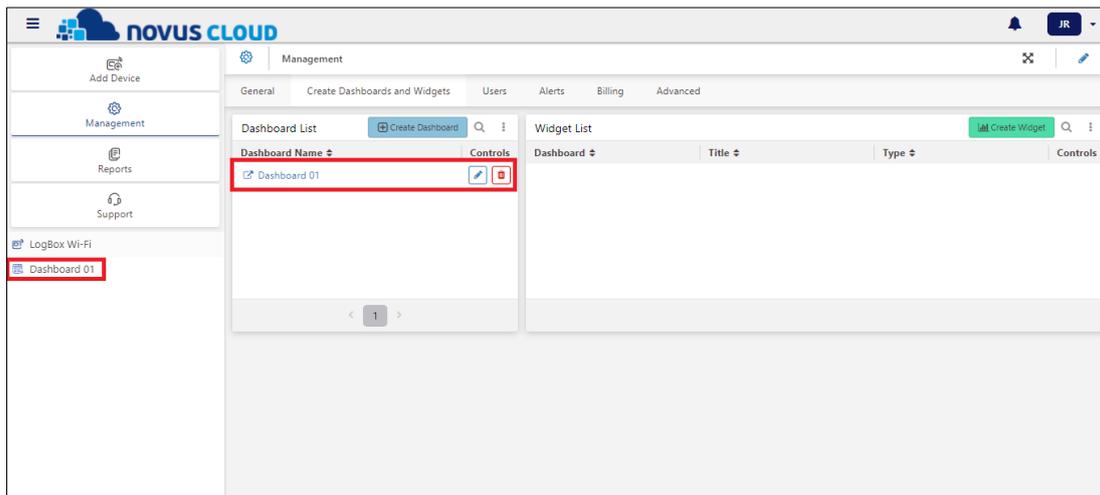


Figure 31 – Access to dashboards

You can edit the name of the selected dashboard by clicking the  button and clicking the  button to save the process after you finish, as the example below shows:

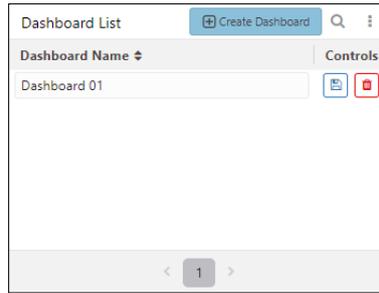


Figure 32 – Changing the dashboard name

To delete a dashboard, you must click the  button and, when requested, confirm the deletion. **It is important to note that deleting a dashboard implies deleting the linked Widgets.**

As the figure below shows, a newly created dashboard will be empty, and you will need to complete it with widgets. To add widgets to the dashboard, you must click the **Create Widget** button, as shown in the figure below:

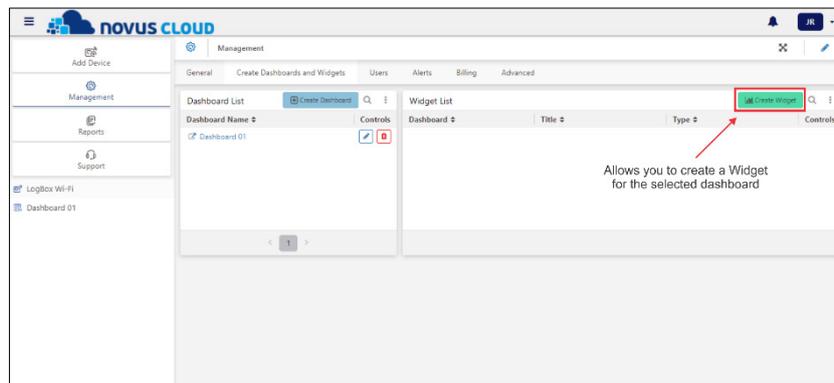


Figure 33 – Creating a Widget

You will have to fill in the creation parameters of the widget, as shown in the figure below. Each type of widget will have specific parameters. The "Gauge" type, for example, has the fields **Device**, **Variable**, **Gauge Type**, **Minimum Value** and **Maximum Value**.

Once you have filled in the fields, just click the **Create Widget** button to complete the process:

Create Widget to a Dashboard ✕

Dashboard \*  
select the dashboard ✕

Title \*  
insert the widget title

Type \*  
Gauge ✕

Device \*  
select a device to widget ✕

Variable \*  
select the variables ✕

Gauge Type \*  
select the gauge type ✕

Minimum Value (Default is 0)  
insert the minimum

Maximum Value (Default is 100)  
insert the maximum

Create Widget

Figure 34 – Creating a Widget

As explained above, each type of widget allows different customizations. Thus, you must fill in different parameters. **NOVUS Cloud** admits several widget types, selected in the **Type** field, which are the following:

- **"Gauge" Type:** Displays the variable in a box like an analogue car speedometer. It allows 5 different configurations. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
  - **Gauge Type:** Allows you to define the type of meter to be used: **Solid, Dial, VU Meter, or Dual axes.**
  - **Minimum Value:** Allows you to define a minimum value for the variable. The default value is 0.
  - **Maximum Value:** Allows you to define a maximum value for the variable. The default value is 100.
- **"Card" Type:** Displays the variable in a card format. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
- **"Chart" Type:** Displays the chosen variables in chart format. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
  - **2nd Device (Optional):** Allows you to set a second device to be linked to the dashboard. If selected, a new parameter **Variable** will be displayed to define the variables of this device.
  - **Chart Type:** Allows you to define the type of chart to be used: **Line, Area, Vertical Bar or Horizontal Bar.**
- **"Display" Type:** Displays the chosen variable in a simple display format. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
- **"Map" Type:** Displays the location of the variable on the map. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
- **"Tile" Type:** Displays a window that allows you to insert an image via a URL. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Tile Link:** Allows you to insert the URL/link of the image to be used.
- **"Pie" Type:** Displays a pie chart in circle or semicircle format, depending on the option configured. This type of widget has the following customizable parameters:
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be displayed.
  - **2nd Device (Optional):** Allows you to set a second device to be linked to the dashboard. If selected, a new parameter **Variable** will be displayed to define the variables of this device.
  - **Chart Type:** Allows you to define the type of chart to be used: **Circle or Semi-Circle.**
- **"Cylinder" Type:** Displays the chosen variable in a tank-shaped cylinder, used to demonstrate volume or other quantities. You can set an alert to cause the contents of the cylinder to change color when the set condition is reached.
  - **Title:** Allows you to define a title for the dashboard.
  - **Device:** Allows you to define the device to which the dashboard will be attached.
  - **Variable:** Allows you to define the variable to be monitored by the cylinder.
  - **Warning Condition:** Allows you to define the condition that will cause the contents of the cylinder to change color.
  - **Minimum Value:** Allows you to enter a minimum value for the variable. Default: 0.
  - **Maximum Value:** Allows you to enter a maximum value for the variable. Default: 100.
- **"Report" Type:** Displays a report on the selected device.

After filling in the widget information, you must click the **Create Widget** button, as explained above, to complete the process. If the process is successful, the platform will display the following message:



Widget Successfully created!

Figure 35 – Widget successfully created

Widgets created will be displayed in list format in the "Widget List" section, as shown in the figure below:

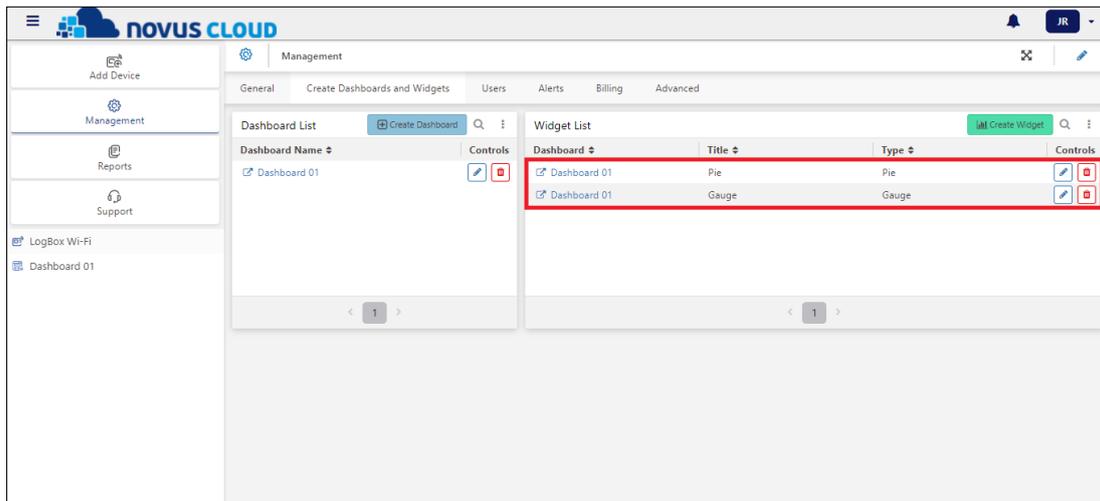


Figure 36 – Widget List

You can edit the dashboard linked to the widget or the name of the selected dashboard by clicking the  button. You must click the  button to save the process after you finish editing, as the example below shows:

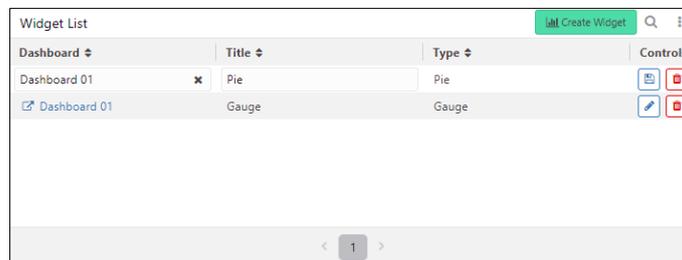


Figure 37 – Modifying a Widget

To delete a widget, you must click the  button and, when requested, confirm the deletion.

After creating the widgets, you can click on the name of the dashboard in the side menu of the screen to be redirected to it, as the example below shows:

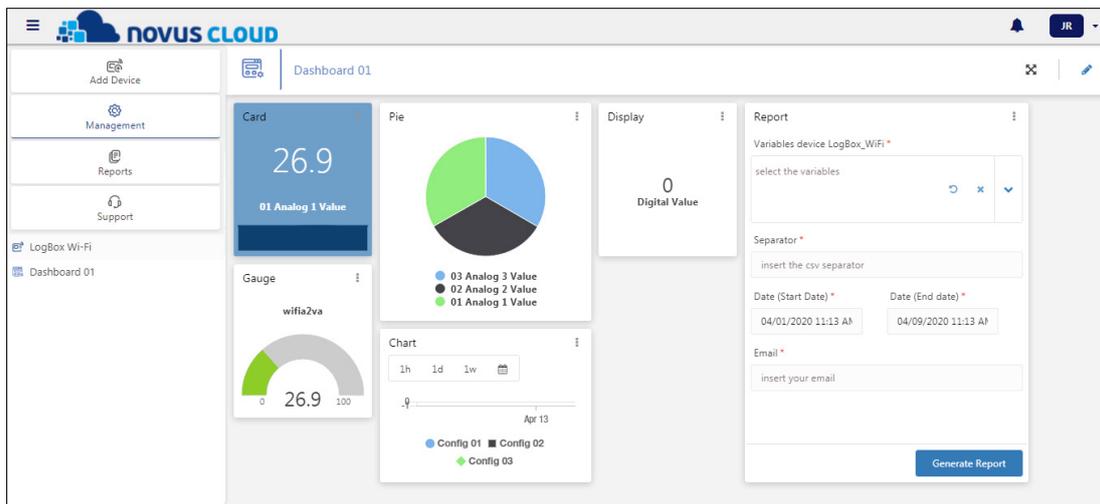


Figure 38 – Dashboard Widgets

This dashboard is fully configurable. You can move the widget cards as you wish or need. To customize it, click on the  button at the top right of the screen and freely drag the content boxes, as shown below:

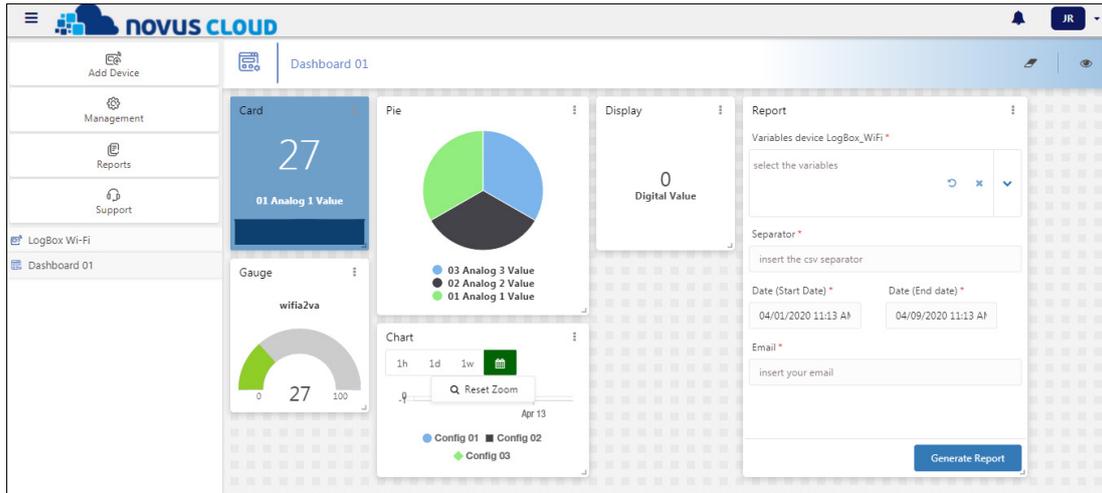


Figure 39 – Customizing the dashboard layout

After the changes are completed, you can click the  button to save and return to view mode. Clicking the  button allows you to undo the changes made.

You can click on the  button of each widget card to view information about the last update or export the data to files with \*.xls or \*.csv formats. Exporting the data through this option means exporting only the data of each Widget.

To generate more complete reports, you must use the functionality of the "Reports" tab of each device, as shown in the section ["REPORTS" TAB](#) of the chapter [VIEWING DATA FROM A DEVICE](#), or the **Reports** button, located on the left side tab of the platform, as shown in the chapter [CREATING REPORTS](#).

### 5.3 "USERS" TAB

This tab allows you to add users to the **NOVUS Cloud** platform, as shown in the figure below:

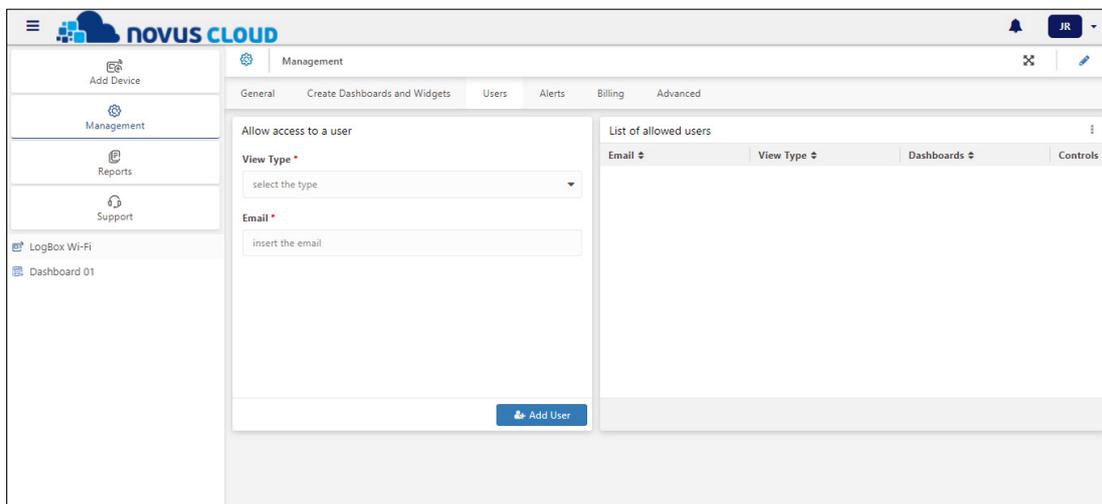


Figure 40 – NOVUS Cloud users

The "Allow access to a user" section allows you to add users to the platform. When adding a user, you can define whether he can view or edit the settings of the **NOVUS Cloud** and the devices connected to it. The **View Type** field of this section presents three types of users:

- **Viewer:** When creating this user, you will need to define the dashboards and devices to which the user will have access in the **Dashboards** field, as shown in **Figure 40**. This user will not be able to create, edit or delete dashboards and widgets. His authorizations are limited to viewing and creating reports.
- **Manager:** This user will have access to all devices and dashboards connected to the platform account. In addition, he can create, edit, or delete dashboards, widgets, and alarms.
- **Public:** This user has the same permissions as the **Viewer** user. In this case, however, it is not necessary for the public user to have an account in **NOVUS Cloud** to access the dashboards for which they have been granted permission. This user can be defined with a fictitious email address. Since it is not necessary to use a real account, a password must be set.

The users created will be displayed in the "List of allowed users" section, located on the right side of the screen, as shown in the figure below:

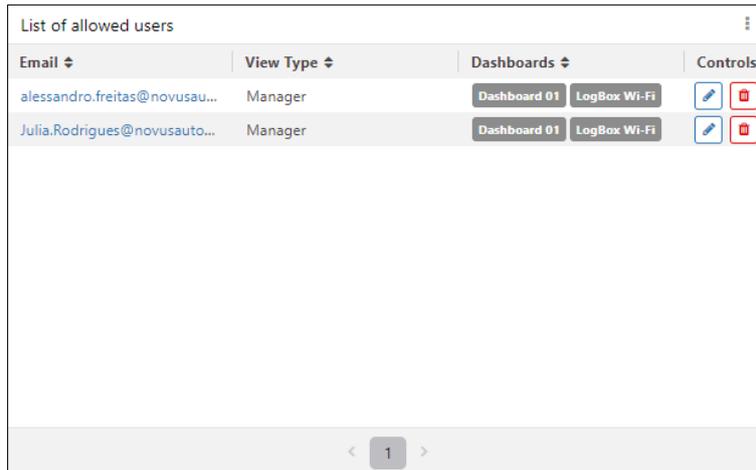


Figure 41 – List of allowed users

You can edit the access settings of the selected user by clicking on the [Edit] button and, once the editing has been done, click on the [Save] button to save the process, as shown in the example below:

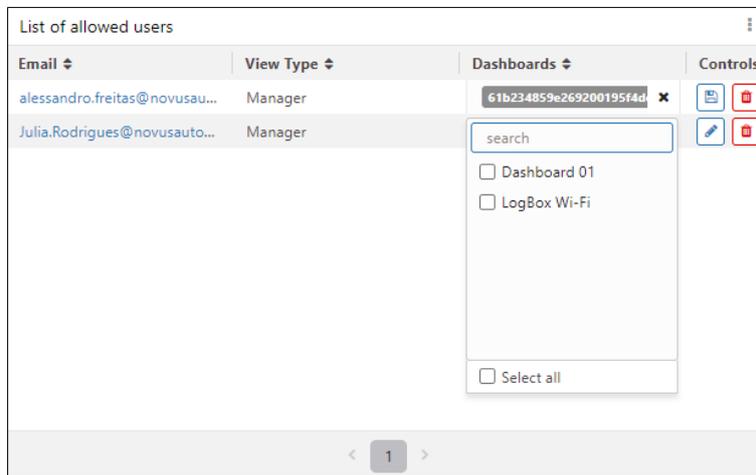


Figure 42 – Editing user permissions

To delete a user, you must click the [Delete] button and, when requested, confirm the process.  
You can export the data from this list to a file with extension \*.xlsc or \*.csv by clicking the [Export] button and selecting the **Export to** option.

## 5.4 "ALERTS" TAB

This tab allows you to create alarms for configured devices. This enables configured users to receive emails or SMS with information about any exceptional conditions. You can, for example, create alarms with limits for any of the variables of a device connected to the platform.

As shown in the figure below, this tab has the sections "Alert Setup List", which will be composed of an alarm list, "Creating new contact", which allows adding users, "List of triggered alerts", which allows you to view a list with information about triggered alarms, and "Contact List", which will be composed of the users registered to receive these alarms:

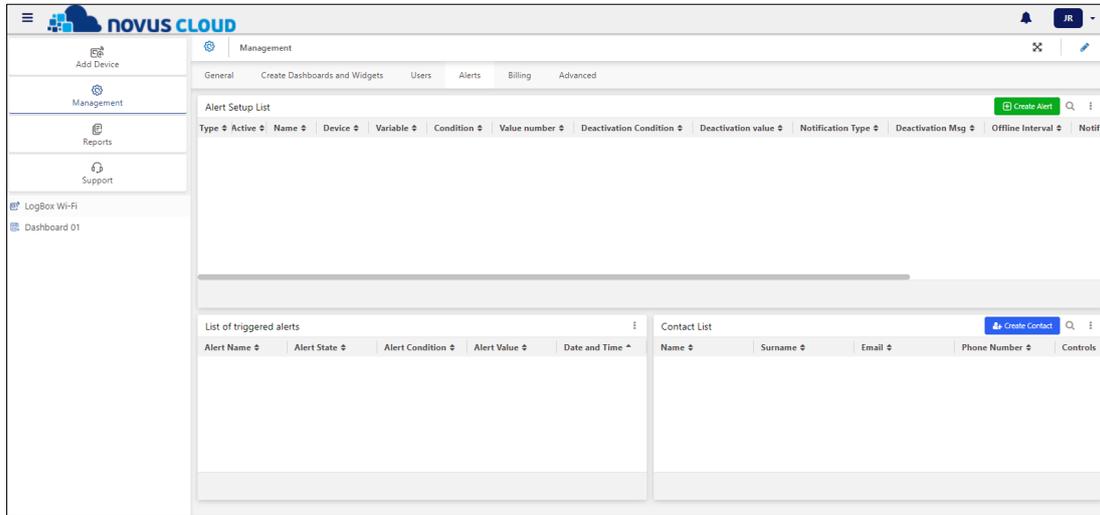


Figure 43 – Creating alerts

Before setting any alarms, you must add to the platform the contacts that will receive the alarm warnings. To add a new user, you need to click the **Create Contact** button and fill in the fields in the "Creating new contact" section, entering first name, last name, email, and phone number (country code + region code + number), and then click the **Add Contact** button, located at the bottom:

Name *	Surname
<input type="text" value="insert a name"/>	<input type="text" value="insert a surname"/>
Email	Phone Number
<input type="text" value="enter one or more email address"/>	<input type="text" value="ex: +5521994568734"/>

Figure 44 – Creating new contact

The created user data will be displayed in the "Contact List" section, located to the right of the user creation section, as shown in the figure below:

Name	Surname	Email	Phone Number	Controls
Júlia	Rodrigues	Julia.Rodrigues...	55519	<input type="button" value="edit"/> <input type="button" value="delete"/>

Figure 45 – Contact list

This section allows you to view the contacts. If necessary, you can change or delete them by clicking the  or  buttons. You can also export the data from this list to a file with extension \*.xlsx or \*.csv by clicking on the  button and selecting the option **Export to**.

After creating the user list, you can create an alarm by clicking the **Create Alert** button. After that, you must select the type of alarm to be created:

The screenshot shows a window titled 'Alert Setup' with a close button (x) and a help button (?). It contains two main input fields: 'Alert Name' with a placeholder 'insert a name' and 'Alert Type' with a placeholder 'select the type'. At the bottom right, there is a blue button labeled 'Create Alert'.

Figure 46 – Alarm type

There are two types of alarm:

- **Condition:** Allows you to create alarms involving the variables and conditions of the selected device.
- **Offline:** Allows you to be notified whenever the selected device does not send data during a certain period.

If the selected alarm type is **Condition**, you must fill in the parameters of the alarm to be created, as shown in the example below:

The screenshot shows the 'Alert Setup' form with the following filled-in fields: 'Alert Name' is 'Alarm 01', 'Alert Type' is 'Condition', 'Device' is 'LogBox Wi-Fi', and 'Variables' is '01 Analog 1 Value'. The 'Activation Condition' is 'Greater Than' with an 'Activation Value' of '30'. The 'Deactivate Condition' is 'Less Than' with a 'Deactivate Value' of '10'. The 'Notification Type' is 'Email'. The 'Contact(s) to receive alerts' field is empty. The 'Message of the Alert' field has a placeholder 'insert the message'. A blue 'Create Alert' button is at the bottom right.

Figure 47 – Alarm properties

The parameters of this type of alarm are:

- **Alert Name:** Allows you to define a name for the alarm to be created.
- **Alarm Type:** Allows you to define the alarm type. In this case, **Condition**.
- **Device:** Allows you to define the device to be used.
- **Variables:** Allows you to define the variables to be used to create this alarm.
- **Activation Condition:** Allows you to define an activation condition: **Less than, Greater than, Equal to** or **Different From**.
- **Activation Value:** Allows you to define the value to which the activation condition should apply.
- **Deactivate Condition:** Allows you to define a deactivation condition: **Less than, Greater than, Equal to** or **Different From**.
- **Deactivate Value:** Allows you to define the value to which the deactivation condition should apply.
- **Notification Type:** Allows you to define the type of notification to be sent: SMS or email.
- **Contact(s) to receive alerts:** Once you have defined the type of alarm notification, you can select the contact to receive the alarm notification.
- **Message of the alert:** Once you have defined the type of notification, you can define a message to be sent with the notice.

If the selected alarm type is **Offline**, you must fill in the parameters of the alarm to be created, as shown in the example below:

Figure 48 – Alarm properties

The parameters of this type of alarm are:

- **Alert Name:** Allows you to define a name for the alarm to be created.
- **Alarm Type:** Allows you to define the alarm type. In this case, **Offline**.
- **Device:** Allows you to define the device to be used.
- **Offline Time (hour):** Allows you to define after how long the device has been inactive an alarm notification will be sent.
- **Notification Interval (hours):** Allows you to define a notification interval. If the device period of inactivity is maintained, alert messages will be sent every hour configured.
- **Notification Type:** Allows you to define the type of notification to be sent: SMS or email.
- **Contact(s) to receive alerts:** Once you have defined the type of alarm notification, you can select the contact to receive the alarm notification.
- **Message of the alert:** Once you have defined the type of notification, you can define a message to be sent with the notice.

After filling in the necessary parameters, you must click the  button to complete the process. The created alarm will be shown in the "Alarm Setup List" section, as the example below shows:

Type	Active	Name	Device	Variable	Condition	Value number	Deactivation Condition	Deactivation value	Notification Type
		Alarm 02	LogBox Wi-Fi	N/A	N/A	N/A	N/A	N/A	Email
		Alarm 01	LogBox Wi-Fi	01 Analog 1 Value	Greater than	30	Lesser than	10	Email

Figure 49 – Alert list

Alarms of the **Offline** type display the  icon. Alarms of the **Condition** type display the  icon. Plus, you can enable or disable the alarm using the  button.

You can edit the settings of the selected alert by clicking on the  button. After that, click the **Save** button. To delete the selected alarm, click the  button and, when requested, confirm the deletion. You can also export the data from this list to a file with extension \*.xlsx or \*.csv by clicking on the  button and selecting the option **Export to**.

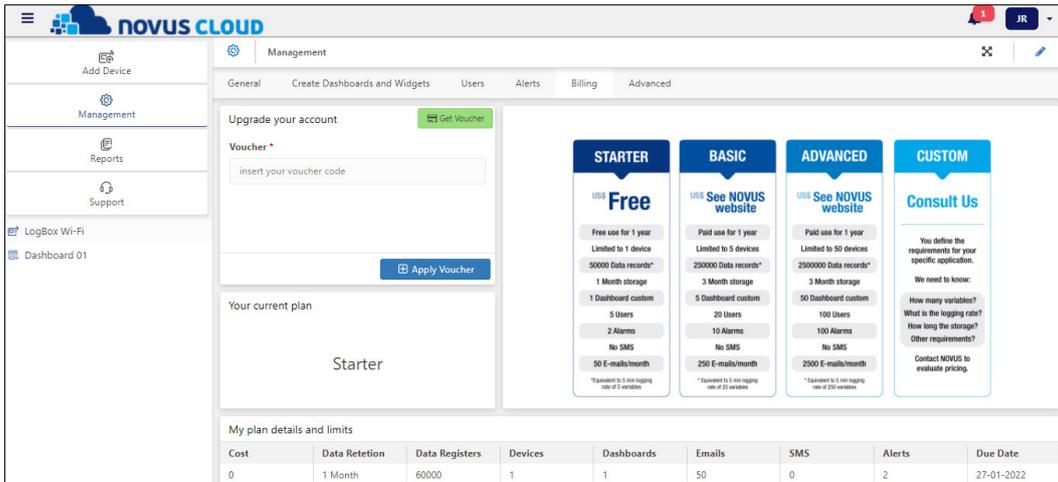
The "List of triggered alerts" section allows you to view a list of the triggered alarms:

Alert Name	Alert State	Alert Condition	Date and Time
Freezer 1	Activate	> 20	10/27/2021 08:28:48 am
Freezer 1	Deactivate	< 19	10/26/2021 04:40:11 pm
Freezer 1	Activate	> 20	10/26/2021 04:00:52 pm
Freezer 1	Deactivate	< 19	10/26/2021 04:00:14 pm

Figure 50 – List of triggered alerts

## 5.5 "BILLING" TAB

This tab allows you to view information on user plans and limits, as shown in the figure below:



The screenshot shows the NOVUS CLOUD interface with the Billing tab selected. The main content area is divided into several sections:

- Upgrade your account:** Includes a "Get Voucher" button and a form to "insert your voucher code", with an "Apply Voucher" button below.
- Your current plan:** Shows the current plan as "Starter".
- My plan details and limits:** A table summarizing plan specifications.
- Plan Comparison:** Four columns representing different plans:
  - STARTER (Free):** Free use for 1 year, limited to 1 device, 50000 Data records, 1 Month storage, 1 Dashboard custom, 5 Users, 2 Alarms, No SMS, 50 E-mails/month.
  - BASIC:** Paid use for 1 year, limited to 5 devices, 250000 Data records, 3 Month storage, 5 Dashboard custom, 20 Users, 10 Alarms, No SMS, 250 E-mails/month.
  - ADVANCED:** Paid use for 1 year, limited to 50 devices, 2500000 Data records, 3 Month storage, 50 Dashboard custom, 100 Users, 100 Alarms, No SMS, 2500 E-mails/month.
  - CUSTOM:** Consult Us. You define the requirements for your specific application. Includes questions like "How many variables?", "What is the logging rate?", "How long the storage?", and "Other requirements?".

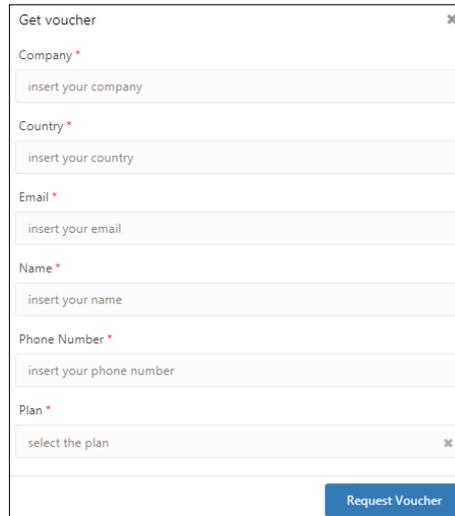
Cost	Data Retention	Data Registers	Devices	Dashboards	Emails	SMS	Alerts	Due Date
0	1 Month	60000	1	1	50	0	2	27-01-2022

Figure 51 – User plans and limits

It consists of the following sections:

- **"Upgrade your account":** This section allows you to request an upgrade to your account by clicking the **Get Voucher** button, as shown in this chapter, or apply a previously received voucher by clicking the **Apply Voucher** button.
- **"Your current plan":** This section provides information about your plan.
- **"My plan details and limits":** This section provides information about your current plan such as the cost of the contracted plan, data retention period, number of data downloaded, number of connected devices, dashboards created, emails, SMS and alarms generated.
- **"My usage":** This section provides information about the connected user such as number of registered data, number of devices and dashboards to which this user is linked and number of emails, SMS or alarms received by this user.

To purchase a new plan, you must click on the  button, located in the "Upgrade your account" section, as shown in **Figure 51**. After that, you must fill in the following fields:



The form titled "Get voucher" contains the following fields:

- Company \* (text input: insert your company)
- Country \* (text input: insert your country)
- Email \* (text input: insert your email)
- Name \* (text input: insert your name)
- Phone Number \* (text input: insert your phone number)
- Plan \* (dropdown menu: select the plan)

A "Request Voucher" button is located at the bottom right of the form.

**Figure 52** – Requesting a voucher

Once you fill in the fields **Company, Country, Email, Name** and **Phone Number**, you must select the desired plan in the **Plan** field: **Custom, Advanced, Basic** or **Starter**. The specifications of each plan are described in the "Billing" tab. After that, just click the **Request Voucher** button.

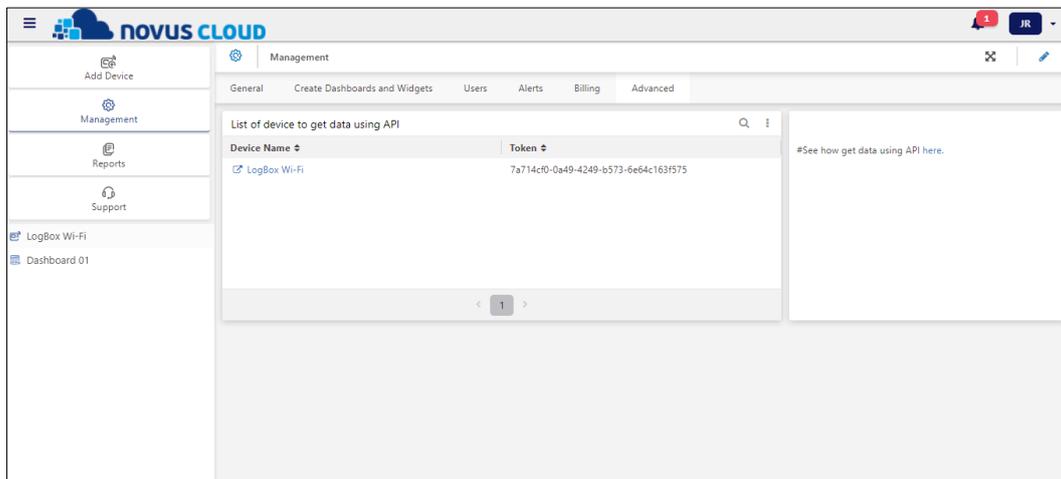
**NOVUS** will contact you as soon as your request is received and help you complete the process. After you receive the voucher, you must enter the number specified in the Voucher field in the "Upgrade your account" section and click the **Apply Voucher** button. Once this is done, the contracted plan will be active.

Hiring a plan with fewer benefits than the current one will cause you to lose previous benefits. If your plan is longer than the current one, your account limits will be increased.

All plans are valid for 12 months, including the free plan. To renew a plan or increase its validity, you must enter a voucher of the same mode as the current plan. If you have a 10-month plan, for example, applying a new voucher for the same plan will extend the validity by 22 months (10 months from the current plan + 12 months from the new plan). This does not occur during plan downgrades or upgrades. In such cases, the validity of the current plan will be discarded and only the 12 months of the new plan will be in effect.

## 5.6 "ADVANCED" TAB

This section allows you to configure access to devices connected via API, as shown in the figure below:



**Figure 53** – Access via API

The "List of devices to get data using API" section shows a list of the devices connected to the platform that allow a connection via API. It informs a Token, received during the first communication between the device and the **NOVUS Cloud**.

This section also has a filter to make it easier to search for a particular device if the list is too long.

You export the data from this list to a file with extension \*.xlsx or \*.csv by clicking the  button and selecting the **Export to** option.

For more information on how to make the API connection, just click on the link, as shown in the figure above.

## 6. CREATING REPORTS

Clicking on the **Reports** button, located on the left side of the screen, will allow you to create reports regarding the devices connected to the platform. In addition, this screen presents a list of all the reports already created through this tool, as shown in the figure below:

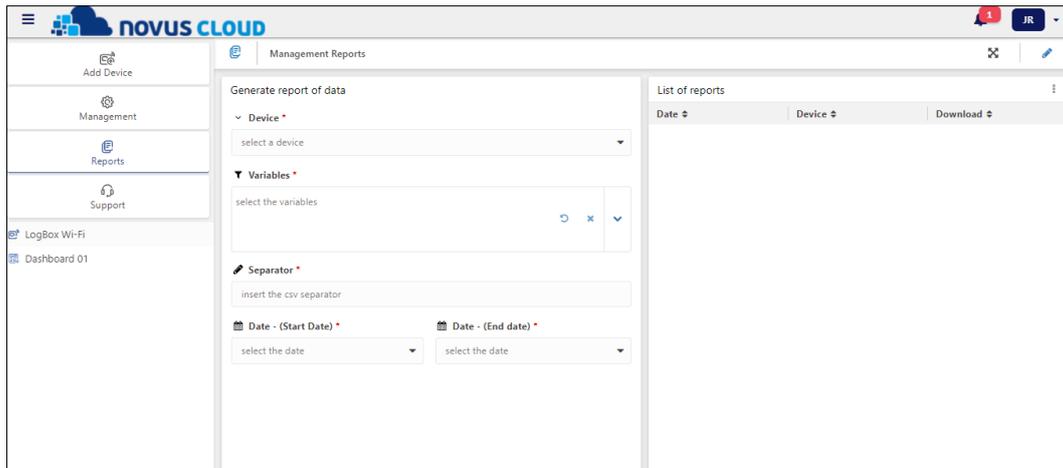


Figure 54 – "Reports" screen

Its operation is very similar to that of the "Reports" tab of the chapter [VIEWING DATA FROM A DEVICE](#).

The "Generate report of data" section allows you to generate a report regarding the device selected in the **Device** field. After that, you must fill in the following fields: **Variables**, which allows you to add one or all of the available variables; **Separator**, which allows you to define a specific character to separate the report information (such as comma or semicolon); **Start Date** and **End Date**, which allows you to select the date and time for the start and end of the collection, in order to filter the data to be presented, as shown in the example below:

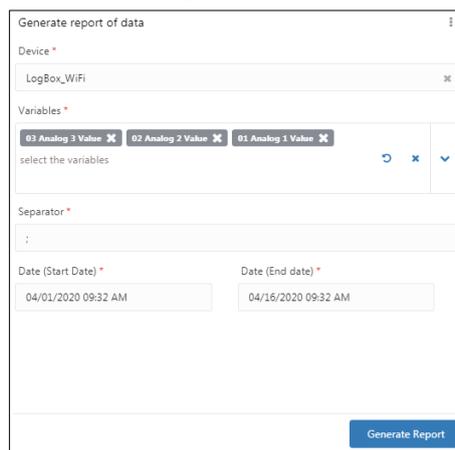


Figure 55 – Creating a report

Once the information has been filled in, you must click the Generate Report button to complete the process.

If the required information has not been filled in or there is an error while filling in, the platform will display the following message, requesting a review of all the fields before a new attempt is made:

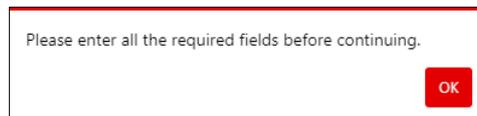


Figure 56 – An error occurred during the attempt

If the platform is successful in generating and sending the report, it will display the following message:



Figure 57 – Report successfully generated

Once the above message has been displayed, the generated report will be displayed in the "List of reports" section on the right side of the screen as shown in the example below:

Date	Device	Download
From 2021/12/13 14:46:00 to 2021/12/15 1...	LogBox Wi-Fi	<a href="#">Download report</a>
From 2021/12/13 14:46:00 to 2021/12/15 1...	LogBox Wi-Fi	<a href="#">Download report</a>
From 2021/12/13 14:46:00 to 2021/12/15 1...	LogBox Wi-Fi	<a href="#">Download report</a>

< 1 >

Figure 58 – List of reports

Clicking the **Download Report** button will allow you to download the selected report. The report will have \*.csv extension and must present the data of all variables selected in the **Variables** field of the figure above. The information will be separated according to the tab selected when creating the report.

You can export the data from this list to a file with extension \*.xlsc or \*.csv by clicking the  button and selecting the **Export to** option.

## 7. API FOR DATA EXTRACTION

### 7.1 NOVUS CLOUD API

Using **NOVUS Cloud** API, you can collect data from devices via HTTP request and include filters via parameters to speed up requests. This makes it easier to directly acquire information from processes and devices.

### 7.2 GET REQUEST

To query the data from **NOVUS** devices that have been published to **NOVUS Cloud** via API, you can send a GET request to the following URL:



https://api.tago.io

Figure 59 – Request

You must add "/data" to the URL path, informing the server that you are looking for the data stored in the device bucket. In the [REQUEST REPLIES](#) section, you can check the response format of the request. In the next section, you can check the filter forms and the mandatory parameters.

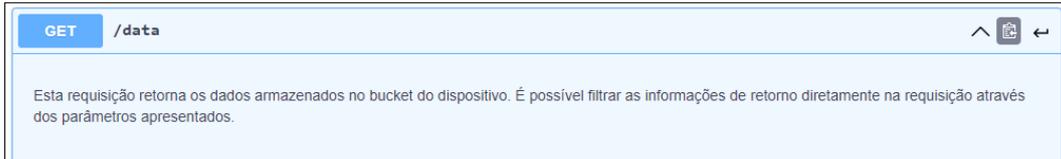


Figure 60 – URL path

### 7.3 THE PARAMETER SPECIFICATION

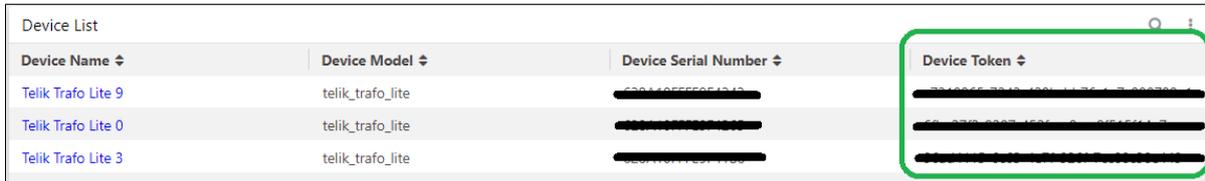
Parameters can be mandatory or non-mandatory. Mandatory parameters are required for the request to be successful and to recognize and validate the device being queried. In this case, the Device Token is the only mandatory parameter, which must be entered as a request header. The other parameters are optional and serve to make querying the required data more flexible and faster.

#### 7.3.1 MANDATORY

##### DEVICE TOKEN:

Mandatory item for the request. You must insert the Device Token (key/value) of the device as a header in the request. The header key is the Device Token itself. The value is the number linked to the device in **NOVUS Cloud**.

You can get the Device Token of each device directly from the **NOVUS Cloud** account where they were registered. Just go to the "Management" screen, in the "General" tab.



Device Name	Device Model	Device Serial Number	Device Token
Telik Trafo Lite 9	telik_trafo_lite	XXXXXXXXXXXX	XXXXXXXXXXXX
Telik Trafo Lite 0	telik_trafo_lite	XXXXXXXXXXXX	XXXXXXXXXXXX
Telik Trafo Lite 3	telik_trafo_lite	XXXXXXXXXXXX	XXXXXXXXXXXX

Figure 61 – Device Token

#### 7.3.2 NON-MANDATORY

##### QTY:

Amount of data desired as a response from the request.



Figure 62 – QTY parameter

**VALUE:**

Returns only the data of the variables with the requested value.

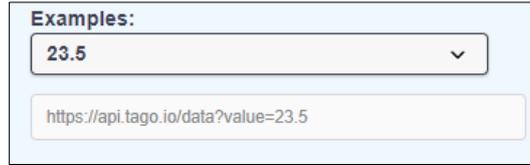


Figure 63 – Value parameter

**VARIABLE:**

Selects the variable for which you want a response. This parameter is useful for filtering channels and other information when necessary.

In the [VARIABLES SPECIFICATION BY DEVICE TYPE](#) section, you can check the tables of variables for each of the **NOVUS** devices that allow you to publish data in **NOVUS Cloud** (except for **AirGate 4G**).

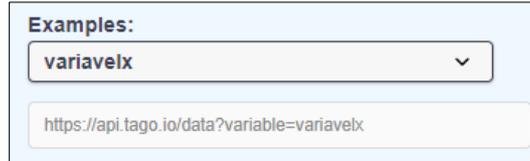


Figure 64 – Variable parameter

**START\_DATE:**

Limits the start date/time of the values received in the response.

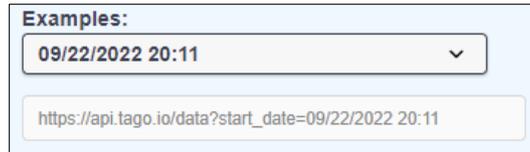


Figure 65 – Start\_date parameter

**END\_DATE:**

Limits the final date/time of the values received in the response.



Figure 66 – End\_date parameter

**ORDINATION:**

Choose the order of the set returned from the request (ascending/descending).



Figure 67 – Ordination parameter

**SKIP:**

Skip the number of specified items.

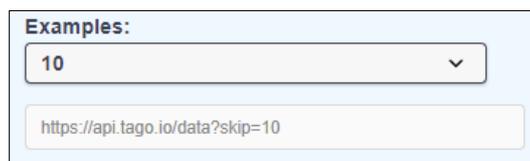


Figure 68 – Skip parameter

### 7.3.3 PARAMETER COMBINATIONS IN THE REQUEST

It is possible to combine the parameters presented to make the request data faster and more flexible. To do so, it is necessary to add all the items as query, initializing with "?" after the path date and, between each of the complementary parameters, add the "&" character.

Example: <https://api.tago.io/data?qty=20&value=23.5&variable=variavelx>

## 7.4 REQUEST REPLIES

### 7.4.1 SUCCESSFUL REQUEST (200 – OK)

If the request is sent properly, it is expected to return a message with the code 200 (OK). With it, the data packet will be requested and specified via parameters (optional). You must include the Device Token in the request header since it is mandatory.

```
{
  "status": true,
  "result": [
    {
      "id": "732ceb15f603130018eb3c98",
      "time": "2022-09-22T23:12:55.000Z",
      "value": 23.2,
      "variable": "wifia3va",
      "metadata": [
        {
          "timestamp": 1623448375,
          "CREATED_AT": "09/22/2022 20:13"
        }
      ]
    },
    "group": "1863899026.2137",
    "device": "632c920bf609330018e485d7"
  ]
}
```

Figure 69 – Successful request

### 7.4.2 REQUEST FAILURE (400 – BAD REQUEST)

If the request fails, the requested data packet will not be returned. The code 400 (Bad Request) will be displayed. Whenever this occurs, you should review the request. If there is nothing wrong with the request, contact **NOVUS** Technical Support.

## 7.5 VARIABLES SPECIFICATION BY DEVICE TYPE

This section shows the variables available in **NOVUS Cloud**, according to each device. You can use them as query parameters for the request. However, it is necessary to pay attention to the current configuration of the device used, observing, for example, the number of enabled channels and which of them are registering information.

### 7.5.1 LOGBOX WI-FI

LOGBOX WI-FI	
ALIAS	DESCRIPTION
wifidigva	Digital channel value
wifia1va	Analog channel 1 value
wifia2va	Analog channel 2 value
wifia3va	Analog channel 3 value
wifievt	Events

Table 1

### 7.5.2 LOGBOX 3G

LOGBOX 3G	
ALIAS	DESCRIPTION
3grecdd	Time and date
3grecesv	External power supply
3grecbtv	Battery value
3grecbtp	Battery percentage
3greccjv	Internal temperature
3grecgps	GPS location
3grecdi1v	Digital channel value

LOGBOX 3G	
3grecuc2v	Analog channel 2 value
3grecuc1v	Analog channel 1 value
3gevt	Events

Table 2

### 7.5.3 DIGIRAIL OEE

DIGIRAIL OEE	
ALIAS	DESCRIPTION
chd1_value	Analog channel 1 value
chd2_value	Analog channel 2 value
chd3_value	Analog channel 3 value
chd4_value	Analog channel 4 value
chd5_value	Analog channel 5 value
chd6_value	Analog channel 6 value
chd1_edge	Digital 1 Edge
chd2_edge	Digital 2 Edge
chd3_edge	Digital 3 Edge
chd4_edge	Digital 4 Edge
chd5_edge	Digital 5 Edge
chd6_edge	Digital 6 Edge
chd1_timestamp	Digital 1 timestamp
chd2_timestamp	Digital 2 timestamp
chd3_timestamp	Digital 3 timestamp
chd4_timestamp	Digital 4 timestamp
chd5_timestamp	Digital 5 timestamp
chd6_timestamp	Digital 6 timestamp
reset_chd1	Digital reset 1
reset_chd2	Digital reset 2
reset_chd3	Digital reset 3
reset_chd4	Digital reset 4
reset_chd5	Digital reset 5
reset_chd6	Digital reset 6
out1	Output 1 status
out2	Output 2 status
buzzer	Buzzer status
reset_all	Reset all digital
ch1_user_range	Analog channel 1 value
ch2_user_range	Analog channel 2 value

Table 3

7.5.4 AIRGATE 3G AND FIELDLOGGER

AIRGATE 3G	
ALIAS	DESCRIPTION
cost	Connection status
dic1	Digital input 1 counter
dic2	Digital input 2 counter
dis1	Digital input 1 status
dis2	Digital input 2 status
sign	DB signal strength
rem1	Remote channel 1
rem2	Remote channel 2
rem3	Remote channel 3
rem4	Remote channel 4
rem5	Remote channel 5
rem6	Remote channel 6
rem7	Remote channel 7
rem8	Remote channel 8
rem9	Remote channel 9
rem10	Remote channel 10
rem11	Remote channel 11
rem12	Remote channel 12
rem13	Remote channel 13
rem14	Remote channel 14
rem15	Remote channel 15
rem16	Remote channel 16
rem17	Remote channel 17
rem18	Remote channel 18
rem19	Remote channel 19
rem20	Remote channel 20
rem21	Remote channel 21
rem22	Remote channel 22
rem23	Remote channel 23
rem24	Remote channel 24
rem25	Remote channel 25
rem26	Remote channel 26
rem27	Remote channel 27
rem28	Remote channel 28
rem29	Remote channel 29
rem30	Remote channel 30
rem31	Remote channel 31
rem33	Remote channel 32
rem34	Remote channel 33
rem35	Remote channel 34
rem36	Remote channel 35
rem37	Remote channel 36
rem38	Remote channel 37
rem39	Remote channel 38
rem40	Remote channel 39
rem41	Remote channel 40
rem42	Remote channel 41

FIELDLOGGER	
ALIAS	DESCRIPTION
spal01	Alarm 1 Setpoint
spal02	Alarm 2 Setpoint
spal03	Alarm 3 Setpoint
spal04	Alarm 4 Setpoint
spal05	Alarm 5 Setpoint
spal06	Alarm 6 Setpoint
spal07	Alarm 7 Setpoint
spal08	Alarm 8 Setpoint
spal09	Alarm 9 Setpoint
spal10	Alarm 10 Setpoint
spal11	Alarm 11 Setpoint
spal12	Alarm 12 Setpoint
spal13	Alarm 13 Setpoint
spal14	Alarm 14 Setpoint
spal15	Alarm 15 Setpoint
spal16	Alarm 16 Setpoint
spal17	Alarm 17 Setpoint
spal18	Alarm 18 Setpoint
spal19	Alarm 19 Setpoint
spal20	Alarm 20 Setpoint
spal21	Alarm 21 Setpoint
spal22	Alarm 22 Setpoint
spal23	Alarm 23 Setpoint
spal24	Alarm 24 Setpoint
spal25	Alarm 25 Setpoint
spal26	Alarm 26 Setpoint
spal27	Alarm 26 Setpoint
spal28	Alarm 27 Setpoint
spal29	Alarm 28 Setpoint
spal30	Alarm 29 Setpoint
spal31	Alarm 30 Setpoint
spal32	Alarm 31 Setpoint
an1	Analog channel 1
an2	Analog channel 2
an3	Analog channel 3
an4	Analog channel 4
an5	Analog channel 5
an6	Analog channel 6
an7	Analog channel 7
an8	Analog channel 8
dig1	Digital channel 1
dig2	Digital channel 2
dig3	Digital channel 3
dig4	Digital channel 4
dig5	Digital channel 5
dig6	Digital channel 6
dig7	Digital channel 7

rem43	Remote channel 42
rem44	Remote channel 43
rem45	Remote channel 44
rem46	Remote channel 45
rem47	Remote channel 46
rem48	Remote channel 47
rem49	Remote channel 48
rem50	Remote channel 49
rem51	Remote channel 50
rem52	Remote channel 51
rem53	Remote channel 52
rem54	Remote channel 53
rem55	Remote channel 54
rem56	Remote channel 55
rem57	Remote channel 56
rem58	Remote channel 57
rem59	Remote channel 58
rem60	Remote channel 59
rem61	Remote channel 60
rem62	Remote channel 61
rem63	Remote channel 62
rem64	Remote channel 63
rem65	Remote channel 64
rem66	Remote channel 65
rem67	Remote channel 66
rem68	Remote channel 67
rem69	Remote channel 68
rem70	Remote channel 69
rem71	Remote channel 70
rem72	Remote channel 71
rem73	Remote channel 72
rem74	Remote channel 73
rem75	Remote channel 74
rem76	Remote channel 75
rem77	Remote channel 76
rem78	Remote channel 77
rem79	Remote channel 78
rem80	Remote channel 79
rem81	Remote channel 80
rem82	Remote channel 81
rem83	Remote channel 82
rem84	Remote channel 83
rem85	Remote channel 84
rem86	Remote channel 85
rem87	Remote channel 86
rem88	Remote channel 87
rem89	Remote channel 88
rem90	Remote channel 89
rem91	Remote channel 90
rem92	Remote channel 91

dig8	Digital channel 8
dout1	Digital output 1
dout2	Digital output 2
dout3	Digital output 3
dout4	Digital output 4
dout5	Digital output 5
dout6	Digital output 6
dout7	Digital output al 7
dout8	Digital output 8
rly1	Relay 1
rly2	Relay 2
rem01	Remote channel 1
rem02	Remote channel 2
rem03	Remote channel 3
rem04	Remote channel 4
rem05	Remote channel 5
rem06	Remote channel 6
rem07	Remote channel 7
rem08	Remote channel 8
rem09	Remote channel 9
rem10	Remote channel 10
rem11	Remote channel 11
rem12	Remote channel 12
rem13	Remote channel 13
rem14	Remote channel 14
rem15	Remote channel 15
rem16	Remote channel 16
rem17	Remote channel 17
rem18	Remote channel 18
rem19	Remote channel 19
rem20	Remote channel 20
rem21	Remote channel 21
rem22	Remote channel 22
rem23	Remote channel 23
rem24	Remote channel 24
rem25	Remote channel 25
rem26	Remote channel 26
rem27	Remote channel 27
rem28	Remote channel 28
rem29	Remote channel 29
rem30	Remote channel 30
rem31	Remote channel 31
rem32	Remote channel 32
rem33	Remote channel 33
rem34	Remote channel 34
rem35	Remote channel 35
rem36	Remote channel 36
rem37	Remote channel 37
rem38	Remote channel 38
rem39	Remote channel 39

rem93	Remote channel 92
rem94	Remote channel 93
rem95	Remote channel 94
rem96	Remote channel 95
rem97	Remote channel 96
rem98	Remote channel 97
rem99	Remote channel 98
rem100	Remote channel 99
rem101	Remote channel 100
rem102	Remote channel 101
rem103	Remote channel 102
rem104	Remote channel 103
rem105	Remote channel 104
rem106	Remote channel 105
rem107	Remote channel 106
rem108	Remote channel 107
rem109	Remote channel 108
rem110	Remote channel 109
rem111	Remote channel 110
rem112	Remote channel 111
rem113	Remote channel 112
rem114	Remote channel 113
rem115	Remote channel 114
rem116	Remote channel 115
rem117	Remote channel 116
rem118	Remote channel 117
rem119	Remote channel 118
rem120	Remote channel 119
rem121	Remote channel 120
rem122	Remote channel 121
rem123	Remote channel 122
rem124	Remote channel 123
rem125	Remote channel 124
rem126	Remote channel 125
rem127	Remote channel 126
rem128	Remote channel 127

**Table 4**

rem40	Remote channel 40
rem41	Remote channel 41
rem42	Remote channel 42
rem43	Remote channel 43
rem44	Remote channel 44
rem45	Remote channel 45
rem46	Remote channel 46
rem47	Remote channel 47
rem48	Remote channel 48
rem49	Remote channel 49
rem50	Remote channel 50
rem51	Remote channel 51
rem52	Remote channel 52
rem53	Remote channel 53
rem54	Remote channel 54
rem55	Remote channel 55
rem56	Remote channel 56
rem57	Remote channel 57
rem58	Remote channel 58
rem59	Remote channel 59
rem60	Remote channel 60
rem61	Remote channel 61
rem62	Remote channel 62
rem63	Remote channel 63
rem64	Remote channel 64
vrt001	Virtual channel 1
vrt002	Virtual channel 2
vrt003	Virtual channel 3
vrt004	Virtual channel 4
vrt005	Virtual channel 5
vrt006	Virtual channel 6
vrt007	Virtual channel 7
vrt008	Virtual channel 8
vrt009	Virtual channel 9
vrt010	Virtual channel 10
vrt011	Virtual channel 11
vrt012	Canal virtual 12
vrt013	Virtual channel 13
vrt014	Virtual channel 14
vrt015	Virtual channel 15
vrt016	Virtual channel 16
vrt017	Virtual channel 17
vrt018	Virtual channel 18
vrt019	Virtual channel 19
vrt020	Virtual channel 20
vrt021	Virtual channel 21
vrt022	Virtual channel 22
vrt023	Virtual channel 23
vrt024	Virtual channel 24
vrt025	Virtual channel 25

vrt026	Virtual channel 26
vrt027	Virtual channel 27
vrt028	Virtual channel 28
vrt029	Virtual channel 29
vrt030	Virtual channel 30
vrt031	Virtual channel 31
vrt032	Virtual channel 32
vrt033	Virtual channel 33
vrt034	Virtual channel 34
vrt035	Virtual channel 35
vrt036	Virtual channel 36
vrt037	Virtual channel 37
vrt038	Virtual channel 38
vrt039	Virtual channel 39
vrt040	Virtual channel 40
vrt041	Virtual channel 41
vrt042	Virtual channel 42
vrt043	Virtual channel 43
vrt044	Virtual channel 44
vrt045	Virtual channel 45
vrt046	Virtual channel 46
vrt047	Virtual channel 47
vrt048	Virtual channel 48
vrt049	Virtual channel 49
vrt050	Virtual channel 50
vrt051	Virtual channel 51
vrt052	Virtual channel 52
vrt053	Virtual channel 53
vrt054	Virtual channel 54
vrt055	Virtual channel 55
vrt056	Virtual channel 56
vrt057	Virtual channel 57
vrt058	Virtual channel 58
vrt059	Virtual channel 59
vrt060	Virtual channel 60
vrt061	Virtual channel 61
vrt062	Virtual channel 62
vrt063	Virtual channel 63
vrt064	Virtual channel 64
vrt065	Virtual channel 65
vrt066	Virtual channel 66
vrt067	Virtual channel 67
vrt068	Virtual channel 68
vrt069	Virtual channel 69
vrt070	Virtual channel 70
vrt071	Virtual channel 71
vrt072	Virtual channel 72
vrt073	Virtual channel 73
vrt074	Virtual channel 74
vrt075	Virtual channel 75

vrt076	Virtual channel 76
vrt077	Virtual channel 77
vrt078	Virtual channel 78
vrt079	Virtual channel 79
vrt080	Virtual channel 80
vrt081	Virtual channel 81
vrt082	Virtual channel 82
vrt083	Virtual channel 83
vrt084	Virtual channel 84
vrt085	Virtual channel 85
vrt086	Virtual channel 86
vrt087	Virtual channel 87
vrt088	Virtual channel 88
vrt089	Virtual channel 89
vrt090	Virtual channel 90
vrt091	Virtual channel 91
vrt092	Virtual channel 92
vrt093	Virtual channel 93
vrt094	Virtual channel 94
vrt095	Virtual channel 95
vrt096	Virtual channel 96
vrt097	Virtual channel 97
vrt098	Virtual channel 98
vrt099	Virtual channel 99
vrt100	Virtual channel 100
vrt101	Virtual channel 101
vrt102	Virtual channel 102
vrt103	Virtual channel 103
vrt104	Virtual channel 104
vrt105	Virtual channel 105
vrt106	Virtual channel 106
vrt107	Virtual channel 107
vrt108	Virtual channel 108
vrt109	Virtual channel 109
vrt110	Virtual channel 110
vrt111	Virtual channel 111
vrt112	Virtual channel 112
vrt113	Virtual channel 113
vrt114	Virtual channel 114
vrt115	Virtual channel 115
vrt116	Virtual channel 116
vrt117	Virtual channel 117
vrt118	Virtual channel 118
vrt119	Virtual channel 119
vrt120	Virtual channel 120
vrt121	Virtual channel 121
vrt122	Virtual channel 122
vrt123	Virtual channel 123
vrt124	Virtual channel 124

Table 5

### 7.5.5 TELIK TRAF0 LITE

TELIK TRAF0 LITE	
ALIAS	DESCRIPTION
trafo_local_dif	Difference between transformer and local temperature.
temp_trafo_avg	Average transformer temperature.
temp_trafo_max	Maximum transformer temperature.
temp_trafo_min	Minimum transformer temperature.
trafo_d_alarm_status	Hysteresis alarm status for the transformer heating rate.
trafo_temp_alarm_status	Transformer temperature alarm status.
in_trafo_d_der_val	Derived temperature alarm in "Derived".
in_trafo_d_val	Derived temperature alarm in "Temperature".
trafo_val_max	Maximum temperature for the temperature alarm output.
in_trafo_val	Temperature alarm input.
temp_trafo	Transformer temperature.
temp_Amb_min	Minimum ambient temperature.
temp_Amb_max	Maximum ambient temperature.
temp_Amb_avg	Average ambient temperature.
vbat_min	Minimum battery voltage.
vbat_max	Maximum battery voltage.
vbat_avg	Average battery voltage.
vbat_level	Battery charge.
vbat	Battery voltage.
gw_location	Location.
weather_icon	Climate.
local_temperature	Local temperature.
temp_Amb	Internal temperature.
in_bat_val	Battery alarm voltage.
batt_alarm_status	Battery alarm status.

Table 6

### 7.5.6 AIRGATE 4G – CONFIGURABLE VARIABLES

The **AirGate 4G** device has no predefined variables. You can define the variable names that the device will send, and **NOVUS Cloud** will store the data based on the Aliases defined during device configuration.

## 8. EXTRA FEATURES

**NOVUS Cloud** also has the following features:

- **Open API:** **NOVUS Cloud** offers an API for obtaining data from an account, which simplifies integration with external systems.
- **Redirecting data to External MQTT Brokers:** **NOVUS Cloud** offers a service option for redirecting data to external MQTT brokers. With this feature, you can send data from devices to another server. This simplifies access to Supervisory, CRM Systems, among others. To purchase this functionality, contact **NOVUS** and ask for a quotation.

## 9. SUPPORT

Clicking the **Support** button, located on the tab on the left side of the screen, will allow you to be redirected to the **NOVUS** Technical Support page. On this page you will be able to fill out a form for further contact, as shown in the figure below:

The screenshot shows the NOVUS Cloud website's 'Contact Form' page. The page has a light gray background and a white sidebar on the left. The sidebar contains navigation links: 'Add Device', 'Management', 'Reports', 'Support', 'LogIn Wi-Fi', and 'Dashboard 01'. The main content area is titled 'Contact Form' and includes a breadcrumb trail: 'Home > Contact us > Contact Form'. Below the title, there is a brief message: 'NOVUS has been always concerned about its customers and partners satisfaction. Please fill out the fields below to express your opinion, suggestion or complaint about our products and services. Please send us an e-mail with your comments and demands.' The form fields are: 'To:' (dropdown menu), 'Name:' (text input), 'Company:' (text input), 'Already a client:' (radio buttons for 'yes' and 'no'), 'Profile:' (dropdown menu), 'Segment:' (dropdown menu), 'Position:' (dropdown menu), 'Email:' (text input), 'Country:' (dropdown menu, currently set to 'Brazil'), and 'Phone:' (text input). Below these fields is a large text area for 'Message:'. At the bottom of the form, there is a checkbox for 'I agree to receive communications. By providing my data, I agree to the Privacy Policy.' and a 'Send' button. The footer of the page contains contact information for 'NOVUS HEADQUARTER' and 'U.S.A OFFICE', a search bar for products, and a QR code with a 'Click Here' button.

Figure 70 – Contacting Technical Support

## 10. TOP MENU OF THE PLATFORM

The top menu of the platform has 2 buttons for the notifications and settings of the connected user account and 1 button to hide the side tab of configuration, as shown in the figure below:

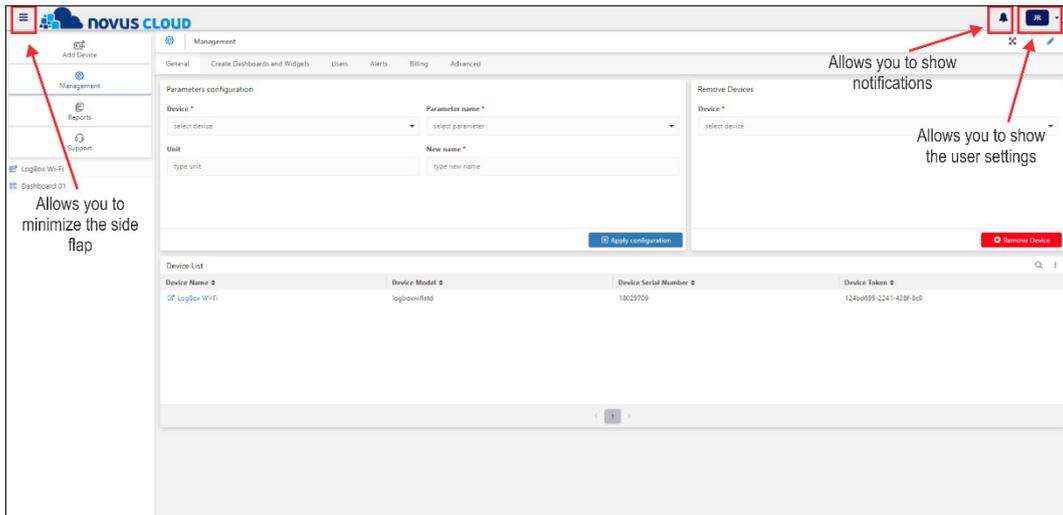


Figure 71 – Top menu of the platform

### 10.1 BUTTON TO MINIMIZE THE SIDE TAB

The  button allows you to minimize the side tab and expand the viewing area of the page, as shown in the example below:

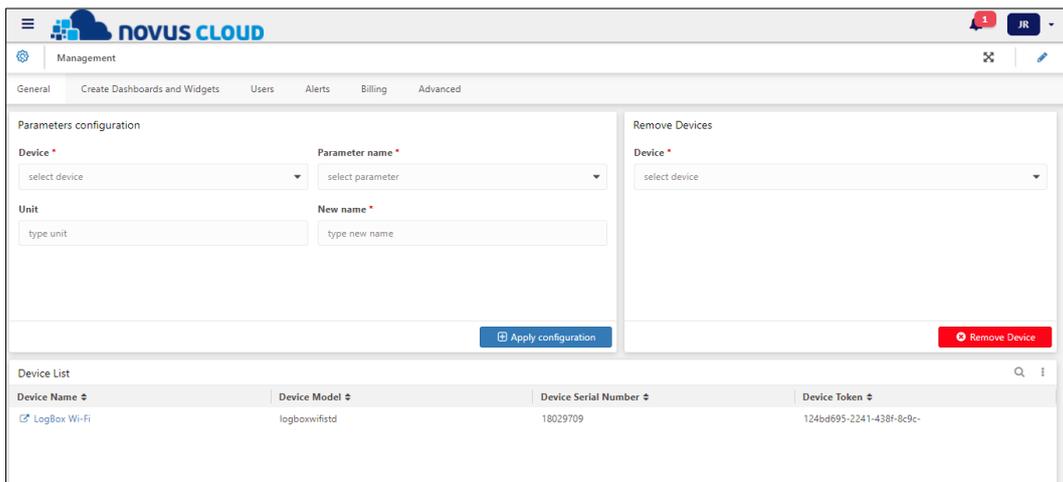


Figure 72 – Expanded screen

## 10.2 BUTTON TO OPEN THE NOTIFICATION TAB

The  button allows you to display the notification tab of the **NOVUS Cloud** platform, as shown in the example below:

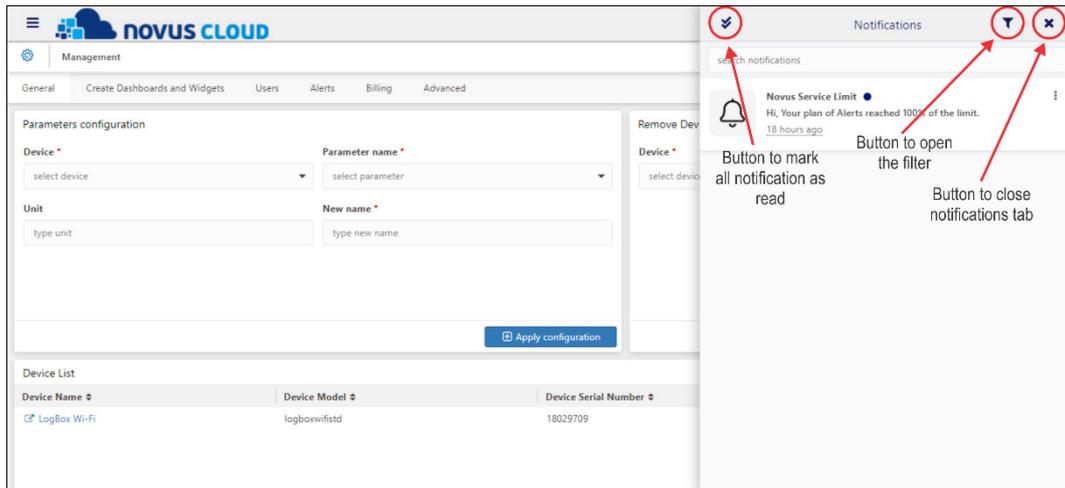


Figure 73 – Notifications

In the notifications tab, clicking the  button allows you to open the notifications filter. In this filter you can search for specific notifications via the text box:

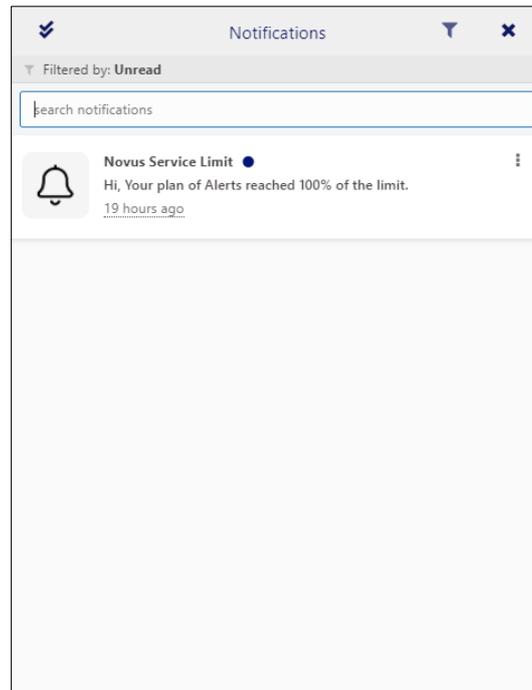


Figure 74 – Notification filter

### 10.3 BUTTON TO OPEN THE USER SETTINGS

The **JR** button, which will always be displayed with the user's initials, allows you to open the account settings by clicking on the **My Account** option or exit the platform by clicking on the **Sign Out** option.

Clicking on the **My Account** option will redirect you to the "General Information" tab. This screen will display the user's account settings. You can also register or edit information such as username, phone, and company, edit the time zone or change your password, as shown in the figure below:

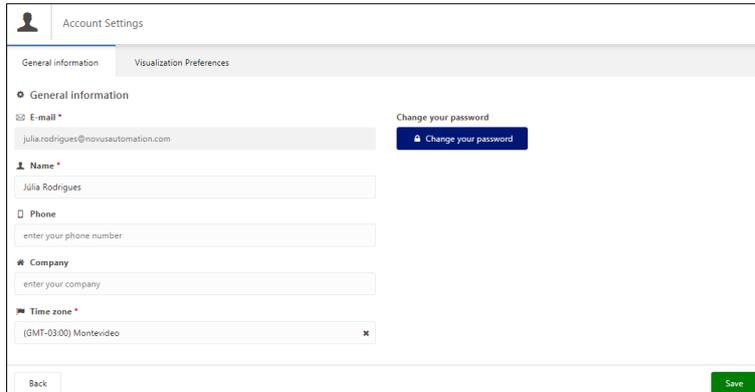


Figure 75 – General information

The "Visualization Preferences" tab will allow you to set visualization preferences, such as platform default language and dashboard view mode. This includes setting the date format, last update view mode, and data separator character, as shown in the figure below:

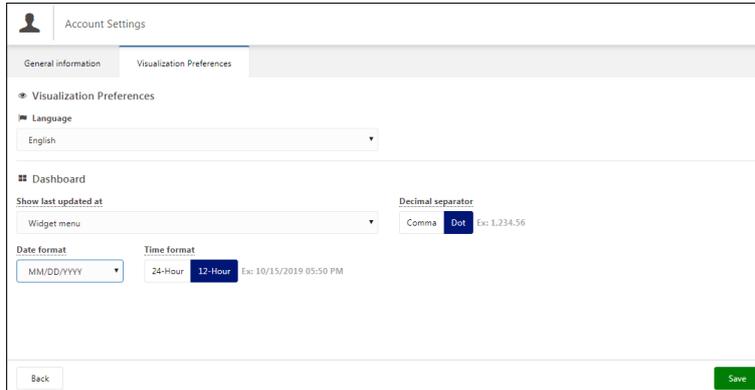


Figure 76 – Visualization preferences