NOVUS Cloud

INSTRUCTION MANUAL V1.0x D

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. 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. Cloud applications are customizable, so you can create multiple dashboards with widgets to display data, configure alarms and send notifications by email or SMS[1].

[1] Check countries where this feature is available.

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:

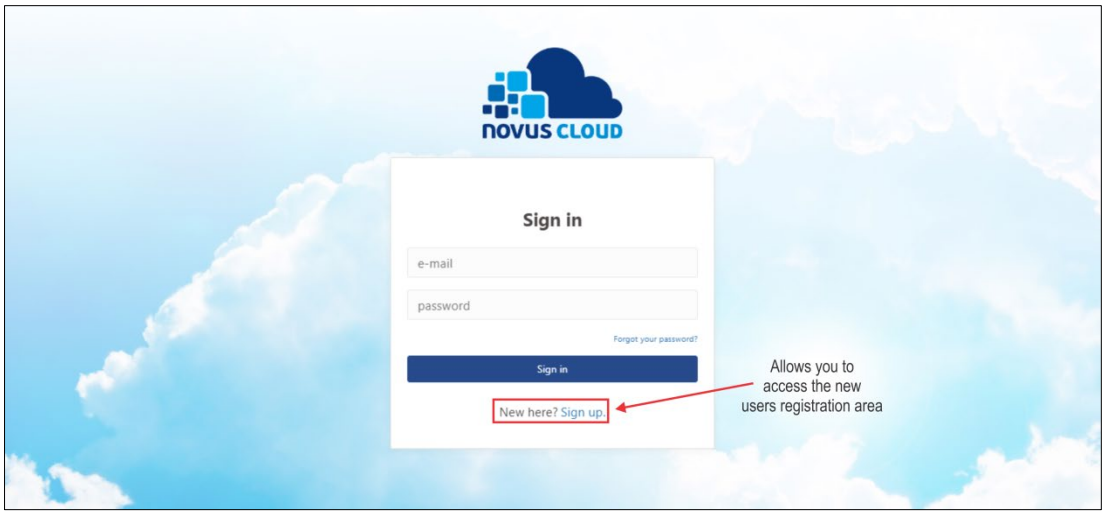


Figure 1

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 the figure above. 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:

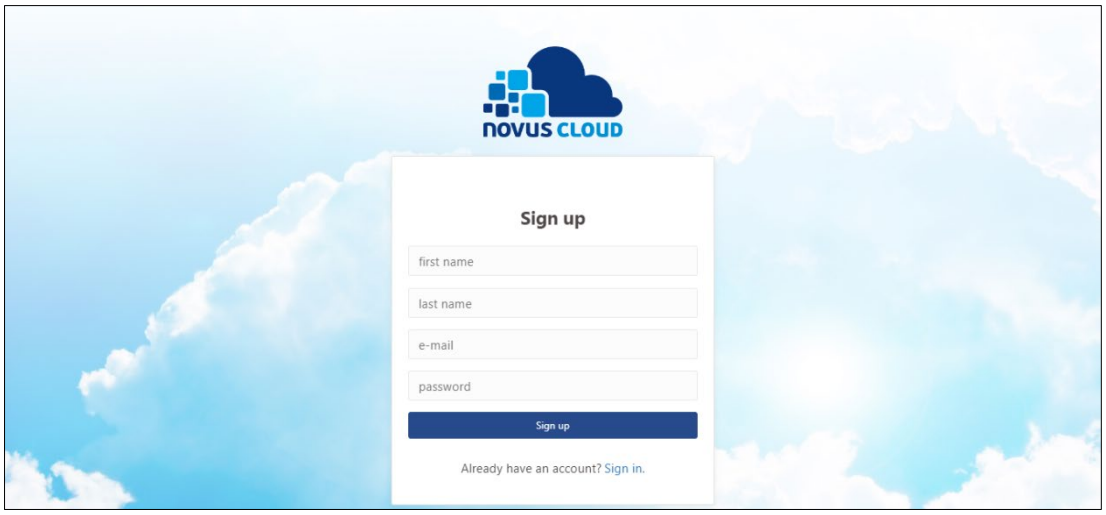


Figure 2

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:

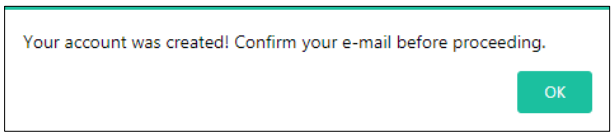


Figure 3

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:

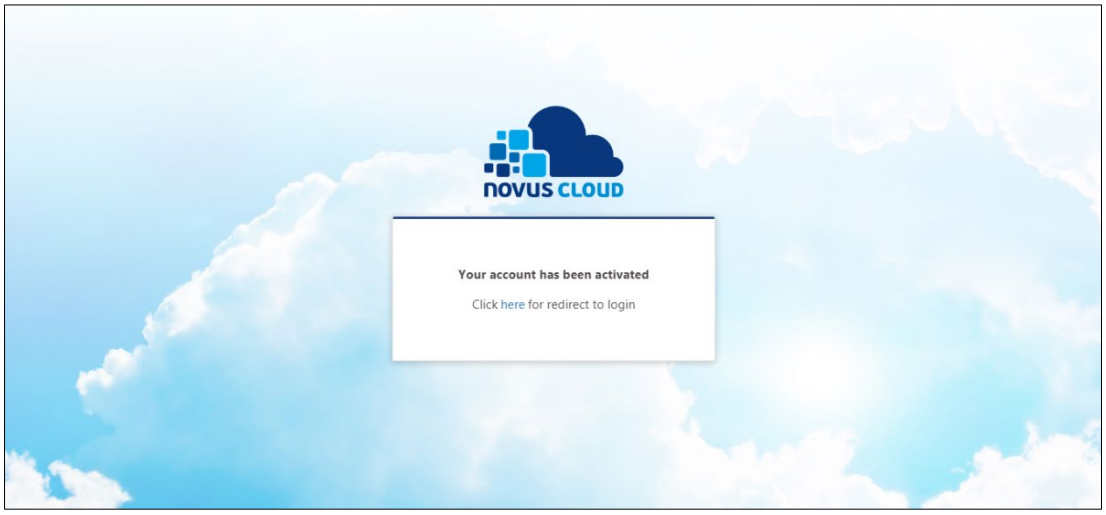


Figure 4

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

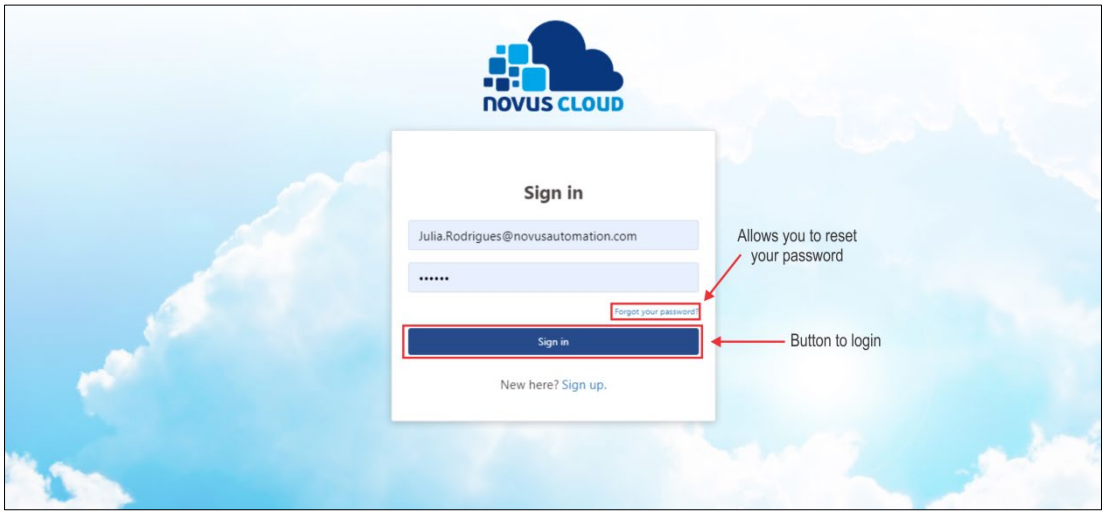


Figure 5

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:

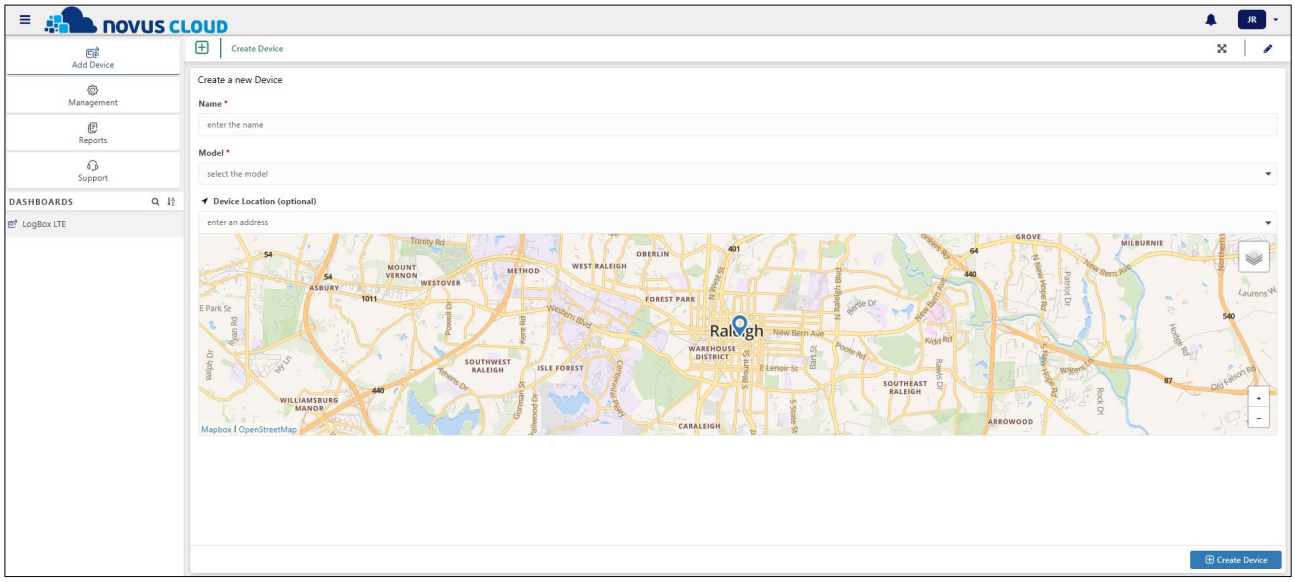


Figure 6

To do this, fill in the **Name** field, which allows you to define a specific name for the device to be added, select the model in the **Model** field and then enter the **Serial Number**, which is usually located on the device's label.

It is also possible to enter the location of the device by filling in the **Device Location** field.

To complete the process, simply click on the **Create Device** button.

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:

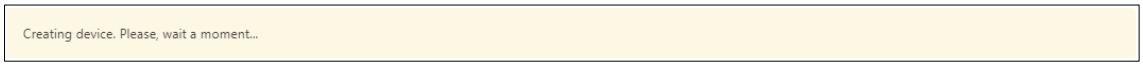


Figure 7

Figure 8

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:

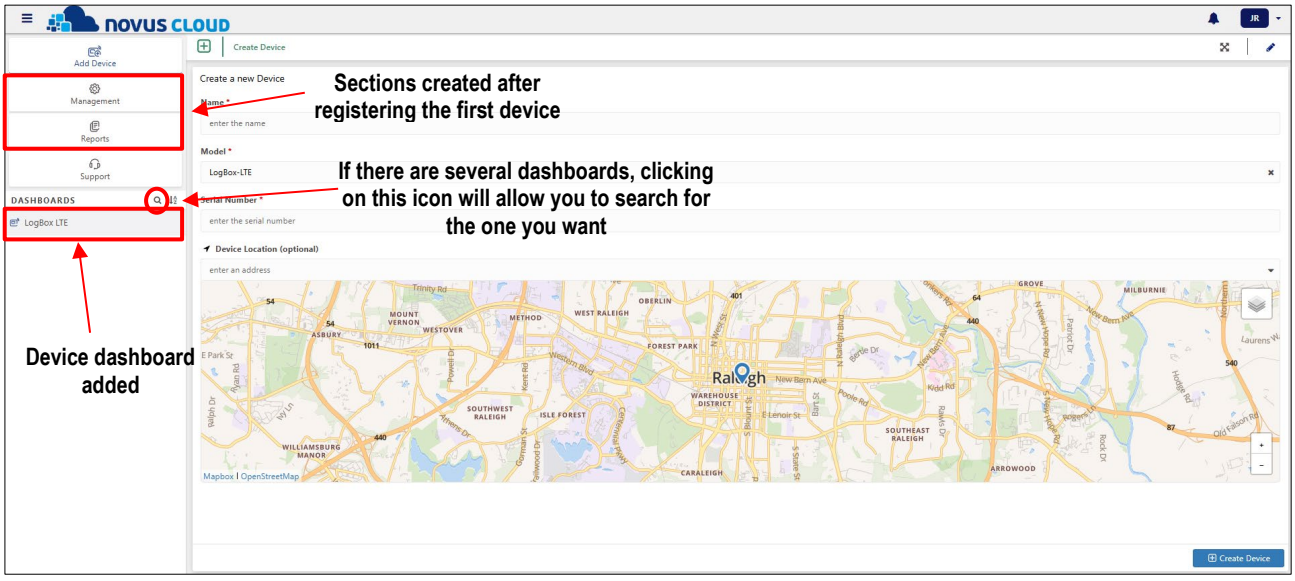


Figure 9

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 will show the following message:

Figure 10

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**:

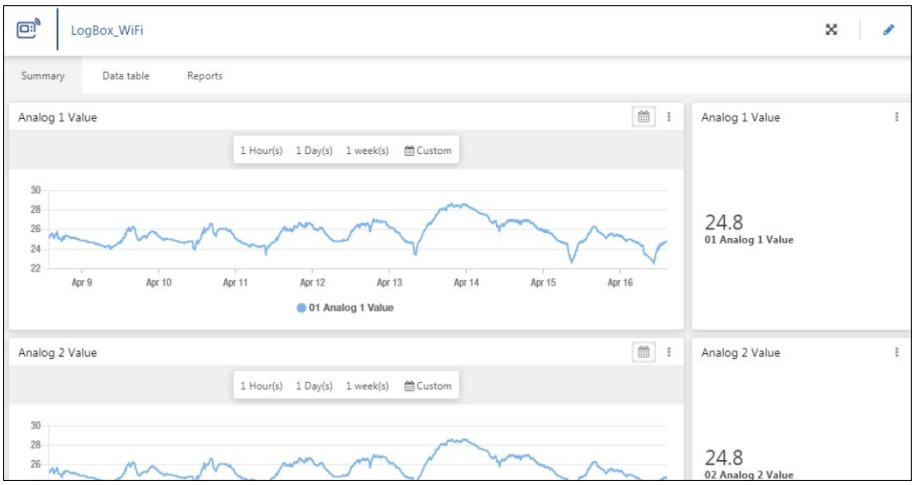


Figure 11

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

This tab brings charts and valuable 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:

1 Hour filter

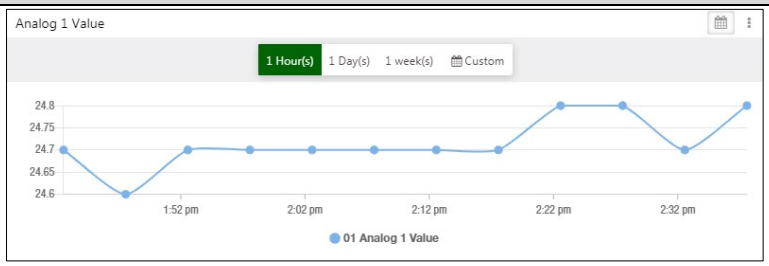


Figure 12

1 Day filter

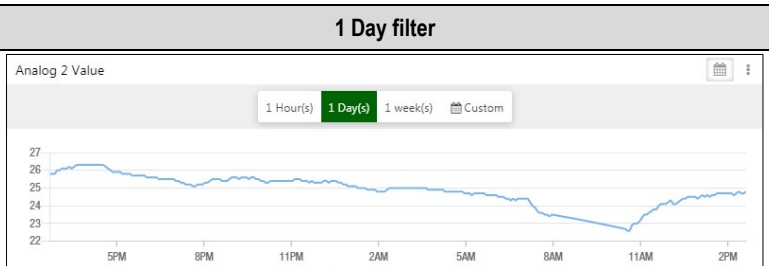


Figure 13

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

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 valuable information, as shown in the examples below:

Using your mouse to create a zoom area

Figure 15

Viewing the zoom area created

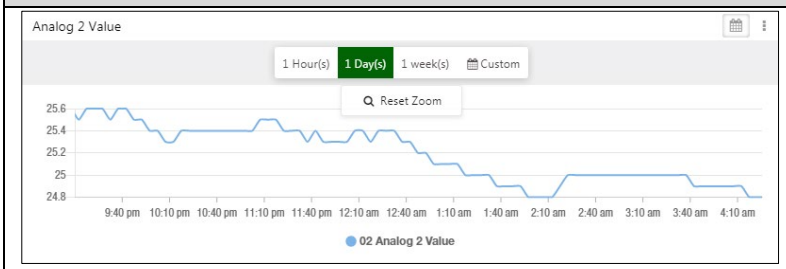


Figure 16

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:

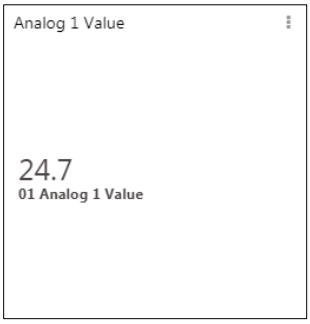


Figure 17

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

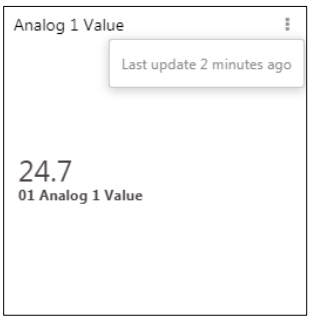


Figure 18

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 19

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:

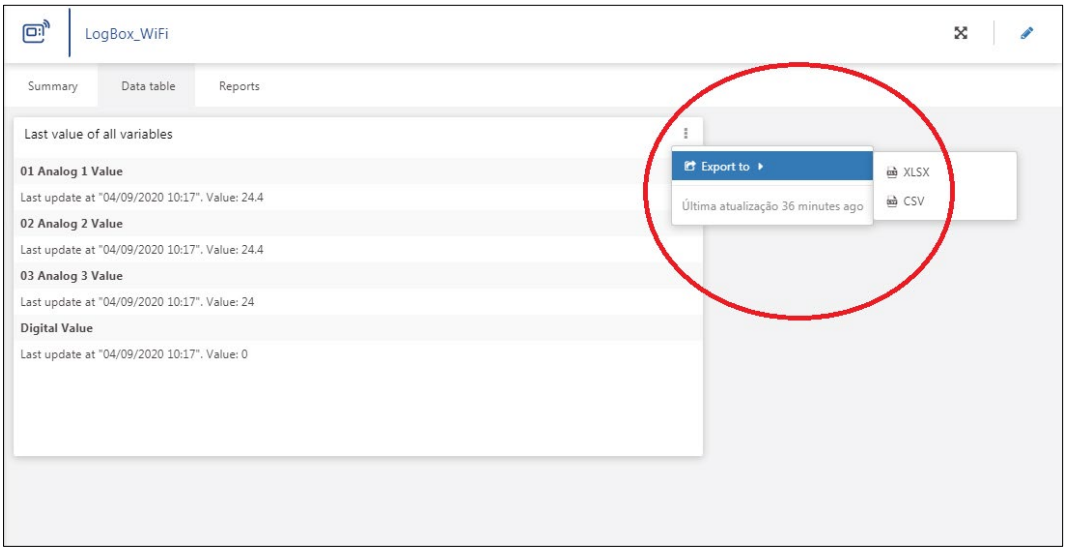


Figure 20

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

Figure 21

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 (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**.

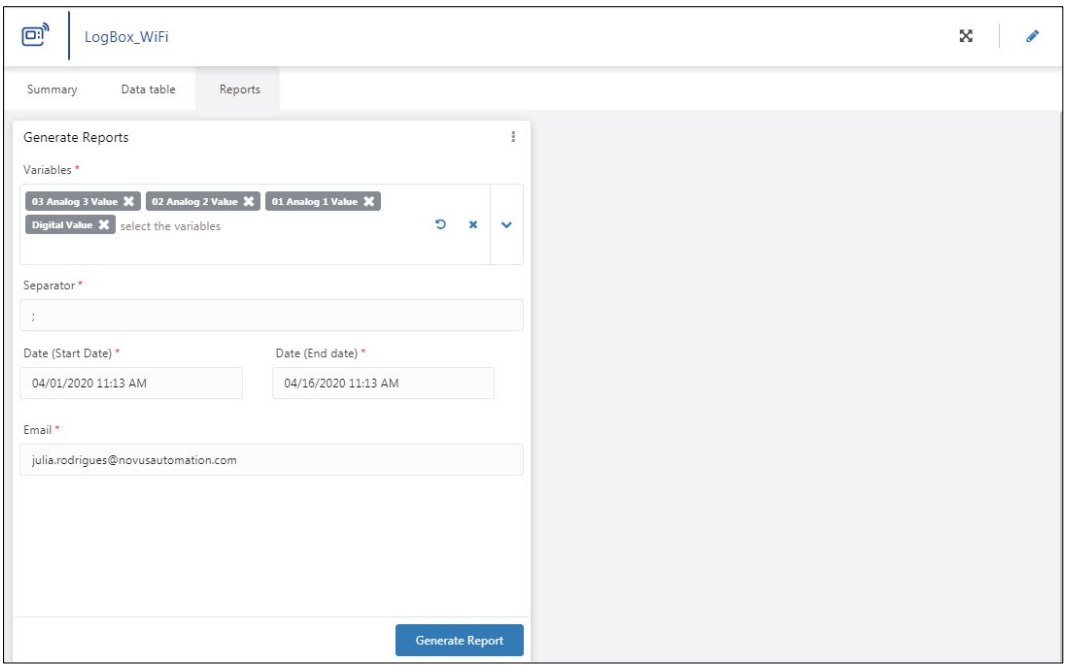


Figure 22

	**It's important to note that, according to the region, the default character for the .csv column separator may be ",". In other regions, it may be ";". Choosing the wrong separator can cause Excel not to open the .csv file properly.**

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 reports, it will display a successful message.

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

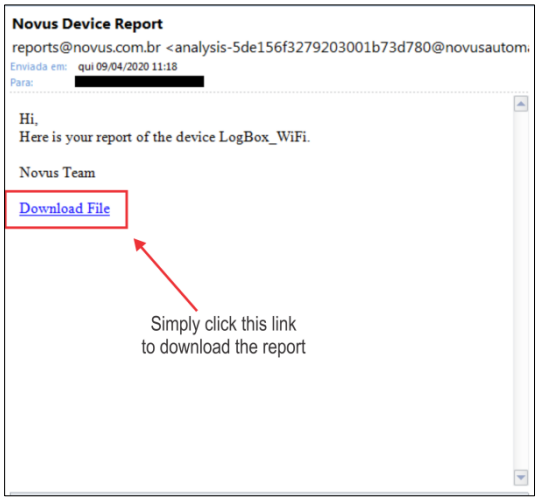


Figure 23

The generated report will have an extension *.csv and must present the data of all variables selected in the **Variables** parameter. 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. 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 following tabs:

- **General**
- **Create Dashboards and Widgets**
- **Users**
- **Alerts**
- **Billing**
- **Advanced**

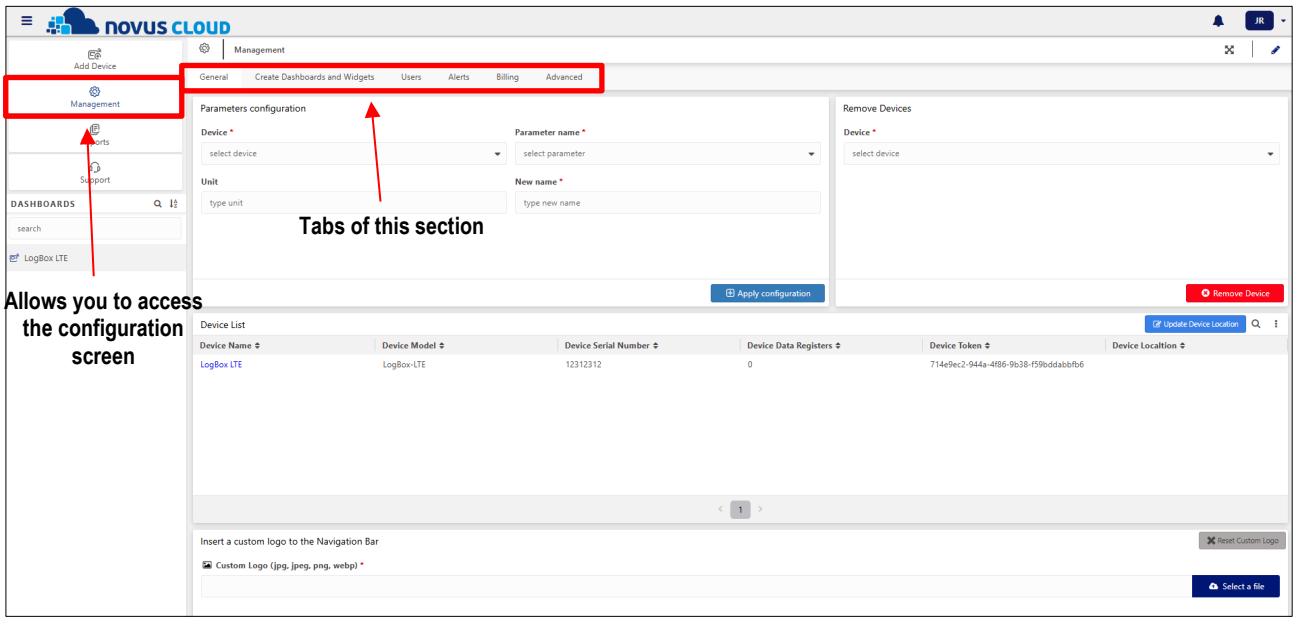


Figure 24

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.

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

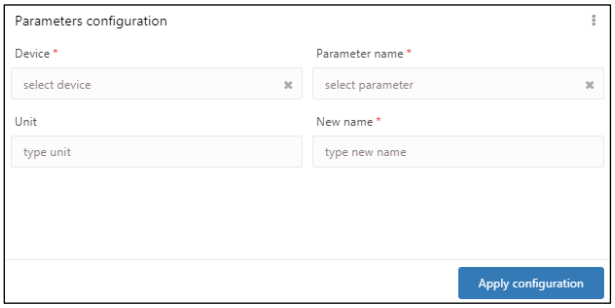


Figure 25

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 do this, simply select the desired device in the **Device** field and click the **Remove Device** button:

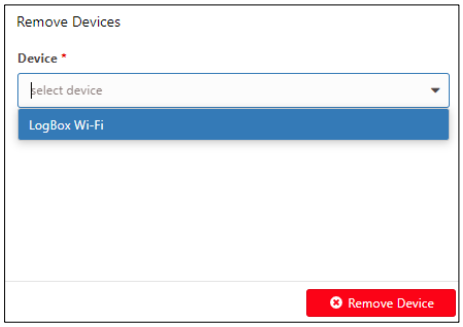


Figure 26

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 displays a list of all devices registered in the platform, as shown in the example below:

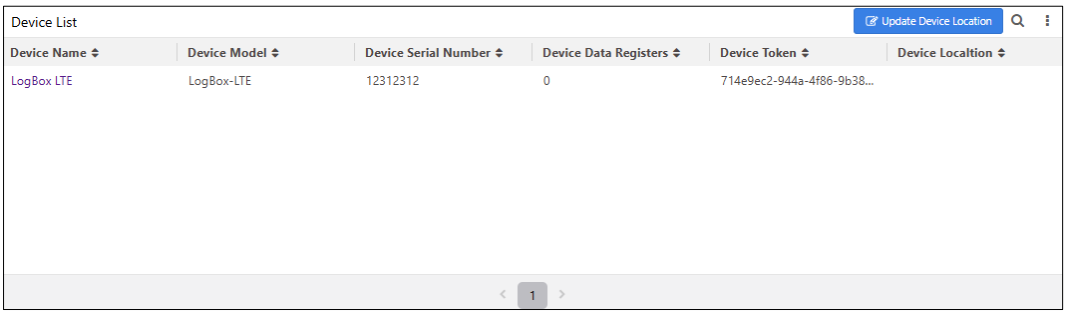


Figure 27

This section displays the fields:

- **Device Name:** Shows the name of the device.
- **Device Model:** Shows the model of the device.
- **Device Serial Number:** Shows the serial number of the device.
- **Device Data Registers:** Shows the number of data recorded by the device.
- **Device Token:** Shows the token of the device.
- **Device Location:** Displays the location of the device.

Clicking on the button allows you to search more easily for a specific device.

Clicking on the button allows you to view information about the period of the last update, export the data in this section to the selected format and, by clicking on **Preferences**, select the columns to be displayed in this section.

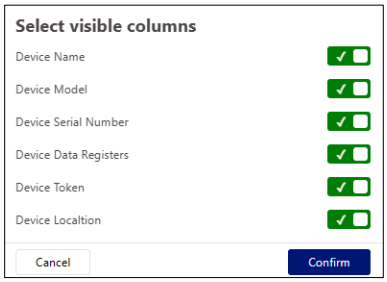
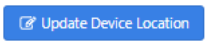


Figure 28

Clicking on the button 

allows you to update or enter the location of a registered device:

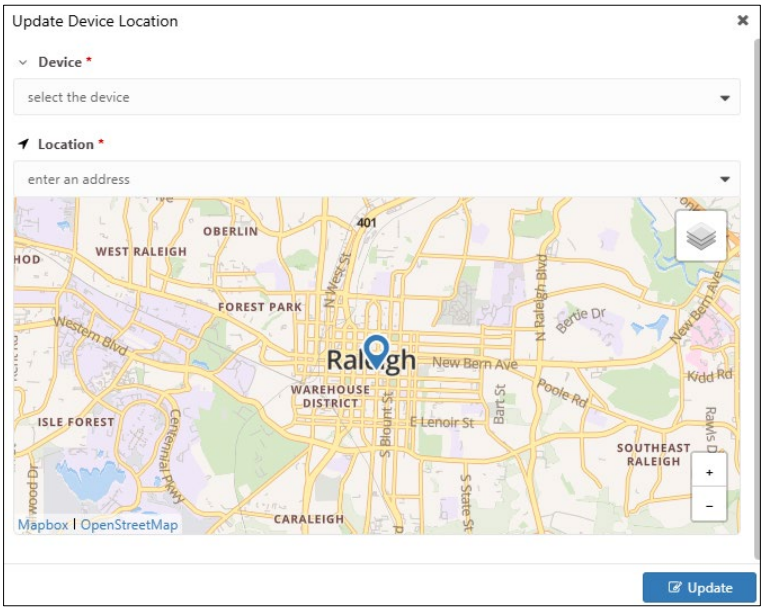


Figure 29

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

In the **Insert a custom logo to the Navigation Bar** section, you can upload an image to change the **NOVUS Cloud** logo, located in the top left corner of the connected account:

Figure 30

Once a logo has been inserted, clicking the **Reset Custom Logo** button will allow you to return to the default logo.

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 

in the **Dashboard List** section to create a dashboard, as shown in the figure below:

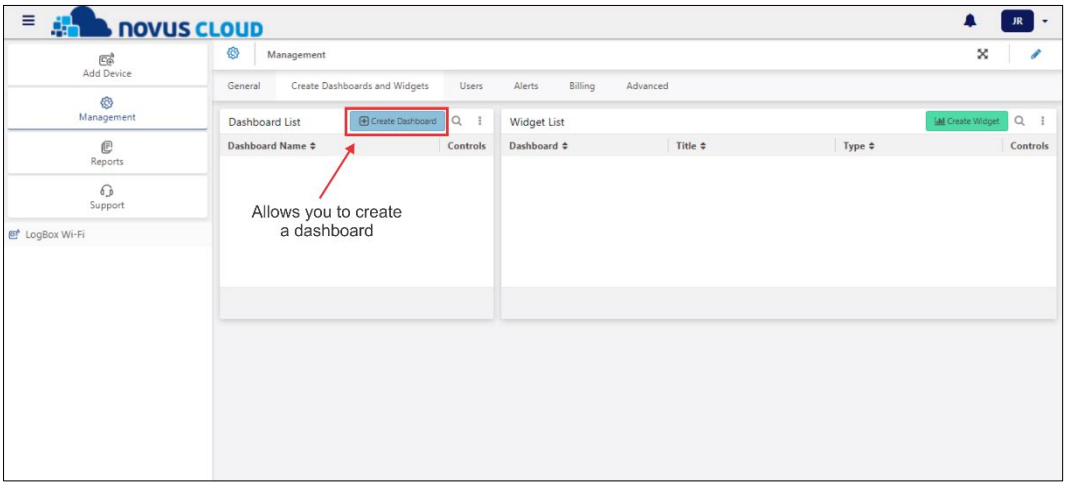


Figure 31

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:

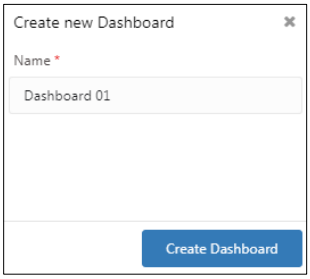


Figure 32

The process may take a few seconds, but once completed, the platform will display a 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:

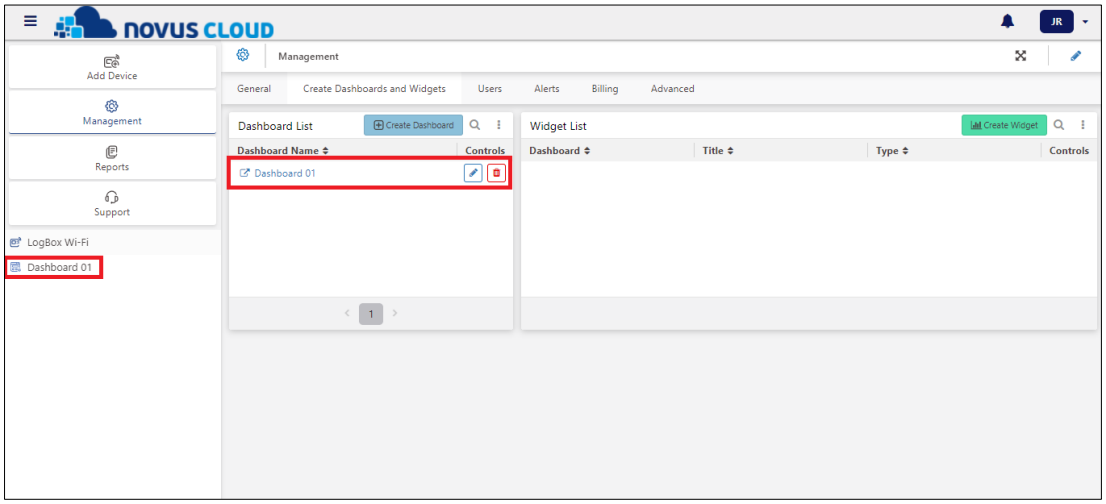
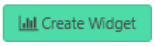


Figure 33

You can edit the name of the selected dashboard by clicking the  button and clicking the  button to save the process after you finish.

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 

button:

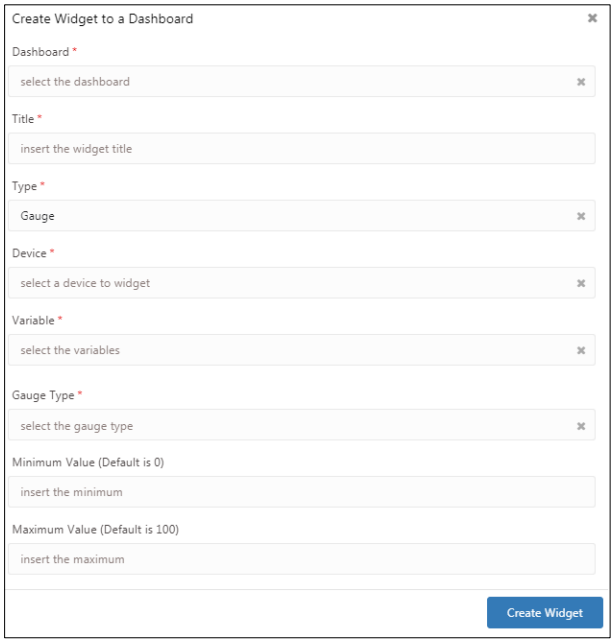


Figure 34

Each type of widget will have specific parameters and allows for different types of customizations. The **Gauge** type, as shown above, has the fields **Device**, **Variable**, **Gauge Type**, **Minimum Value** and **Maximum Value**.

To change the type of widget, use the **Type** field and select one of the following options:

- **Gauge:** 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:** 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:** 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:** 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:** 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:** 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:** 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:** 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.
  - **Waring 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.
- **Input Number:** Allows you to write a specific value to an existing variable. This value remains in a database in **NOVUS Cloud** and is not sent to the device.
  - **Device:** Allows you to define the device to which the widget will be linked.
  - **Variable**: Allows you to define the variable to be displayed.
- **Input Text** Allows you to write a text to an existing variable. This text remains in a database in **NOVUS Cloud** and is not sent to the device.
  - **Device:** Allows you to define the device to which the widget will be linked.
  - **Variable:** Allows you to define the variable to be displayed.

- **Input Switch:** Allows you to write an active or inactive value to an existing variable. This value remains in a database in **NOVUS Cloud** and is not sent to the device.
  - **Device:** Allows you to define the device to which the widget will be linked.
  - **Variable:** Allows you to define the variable to be displayed.
- **Report:** Displays a report on the selected device.
- **FlexTimBox Report:** Displays a report about the **FlexTimBox** device. Only compatible with **FlexTimBox**.
- **Push Button Mono-Stable:** Allows you to write a value to a device variable. Only compatible with **DigiRail OEE**.
  - **DigiRail OEE Devices:** Allows you to select the **DigiRail OEE** to be linked to the widget.
  - **Button color:** Allows you to define the color of the button to be used.
- **Push Button Bi-Stable (Switch):** Allows you to enable or disable a variable on the device. Only compatible with **DigiRail OEE**.
  - **DigiRail OEE Devices:** Allows you to select the **DigiRail OEE** to be linked to the widget.
  - **Button color for state 0:** Allows you to set the color to be used for the button if the device has status 0.
  - **Button color for state 1:** Allows you to set the color to be used for the button if the device has status 1.
- **Downlink:** Allows you to write to specific device registers. Only compatible with **AirGate 4G**, **DigiRail IoT** and **N20K48**.
- **Map with my devices:** Allows you to geographically locate the selected devices on the map. This information must be stored in the device's database in **NOVUS Cloud** (either because the device has sent this information or because the user has manually included the location).

Widgets created will be displayed in list format in the **Widget List** section:

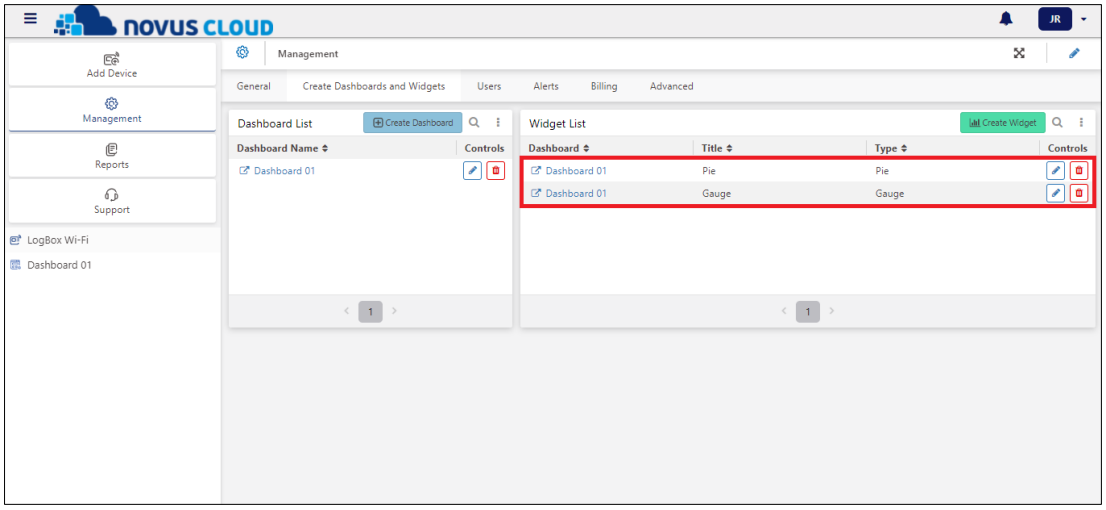


Figure 35

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.

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:

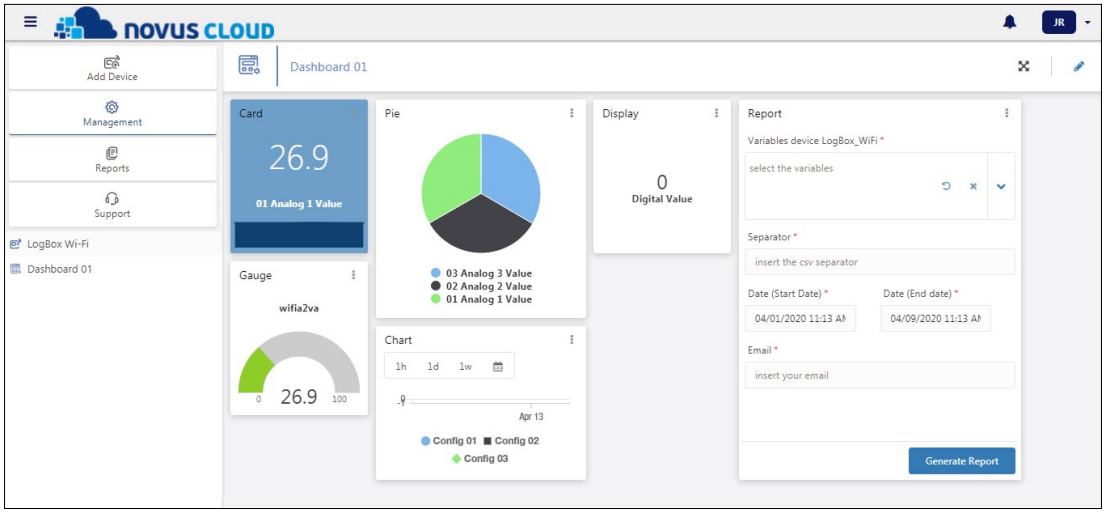


Figure 36

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:

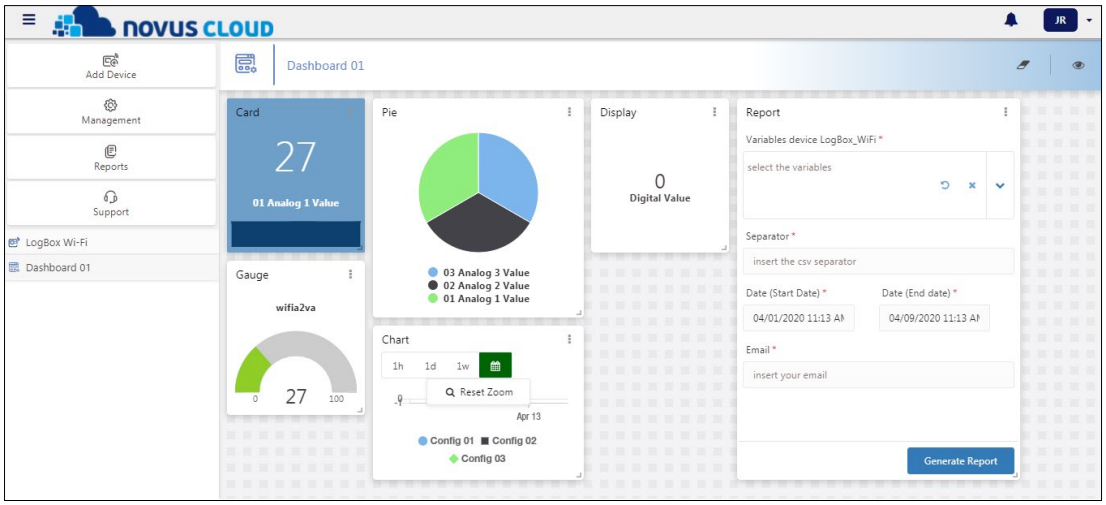


Figure 37

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 *.xlsc 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:

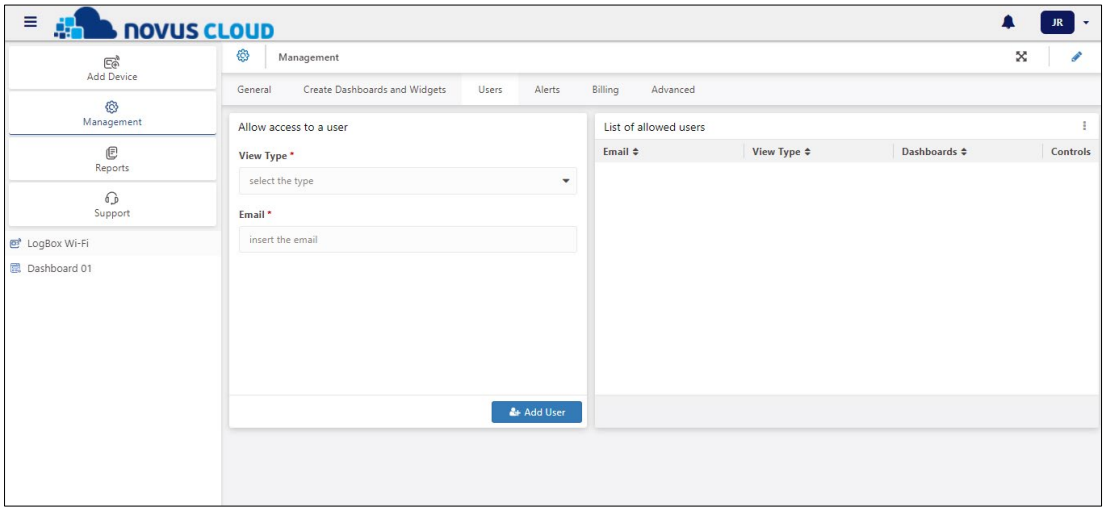


Figure 38

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. 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:

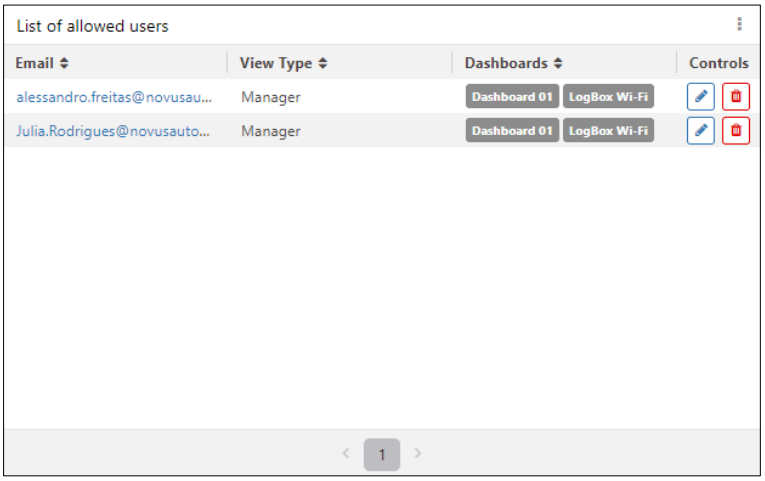


Figure 39

You can edit the access settings of the selected user by clicking on the button and, once the editing has been done, click on the button to save the process.

To delete a user, you must click the 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 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.

This tab has the following sections:

- **Alert Setup List:** It is composed of an alarm list.
- **List of triggered alerts:** Allows you to view a list with information about triggered alarms.
- **Contact List:** It is composed of the users registered to receive these alarms.

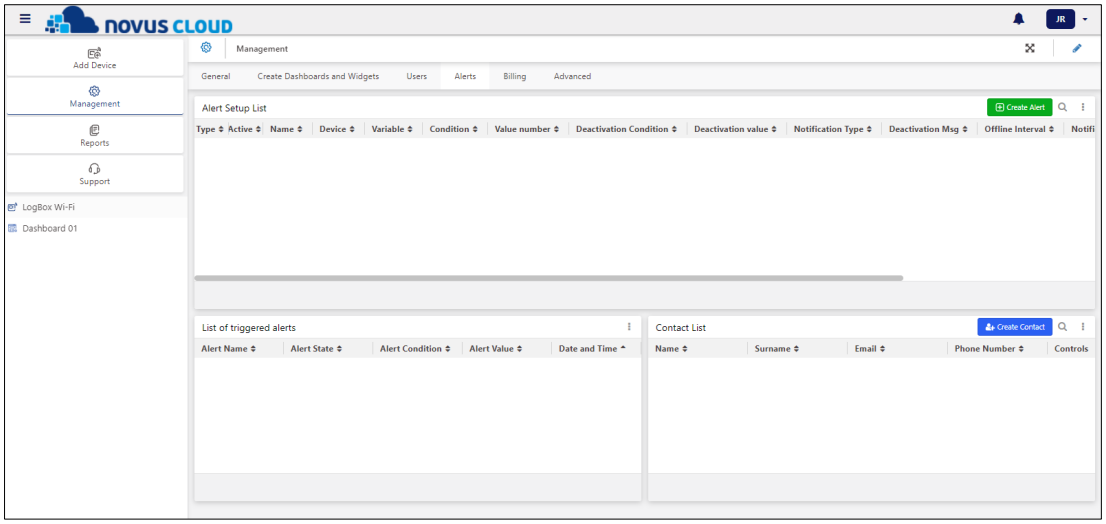


Figure 40

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 **Create contact** button, located at the bottom:

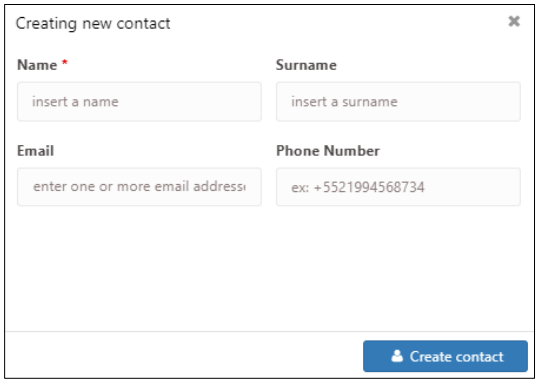


Figure 41

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:

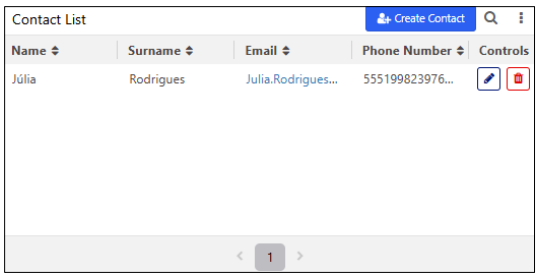


Figure 42

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 *.xlsc 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:

Figure 43

There are 2 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:

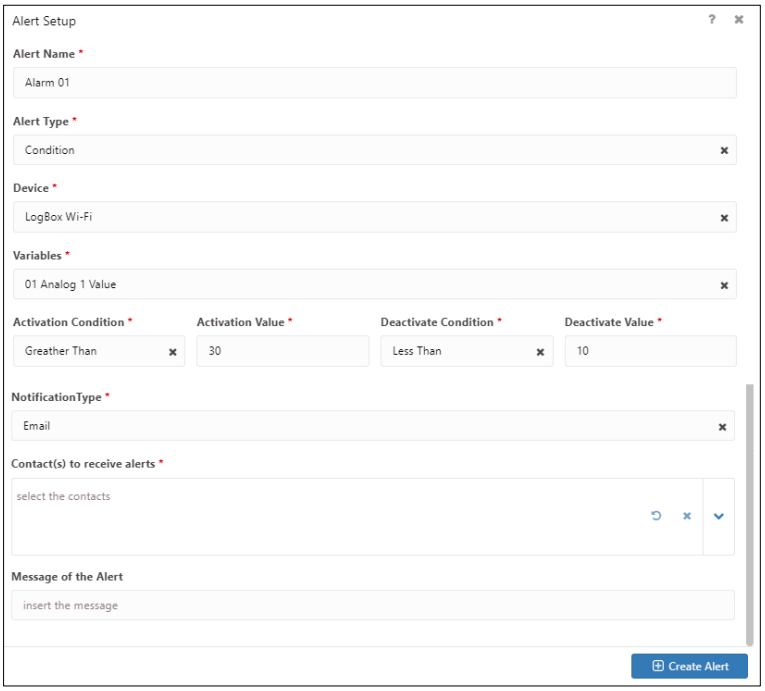


Figure 44

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[2] 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.

[2] Check countries where this feature is available.

- **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:

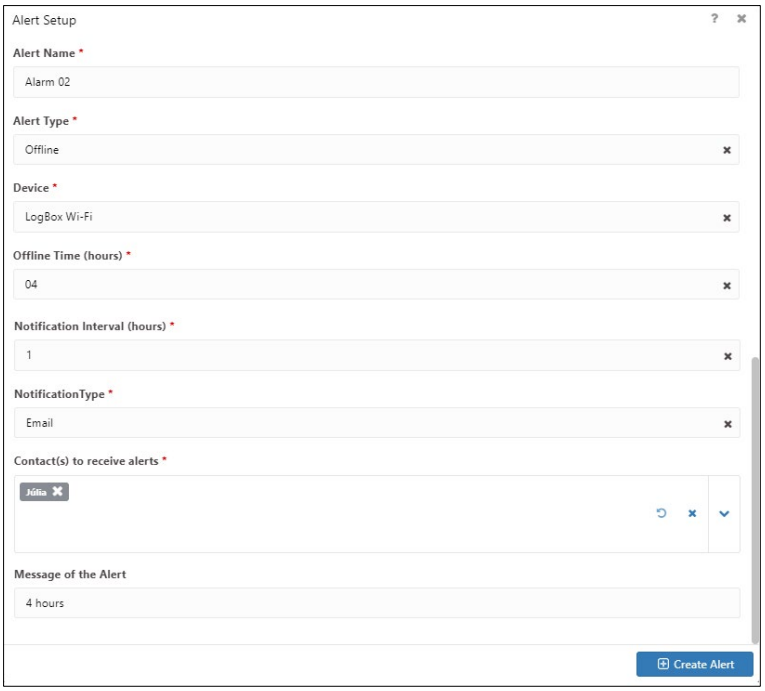


Figure 45

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[3] 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 Create Alert button to complete the process. The alarm created will be shown in the **Alarm Setup List** section:

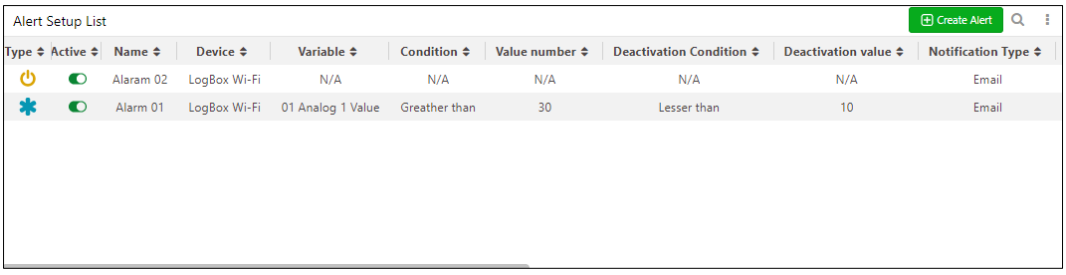


Figure 46

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.

[3] Check countries where this feature is available.

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 *.xlsc 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:

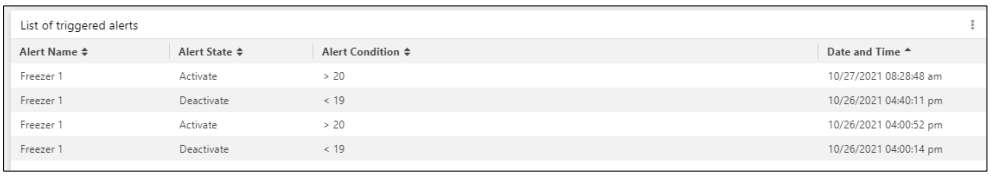


Figure 47

5.5 "BILLING" TAB

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

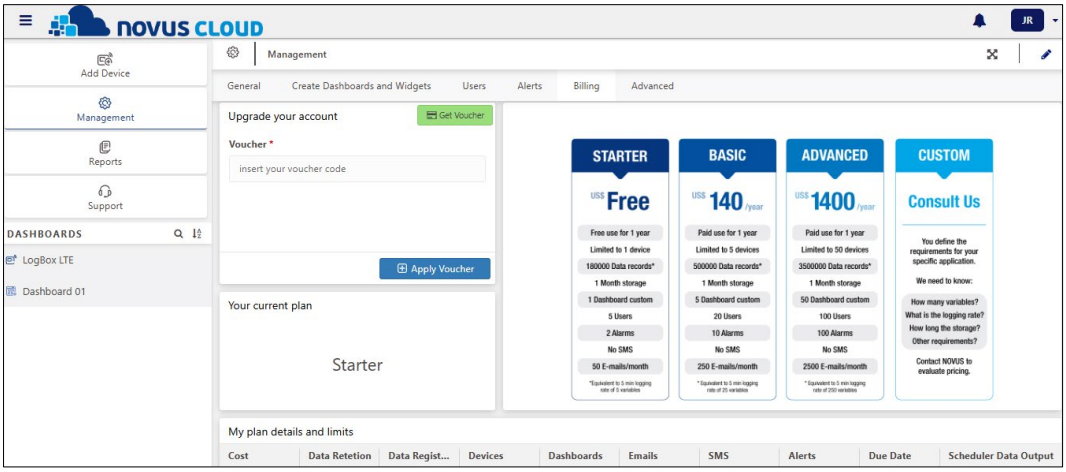


Figure 48

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.

⚠	**Usage restrictions for sending SMS:** **NOVUS Cloud cannot send SMS to numbers in the following countries: Australia, Belarus, China, Egypt, India, Indonesia, Jordan, Kazakhstan, Kenya, Kuwait, Philippines, Qatar, Russia, Saudi Arabia, Sri Lanka, Thailand, Turkey, United Arab Emirates, United Kingdom, Vietnam, Zambia, United States, Puerto Rico and Canada.**

- **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 Get Voucher button, located in the **Upgrade your account** section. After that, you must fill in the following fields:

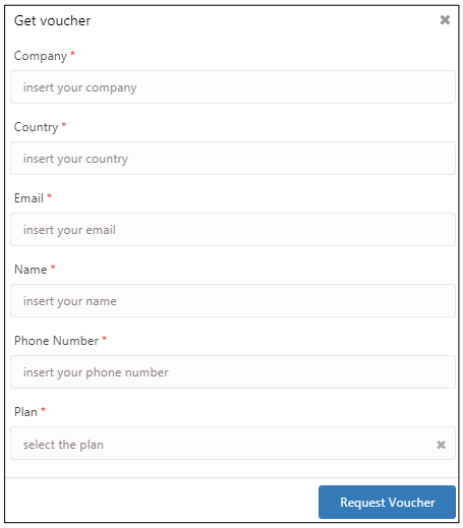


Figure 49

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 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:

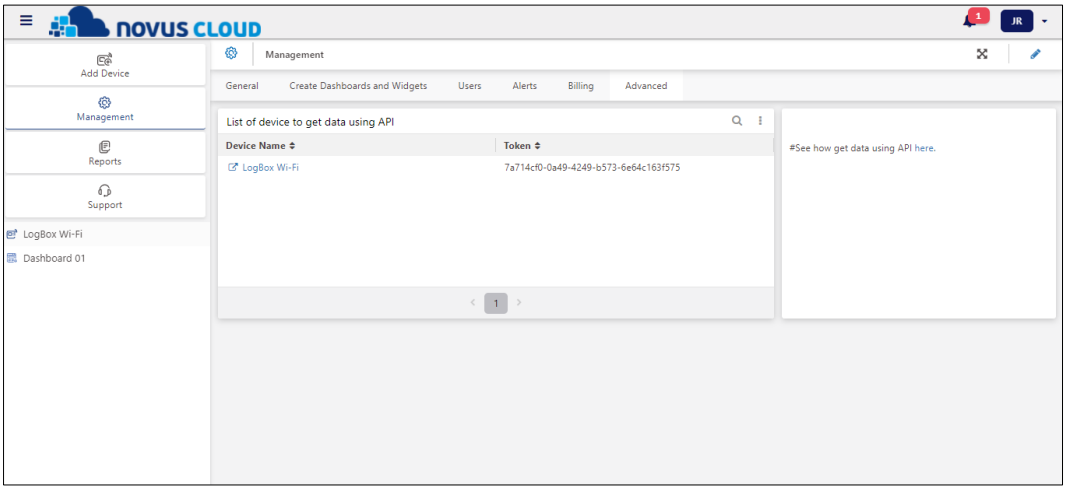


Figure 50

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 the Token received during the first communication between the device and **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 *.xlsc 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:

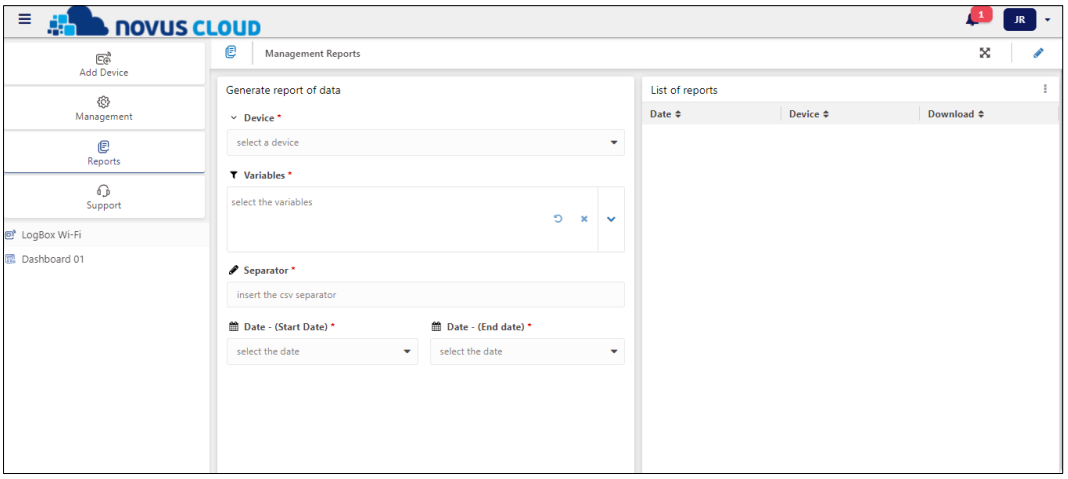


Figure 51

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 (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:

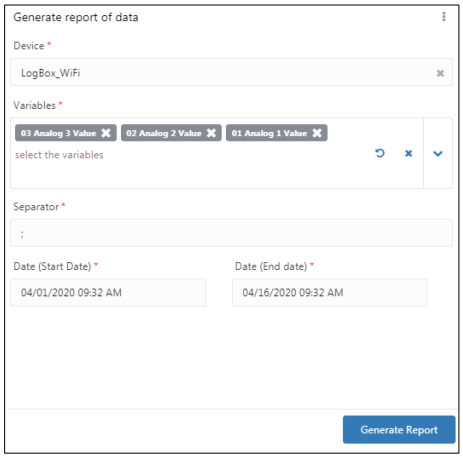


Figure 52

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:

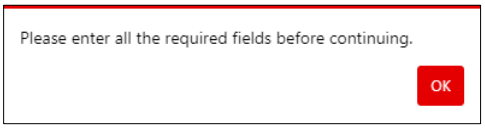


Figure 53

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

Figure 54

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:

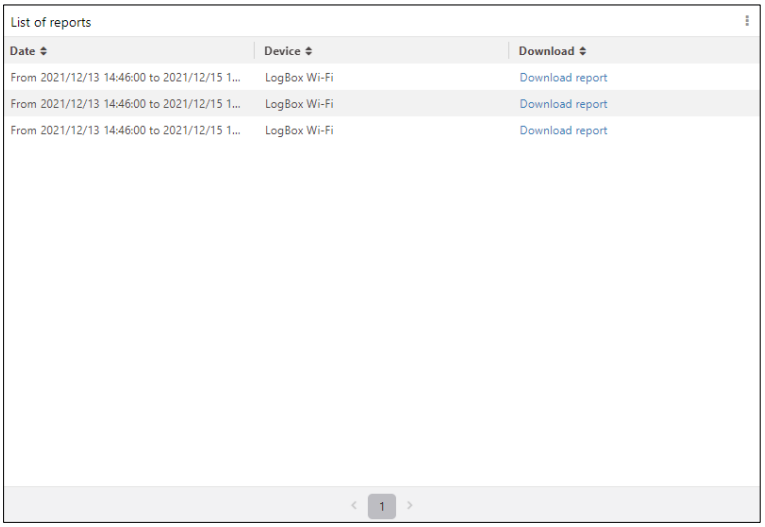


Figure 55

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:

Figure 56

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.

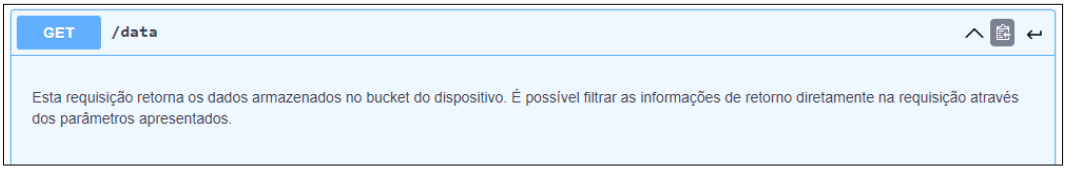


Figure 57

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.

Figure 58

7.3.2 NON-MANDATORY

QTY:

Amount of data desired as a response from the request.

Figure 59

VALUE:

It returns only the data of the variables with the requested value.

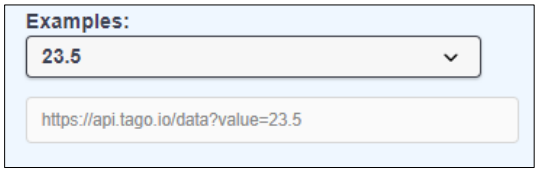


Figure 60

VARIABLE:

It 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 61

START_DATE:

It limits the start date/time of the values received in response.

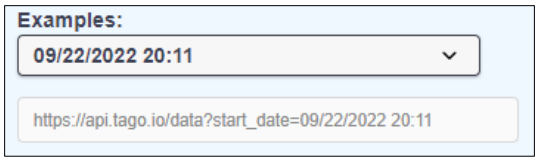


Figure 62

END_DATE:

It limits the final date/time of the values received in response.

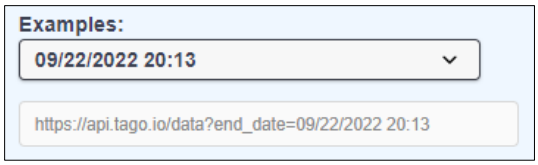


Figure 63

ORDINATION:

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

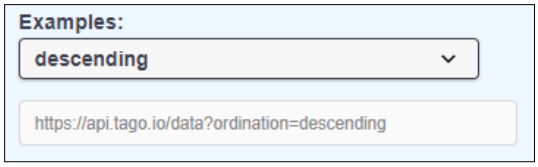


Figure 64

SKIP:

It skips the number of specified items.

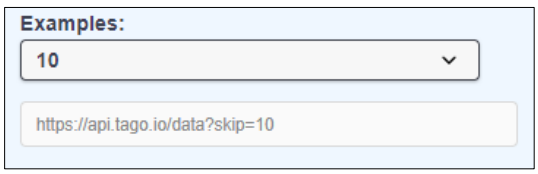


Figure 65

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 66

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 our 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 channels enabled 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 LTE

LOGBOX LTE	
ALIAS	**DESCRIPTION**
anl1	Analog channel 1
anl2	Analog channel 2
3grecdi1v	Digital channel
3grecdi1va	Accumulator channel
3gevt	Events
lteinternal1	Internal value 1

LOGBOX LTE	
lteinternal2	Internal value 2

Table 2

7.5.3 LOGBOX 3G

LOGBOX 3G	
ALIAS	**DESCRIPTION**
3grecdtd	Time and date
3grecesv	External power supply
3grecbtv	Battery value
3grecbtp	Battery percentage
3greccjv	Internal temperature
3grecgpsp	GPS location
3grecdi1v	Digital channel value
3grecuc2v	Analog channel 2 value
3grecuc1v	Analog channel 1 value
3gevt	Events

Table 3

7.5.4 DIGIRAIL OEE | DIGIRAIL IOT

DIGIRAIL OEE | DIGIRAIL IOT	
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

DIGIRAIL OEE | DIGIRAIL IOT	
ch1_user_range	Analog channel 1 value
ch2_user_range	Analog channel 2 value

Table 4

7.5.5 AIRGATE AIR+

AIRGATE AIR+	
ALIAS	**DESCRIPTION**
vcalc_s1	Calculated variable 1
vcalc_s2	Calculated variable 2
vcalc_s3	Calculated variable 3
vcalc_s4	Calculated variable 4
vcalc_s5	Calculated variable 5
vcalc_s6	Calculated variable 6
vcalc_s7	Calculated variable 7
vcalc_s8	Calculated variable 8
vcalc_s9	Calculated variable 9
vcalc_s10	Calculated variable 10
vcalc_s11	Calculated variable 11
vcalc_s12	Calculated variable 12
vcalc_s13	Calculated variable 13
vcalc_s14	Calculated variable 14
vcalc_s15	Calculated variable 15
vcalc_s16	Calculated variable 16
vcalc_s17	Calculated variable 17
vcalc_s18	Calculated variable 18
vcalc_s19	Calculated variable 19
vcalc_s20	Calculated variable 20
vcalc_s21	Calculated variable 21
vcalc_s22	Calculated variable 22
vcalc_s23	Calculated variable 23
vcalc_s24	Calculated variable 24
vcalc_s25	Calculated variable 25
vcalc_s26	Calculated variable 26
vcalc_s27	Calculated variable 27
vcalc_s28	Calculated variable 28
vcalc_s29	Calculated variable 29
vcalc_s30	Calculated variable 30
vcalc_s31	Calculated variable 31
vcalc_s32	Calculated variable 32
umid_s1	Humidity variable 1
umid_s2	Humidity variable 2
umid_s3	Humidity variable 3
umid_s4	Humidity variable 4
umid_s5	Humidity variable 5
umid_s6	Humidity variable 6
umid_s7	Humidity variable 7
umid_s8	Humidity variable 8
umid_s9	Humidity variable 9
umid_s10	Humidity variable 10

AIRGATE AIR+	
umid_s11	Humidity variable 11
umid_s12	Humidity variable 12
umid_s13	Humidity variable 13
umid_s14	Humidity variable 14
umid_s15	Humidity variable 15
umid_s16	Humidity variable 16
umid_s17	Humidity variable 17
umid_s18	Humidity variable 18
umid_s19	Humidity variable 19
umid_s20	Humidity variable 20
umid_s21	Humidity variable 21
umid_s22	Humidity variable 22
umid_s23	Humidity variable 23
umid_s24	Humidity variable 24
umid_s25	Humidity variable 25
umid_s26	Humidity variable 26
umid_s27	Humidity variable 27
umid_s28	Humidity variable 28
umid_s29	Humidity variable 29
umid_s30	Humidity variable 30
umid_s31	Humidity variable 31
umid_s32	Humidity variable 32
temp_s1	Temperature variable 1
temp_s2	Temperature variable 2
temp_s3	Temperature variable 3
temp_s4	Temperature variable 4
temp_s5	Temperature variable 5
temp_s6	Temperature variable 6
temp_s7	Temperature variable 7
temp_s8	Temperature variable 8
temp_s9	Temperature variable 9
temp_s10	Temperature variable 10
temp_s11	Temperature variable 11
temp_s12	Temperature variable 12
temp_s13	Temperature variable 13
temp_s14	Temperature variable 14
temp_s15	Temperature variable 15
temp_s16	Temperature variable 16
temp_s17	Temperature variable 17
temp_s18	Temperature variable 18
temp_s19	Temperature variable 19
temp_s20	Temperature variable 20
temp_s21	Temperature variable 21
temp_s22	Temperature variable 22
temp_s23	Temperature variable 23
temp_s24	Temperature variable 24
temp_s25	Temperature variable 25
temp_s26	Temperature variable 26
temp_s27	Temperature variable 27

AIRGATE AIR+	
temp_s28	Temperature variable 28
temp_s29	Temperature variable 29
temp_s30	Temperature variable 30
temp_s31	Temperature variable 31
temp_s32	Temperature variable 32
alrm_list	Alarm list

Table 5

7.5.6 AIRGATE 3G

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

AIRGATE 3G	
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
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

AIRGATE 3G	
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
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 6

7.5.7 FIELDLOGGER MQTT

FIELDLOGGER MQTT	
ALIAS	**DESCRIPTION**
spal01	Alarm Setpoint 1
spal02	Alarm Setpoint 2
spal03	Alarm Setpoint 3
spal04	Alarm Setpoint 4
spal05	Alarm Setpoint 5
spal06	Alarm Setpoint 6
spal07	Alarm Setpoint 7
spal08	Alarm Setpoint 8
spal09	Alarm Setpoint 9
spal10	Alarm Setpoint 10
spal11	Alarm Setpoint 11
spal12	Alarm Setpoint 12
spal13	Alarm Setpoint 13
spal14	Alarm Setpoint 14
spal15	Alarm Setpoint 15
spal16	Alarm Setpoint 16
spal17	Alarm Setpoint 17
spal18	Alarm Setpoint 18
spal19	Alarm Setpoint 19
spal20	Alarm Setpoint 20
spal21	Alarm Setpoint 21
spal22	Alarm Setpoint 22
spal23	Alarm Setpoint 23
spal24	Alarm Setpoint 24
spal25	Alarm Setpoint 25
spal26	Alarm Setpoint 26
spal27	Alarm Setpoint 27
spal28	Alarm Setpoint 28
spal29	Alarm Setpoint 29
spal30	Alarm Setpoint 30
spal31	Alarm Setpoint 31
spal32	Alarm Setpoint 32
anl1	Analog channel 1
anl2	Analog channel 2
anl3	Analog channel 3
anl4	Analog channel 4
anl5	Analog channel 5
anl6	Analog channel 6
anl7	Analog channel 7
anl8	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

FIELDLOGGER MQTT	
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 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

FIELDLOGGER MQTT	
rem39	Remote channel 39
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	Virtual channel 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

FIELDLOGGER MQTT	
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

FIELDLOGGER MQTT	
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

FIELDLOGGER MQTT	
vrt122	Virtual channel 122
vrt123	Virtual channel 123
vrt124	Virtual channel 124

Table 7

7.5.8 TELIK TRAFO LITE

TELIK TRAFO 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 8

7.5.9 CONFIGURABLE VARIABLES

Some devices do not have 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.

List of devices without predefined variables: **AirGate 4G**, **AirGate 4G Lite**, **N20K48**.

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.
- **Report Scheduler: NOVUS Cloud** provides a tool that allows you to automate the sending of periodic reports via e-mail. This feature must be purchased separately. Consult the Sales Area.

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 Technical Support page. On this page you will be able to fill out a form for further contact, as shown in the figure below:

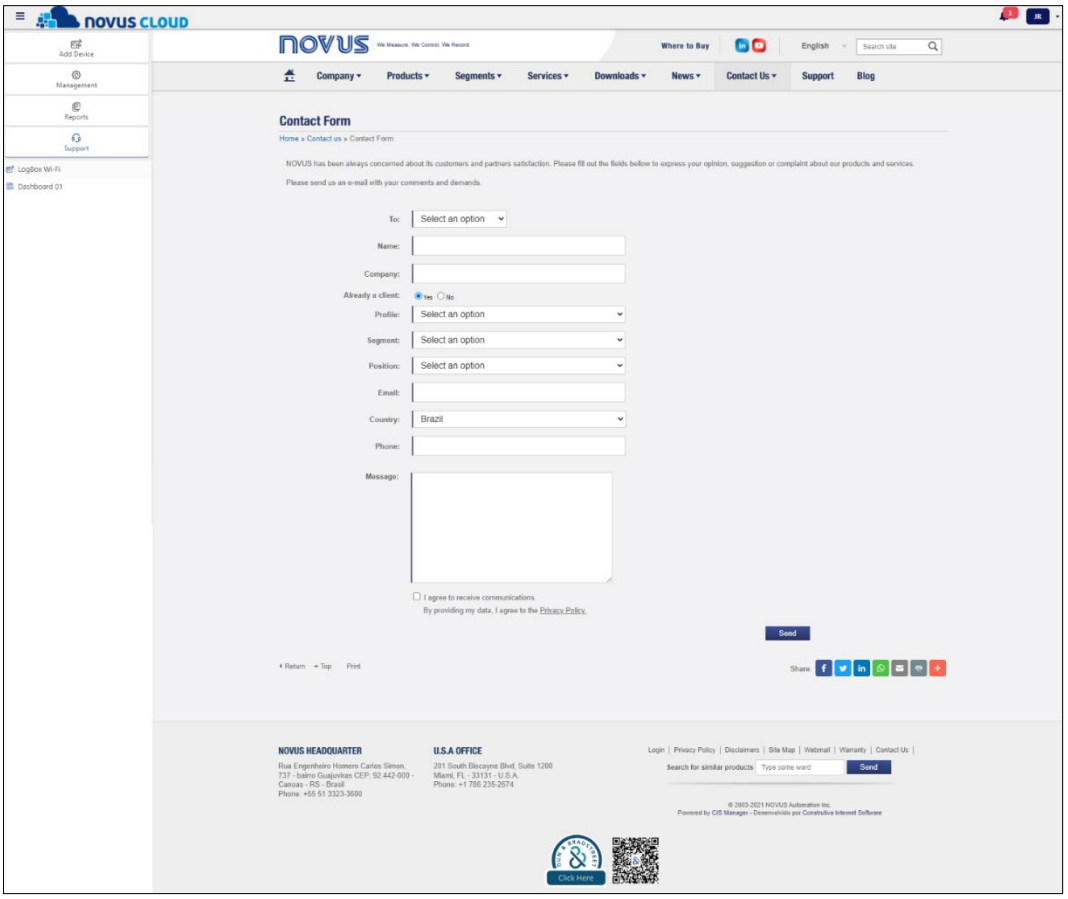


Figure 67

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:

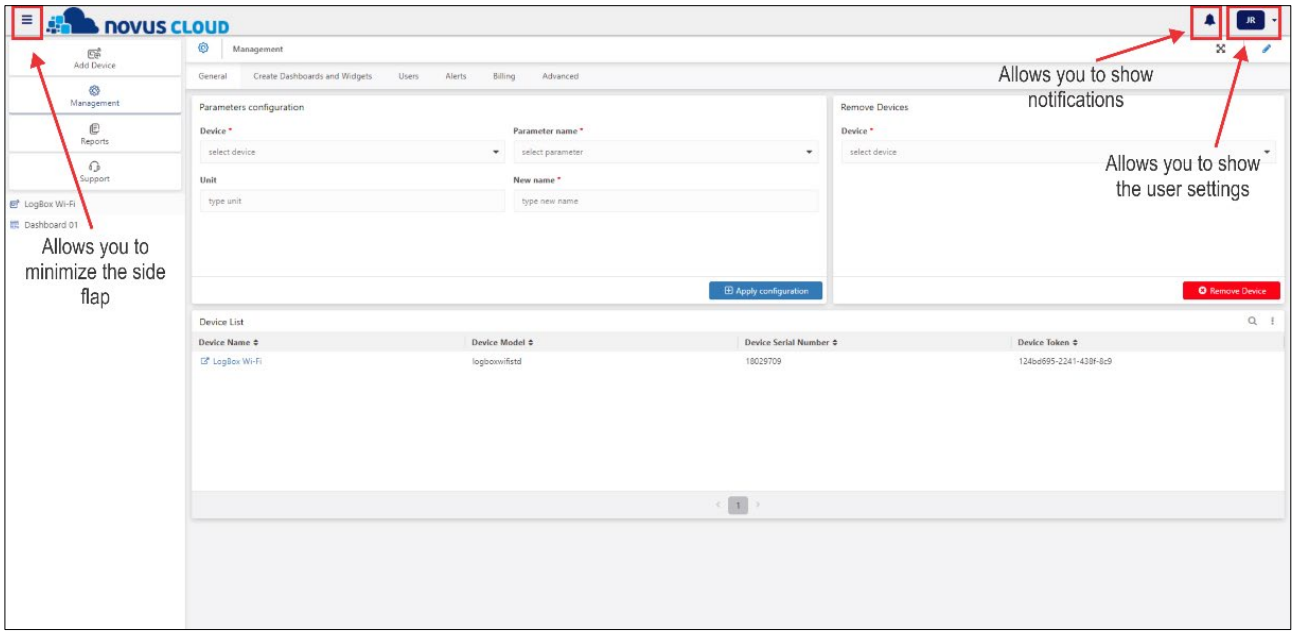


Figure 68

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:

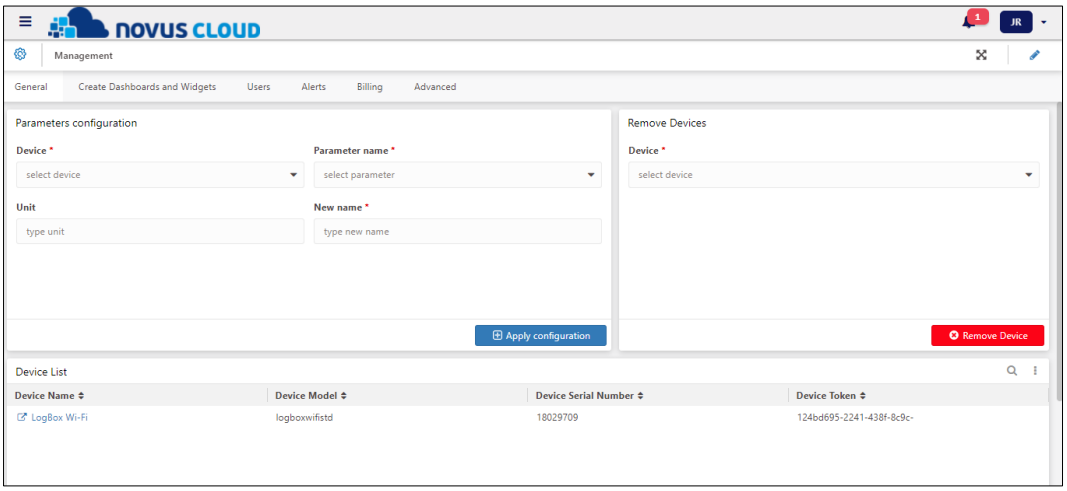


Figure 69

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:

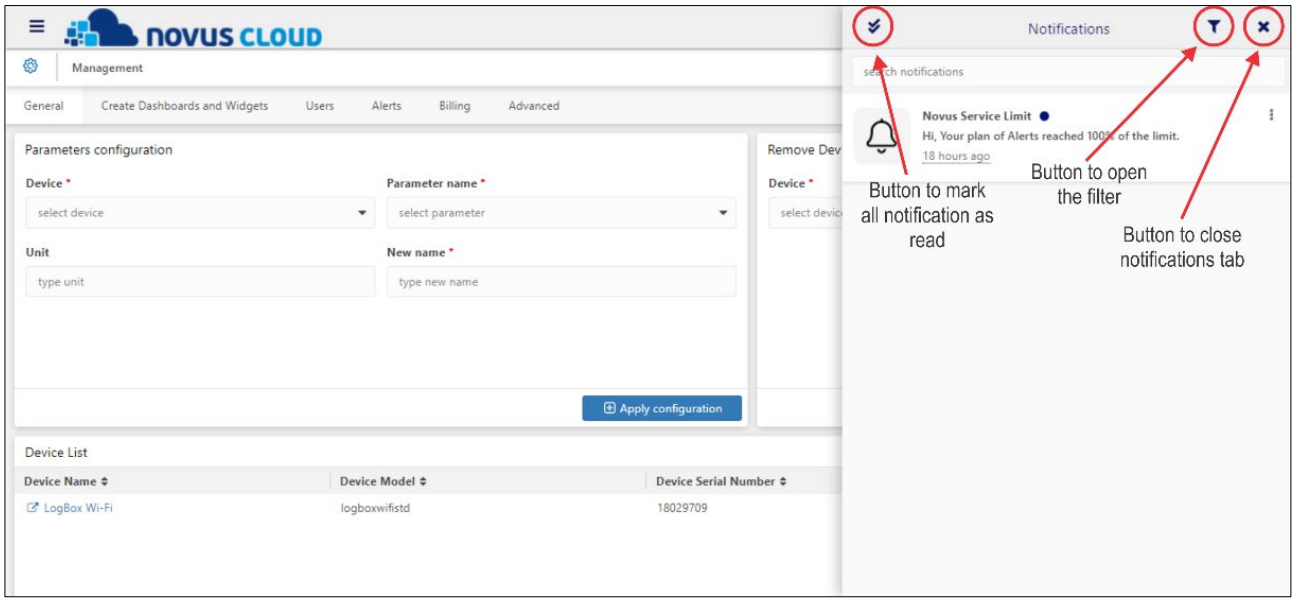


Figure 70

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:

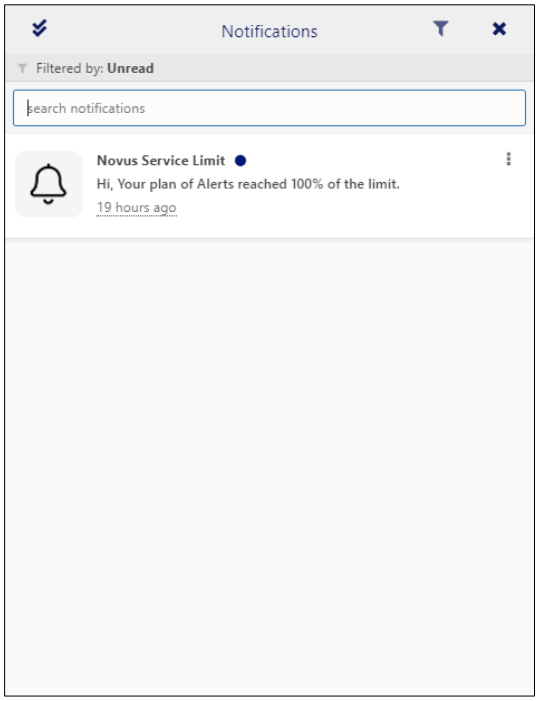


Figure 71

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:

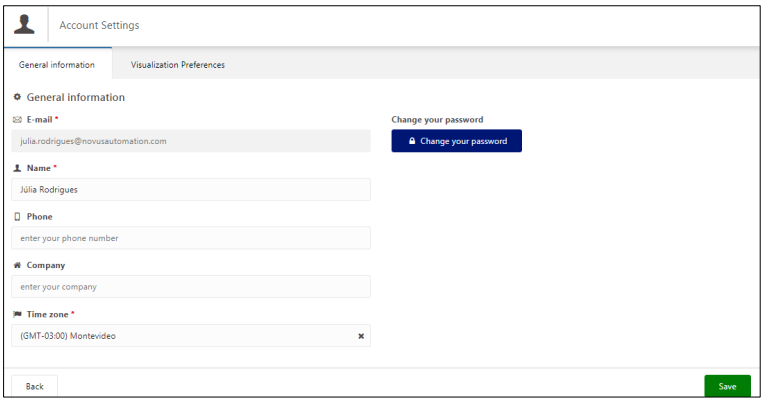


Figure 72

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:

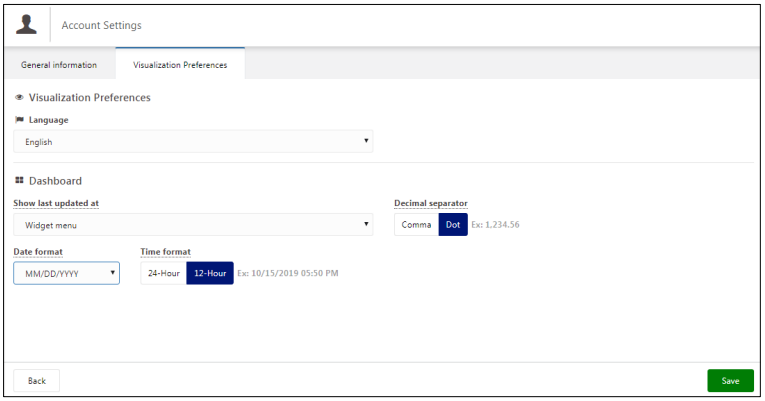


Figure 73