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# 1 NOVUS CLOUD PLATAFORM

**NOVUS Cloud** is a dedicated solution platform for Internet of Things that extends the data presentation horizons. Applied with **NOVUS** products, this platform can receive data, store, analyse and presents online measurements of temperature, humidity, pressure, geographic location or any other amount of interest. Internet access to the data of physical measurements can bring benefits mainly to the following sectors: industrial, logistics, health, construction, energy, sanitation and agriculture.

A Modbus FieldLogger or an AirGate-3G connected to any sensor or device that measures physical quantities can send these measurements to the NOVUS Cloud. In temperature logging applications, the TagTemp-NFC through Android LogChart-NFC application is also able to send their records to the platform.

The platform is secure, scalable and offers an environment for rapid application development, even for people with no programming experience.

The cloud applications are fully customizable, and you can create multiple screens with widgets to display data, configure alarms and events for business rules, send notifications by email and configure scripts to process the data.

# 2 ACCESS TO THE NOVUS CLOUD PLATFORM

You can access the portal through <u>https://iot.novusautomation.com</u> address. To access the account will need to enter access credentials consisting of user name and password provided at the time of application for the account.

If you have trouble accessing or not have an account on the platform, please contact us by sending an email to iot@novusautomation.com.

# **3** ACCOUNT PROPERTIES

By registering an account at the **NOVUS Cloud** platform, users can access the portal to edit all information relating to it, such as personal or functional information about the equipment and how access the data.

After login with your username and password to access the account properties, it is necessary to display the top application menu and click in **Account**, as shown in **Fig. 01**.



Fig. 01 - Account properties

### 3.1 USER PROFILE PROPERTIES

The primary user of the application must complete a register of information, where some of these are mandatory or optional, in the User Profile section. As shown in the **Fig. 02**, you can change the full name, time zone, country, city, language and other profile information. After entering the data, you must click on the **UPDATE** button to save the information.

User Profile				
Full Name: *	John Doe			
Allow Search: 👔	No			
Timezone: *	(GMT-04:00) Brazil 🔹			
Country:	Brazil			
City, State/Province:	Porto Alegre			
Language:	English			
Phone Number:				
Mobile Number:				
Organization:				
Website:				
Email: *	myemail@gmail.com			
Current Password: *				
Automatically execute	Current password required to set new email e Javascript in custom widgets.			
Warning! Javascript displayed in widgets may not be created by Exosite. Exosite will not be held liable for any security issues that may result from viewing user created custom widgets. Learn more about the risks here.				
Last Login: Jun 08, 2015	6 @ 16:27 (America/Campo_Grande)			
	UPDATE			

Fig. 02 - User profile

### 3.2 PASSWORD RECOVERY

If you have forgotten your password, you can recover it through the option "forgot password?" in the website (<u>https://iot.novusautomation.com</u>) or directly using the link <u>https://iot.novusautomation.com/reset</u>. Enter the main email account and click the **SUBMIT** button. You will receive the instructions for password recovery on this email address.

You can add an additional layer of protection in password recovery. In this case, you will must answer correctly the security question at the time of recovery. Access the user profile properties and insert the question and the corresponding answer on Enhanced Security Account, then clicking on **UPDATE**.

Enhanced Account Security					
✓ Use security question for password reset requests					
Password Reset					
Question: *	My question				
Answer: *	My answer				
Current Password: *					
	UPDATE				

Fig. 03 - Secret question

If you define a security question for password recovery, the link send via email with the instructions for password recovery will direct to the page where you need to answer the secret question, as shown in the **Fig. 04**. After you enter the answer, click on **SUBMIT**.

Question: My	question		
Answer:			

Fig. 04 – Answering the secret question

If the answer entered is correct, the user must enter the new password, confirm it and click on SUBMIT.

# 3.3 RESET PASSWORD

To change the password is necessary to access the Reset Password section, where you must enter the current password and new password. After entering the data, click **UPDATE**.

Reset Password	
Current Password: *	
New Password: *	
	Show Password
	UPDATE

Fig. 05 - Reset password

# 3.4 CANCEL ACCOUNT

Although you may cancel your account directly on the platform, we do not recommend to be done this way. Contact us by email at iot@novusautomation.com, informing the principal email address to carry out the cancellation.

Vant to cancel your acc	count?	
faint to cancel your acc	ounti	
VARNING: If you cancel ettings. If you confirm a	l your account, you will lose ccount deletion, you will be s	all of your data and personal signed out immediately.
o cancel your account, t	type in your password.	

Fig. 06 - Cancel account

# 4 HOMEPAGE OF THE ACCOUNT

To access the homepage is necessary to access the main menu of the application and click Home, highlighted in the Fig. 07.





On the homepage of your account, you can perform all application settings. The left menu on the homepage shows the items for the setting divided in categories composed of Home, Data, Devices, Dashboards, Admin and Script, as shown in the **Fig. 08**.



Fig. 08 – Left menu

# 4.1 HOME

When you entering the application that is the first page displayed. By default, this page has the **NOVUS** logo and some information about documentation, but you can change this page another created within the application.

See more information about how to change this page in the section ADMIN -> OPENING DASHBOARD.

### 4.2 DATA

Below each corresponding equipment will appear all the application data. You can add new data variables by clicking + Add Data in the top right corner of the screen.

Data			<u>+ Add Data</u>
Name 🔺	Alias	Last Value Unit	Last Reported Time
Portal: My Portal			
Device: My Device			
GPS	gps	-3000.8595112.60714	15:43:04 May 26, 15 America/Campo_Grande
Temperature	temp	1.11111111111E+19	13:56:56 May 26, 15 America/Campo_Grande



In the Fig. 09, you can see an example with the device named My Device, their Temperature and GPS data variables and the last values received.

To view the data of the variables on this screen does not need any additional configuration and does not require creating any screen. This is the most primitive way to view the data. By clicking on any variable, you can view their properties.

#### 4.2.1 ADD A DATA VARIABLE

We previously registered all **NOVUS** devices on the platform, so it is not necessary to add variables to receive information from them. However, you can create mathematical variables to store the result of basic operations on the equipment variables, such as addition, subtraction, division, multiplication and modulus.

Click the **Data** item in the left side menu. After loading the new window, click in **+ Add Data** in the top right corner of the screen to start adding a new variable. Check the box **From Existing Data**, select the device and click **CONTINUE**.

Data Setup					
:	STEP:	ORIGIN	Сом	FIGURATION	CONFIRM
What's a data source "From a Device"? Creating a data source "From a Device" allows you to capture and record data	0	From a Devi	ce	My Device 🔻	
that a device sends to the One Platform.	۲	From Existin	ig Data	My Device	T
How about "From Existing Data"? "From Existing Data" allows you to create a new data source by combining two or more data sources together.	0	From Share	d Data		
And "From Shared Data"? "From Shared Data" allows you to add a data source that someone else owns, bu has shared with you. Must be activated by an activatior code you receive by email.	t n		TINUE		

Fig. 10 – Add a data variable

The settings for the new variable are composed of their respective name (Data Source Name); data type (Data Source Format): integer, float or string unit (Unit) and an alias (enter the variable name in this field with no blanks), plus the base variable and their respective calculations.

STEP:	ORIGIN	CONFIGURATION	CONFIRM	
When will this data source update? A combination data source will update ONLY when the first data source in the list receives a new value.	Data Source Data Source	ce Name: New temp e Format: float • Unit °F Alias: @newtemp		
	Data Source	v Device) •	Calculation Divide • NA •	Constant 10

Fig. 11 - New variable

After entering the information, click **SUBMIT**. If the Add Data function was successful, the new variable will appear in the list of equipment variables, as shown in the **Fig. 12**.

Data					+ Add Data
Name 🛦	Alias	Last Value	Unit	Last Reported Time	
Portal: My Portal					
Device: My Device					
GPS	gps	-3000.8595112.60714		15:43:04 May 26, 15 America/Campo_Grande	
New temp	newtemp	none	°F		
Temperature	temp	1.111111111111E+19		13:56:56 May 26, 15 America/Campo_Grande	

Fig. 12 - List of variables

### 4.2.2 DATA INFORMATION

Click the Data item on the left menu. After loading the new window, click on a variable in the list to access their properties.

Data					+ Add Data
Name 🔺	Alias	Last Value	Unit	Last Reported Time	
Portal: My Portal					
Device: My Device					
GPS	gps	-3000.8595112.60714		15:43:04 May 26, 15 America/Campo_Grande	
Temperature	temp	1.1111111111111E+19		13:56:56 May 26, 15 America/Campo_Grande	



The properties window allows you to modify some parameters and access a graph and a table with the last values received.

Data Information C 🛛						
Data Update	Data Graph					
Name: Temperature Current Value: 12	27 26 25					
Units: Format: float Storage: 47.29 KB	24					
Source Info	22					
Device: My Device						
Alias: 🖬 temp	16:00 20:00 0:00 4:00 8:00					
RID: 7456b607d83434b76c4994c6934c3e534bc583af						
Calculation: NA V	Write Data					
Retention 🖬	Data value: UPDATE					
infinity custom						
Duration:	Data Log (last 200 records) <u>View Detail Export Data</u>					
Count:	Time Value					
Share as Public Data	11:35:04 Jun 9, 15 12 America/Campo_Grande					
Make public:  MPORTANT: Data sources that are made public can be accessed by	11:35:01 Jun 9, 15 44 America/Campo Grande					
any user. By checking this box, you will be making the information displayed in this data source publicly accessible.	11:34:46 Jun 9, 15 2 America/Campo_Grande					

Fig. 14 - Data Information

The user can change the name (Name), unit (Units), add a calculation (Calculation) with the basic math operations and define other settings. To apply the changes you must click **UPDATE**.

Â

Do not modify the Alias of the variable; otherwise, it will not receive data from the field device.

The variable data should be available for a period of two years. If you need to increase this duration, ask for details at iot@novusautomation.com.

### 4.2.3 WRITE DATA

You can write a value to a variable. To do this, open the properties of the variable in Write Data section, type a value and click UPDATE.

Write Data	
Data value: 42	UPDATE

Fig. 15 – Write data

The new value should appear in the data list on the Data Log (last 200 Records) section, as shown in Fig. 16.

Data Log (last 200 reco	ords) <u>View Detail</u>	Export Data
Time	Value	A
16:46:34 Jun 10, 15 America/Campo, Grande	42	
America/Campo_Grande		

Fig. 16 - Data log section

### 4.2.4 EXPORTING DATA

You can export all the data for a variable into a CSV file. The export function can be accessed on the property page of the variable in the Data Log (last 200 records) section. Click in **Export Data**.

Data Log (last 200 reco	rds) <u>View Detail</u> (Expo	<u>rt Data</u>
Time	Value	<b>^</b>
16:46:34 Jun 10, 15	42	
America/Campo_Grande		

Fig. 17 - Exporting data

The export tool can export more than one variable at a time, so the user must select the desired variables, the time interval or the amount of the lasts values registered. After parameterization, click on **CONTINUE**.

Data Source Export					
	STEP:	DATA	CONFIRM		
	Sele	ct which data	a sources to export	Select: All, None	
		Data Source	Name	Selected	
		New temp			
		GPS			
		Temperature			
	Sele	ct the file typ	e to export: csv 🔻	]	
	• S	elect the time	e range to export.		
		From: 2019	5-05-14 📧 Unt	il: 2015-06-10 🗷	
	0 S	elect the dat	a points to export.		
	QL	IT CONT	INUE		

Fig. 18 - Data source export

To download the CSV file with the exported data, click on this link and save the file on a folder of your computer, as shown in the Fig. 19.

Data Source Export		$\boxtimes$
What's next? It is your data - use it however you like - open it with your favorite spread- sheet program, import it int other analysis software or just save it for a rainy day.	STEP:     DATA     CONFIRM       Data successfully exported.     Please clic this link is save the exported data to your computer.	
	Data Sources: Temperature Time Range: From 2015-05-14 Until 2015-06-10 Format: Comma delimited .csv (rfc4180)	

Fig. 19 – Downloading the CSV file

### 4.2.5 DELETING A VARIABLE

for further analysis.

To delete a variable you can access to their properties in the Delete Data Source section, type the word confirm and click on DELETE.

### 4.3 DEVICES

Here you can see all devices for the application. It is possible to add more devices by clicking + Add Device at the top right corner of the window.

Devices					<u>+ Add Device</u>
Name	Alias	Туре	Unique ID	Location	
My Device	14176583	TagTemp-NFC	14176583	Brazil	

### Fig. 21 - Devices

In the Fig. 21 you can see an example of this screen, where appears a device named as My Device and some respective information.

### 4.3.1 ADDING A DEVICE

Click on the **Device** item on the left menu. After loading the new window, click in + Add Device at the top right corner of the screen to start adding the new equipment.

Devices					+ Add Device
Name	Alias	Туре	Unique ID	Location	
My Device	14176583	TagTemp-NFC	14176583	Brazil	
		5 1			

Fig. 22 – Adding a device

The next step is to select the device type and click CONTINUE.

	STEP:	SETUP TYPE	DEVICE SETUP	CONFIRM	
How do I know which device type to choose? If you have a device that is not in the list of supported devices, choose the generic device type.		Select a support	ed device below.		
What does the device look like?	k C	QUIT CONTINUE			
3G router for IoT application in industrial environments capable of reading data from Modbus slaves. Roteador celular 3G para aplicações IoT industriais com capacidade de ler dados de escravos Modbus.	n				

Fig. 23 - Device type

After choosing the equipment, it will be necessary to introduce two mandatory information: serial number and an identifier name. The serial number is numeric and is located on the label on the equipment. After entering the required information, click **CONTINUE**.

Device Setup						$\boxtimes$		
S	STEP: SETUP	Туре	DEVICE SETUP	CONFIRM				
Where can I find my Serial Number ? Your Serial Number can be	AirGate-3G							
image below.	1. Enter dev	rice Seria	l Number					
	0030381412	0001						
	2. Please er	2. Please enter a device name						
	My AirGate-	3G						
	3. Please er	nter a dev	vice location (optional	- can be a string or GPS (	decimal degrees)			
	PoA							
	QUIT	CONTINUE						

Fig. 24 - Identifying a device

Register the equipment is the first step to make so that it can send data to the cloud. When you enable the service on the device and connect it to the Internet, you will complete the process. Please, follow the instructions in the equipment manual.

After activation, automatically it creates a simple dashboard on the platform to show some parameters for diagnostic purposes. You cannot edit this dashboard.



You have used all of your Portal's allocated Devices.
To add more Devices, you can either:
1) Delete an existing Device first
2) Add more Devices to your Portal Limits (use the Billing Page, or request from your Domain Administrator)
QUIT

Fig. 25 - Reached the limit of devices

### 4.3.2 STEPS TO ADD A NEW DEVICE IN NOVUS CLOUD

- Purchase of any NOVUS device with NOVUS Cloud connection.
- Hire an account on the service NOVUS Cloud.

- Configure the device so you can connect to the **NOVUS Cloud** as indicated in the manual.
- Access NOVUS Cloud and add the new device as described in this manual.
- Connect the device to the Internet.
- Ready! If everything has gone well, you can see the device status indicated as ACTIVATED on the device properties page.
- You can see the data received by NOVUS Cloud accessing the Data item on the menu or in the default Dashboard created automatically, as
  indicated in this manual.
- The basic application in the cloud is ready!

#### 4.3.3 DEVICE PROPERTIES

Click on the Device item on the left menu. After loading the new window, click on a device in the list to access their properties.

Devices					+ Add Device
Name	Alias	Туре	Unique ID	Location	
My Device	14176583	TagTemp-NFC	14176583	Brazil	

Fig. 26 - Device properties

The Device Information window allows you to modify some parameters and access the list of variables with the last values received.

Device Inform	nation							C 🛛
Device Update	3				Data List			+ Add Data
Name:	My De	vice			Name GPS	Alias qps	Last Value	112.60714
Alias: 🖬	14176	583			New temp	newtemp	1.2	
Туре:	TagTe	mp-N	FC		Temperature	temp	12	
Serial Number:	141765	83						
Status:	Activate	ed ?						
Timezone:	(GMT-	04:00	)) Brazil	•				
Location: 🛙	Brazil							
Storage:	47.4 KE	3						
Active Time:	1	r	ninutes					
CIK:	f86e811b	67a5fa	0a73e769f4	8f6649ef979a755				
Device Speci	fic Limit	s (opt	ional)					
	Inherit	Cus	stom					
Data:	۲	$\bigcirc$		(available: 97)				
Events:	۲	$\bigcirc$		(available: 100)				
Daily Emails:	۲	$\bigcirc$						
Daily SMS:	۲	$\odot$						
				UPDATE				

Fig. 27 - Device properties

The user can change the Name, Time zone, Location, Active Time (maximum time to consider the device online) and add new variables. To apply the changes you must click **UPDATE**.

The Status field is important because through it is possible to know if the device is active, inactive or expired, according to the description below:

- Status Activated: The device is active to the cloud and enabled for sending data.
- Status Not-Activated: Device stated in the cloud, but not activated.
- Status Expired: It pass more than 24 hours since the device statement without logging for activation. It will be necessary to re-enable the device to activate it.

#### 4.3.4 DELETING A DEVICE

To delete a device, access to their properties and on the Delete Device section, type the word confirm and click DELETE.



Fig. 28 - Deleting a device

#### 4.3.5 RE-ENABLING A EXPIRED DEVICE

If the device is not ask for activation within 24 hours after its statement on the platform, it will expire. Therefore, it will be necessary to renew its registration in the Re-Enable Device section in the computer properties. Enter the word **confirm** and click **CONTINUE** to renew for more 24 hours.



Fig. 29 - Re-enabling a device

### 4.4 DASHBOARDS

The dashboards are the screens of the application, where you will design all your graphics representations. These work as a container where the user can create widgets, that are objects used to display the variables of the equipment or any other information.

#### 4.4.1 ADD A DASHBOARD

Click the Dashboards item on the left menu. After loading the new screen, click + Add Dashboard on the top right corner of the screen to start adding a new dashboard. Set a name (Dashboard Name), a Description and determine whether the layout will have two (2 columns) or three (3 columns) columns. Then click **SUBMIT**.

Dashboard Setup		$\boxtimes$
What is a "Dashboard"? A "Dashboard" is a different way to visualize data from the same Portal. Some applications may require a "Dashboard" for users and a different "Dashboard" for the maintenance team. It gives you a way to create different dashboards for the different dashboards for the different ways you need to view your data.	Dashboard Name My dash Description My dash Location Thumbnail (150px by 100px) Escolher arquivo Nenhum arquivo selecionado Clear (optional) Template custom • Layout 2 columns • QUIT SUBMIT	

Fig. 30 – Adding a dashboard

The dashboard created will be empty and you need to add widgets to display information. After its creation, click the area indicated on the Fig. 31 to open the dashboard and start editing.

Your Dashboards 🛙					Restore Default Dashboard
Select	Thumbnail	Name	Public	Description	URL
CONFIGURE		My dash	No	My dash	https://iot.novusautomation.com/views/1874061916/1967997182

#### Fig. 31 - Selecting a dashboard

Although it seems natural when click on the **CONFIGURE** button, you will be directed to the properties of the dashboard, determined at the time of its creation.



Upon reaching the limit of dashboards of your account, you will cannot add more dashboards. To increase this limit, please, contact us at iot@novusautomation.com.

### 4.4.2 DASHBOARD PROPERTIES

Click the Dashboards item on the left menu. After loading the new window, click one of the dashboards of the list to access their properties.

Your D	ashboards 🛿				Restore Default Dashboar
Select	Thumbnail	Name	Public	Description	URL
		My dash	No	My dash	https://iot.novusautomation.com/views/1874061916/1967997182
		My 2nd Dash	No	my dash	https://iot.novusautomation.com/views/1874061916/2107156545



The properties window allows you to modify the following parameters:

Dashboard l	Jpdate
Name:	My dash
Template:	custom
Description:	My dash
Location:	
View Thumbnail: (150px by 100px)	Escolher arquivo Selecionado Clear
URL:	https://iot.novusautomation.com/view s/1874061916/1967997182
Home:	Use as Portal Home Page
Navbar:	Hide left side navigation bar
Layout:	2 columns 🔻
Share as Pu Make public: IMPORTANT: D anyone. By chec displayed in this	ublic Dashboard ■ ashboards that are made public can be viewed by king this box, you will be making the information Dashboard publicly accessible. UPDATE

Fig. 33 - Editable parameters

- Name;
- Description;
- Location;
- Use o Portal Home Page: Makes this dashboard as your default homepage;
- Hide left side navigation bar: Hides the left side menu and the ADD WIDGET and CONFIGURE buttons;
- Layout: Option to select arrangement in two or three columns;
- Make public: The dashboard becomes publicly accessible through the Internet. The access link is the URL field, as shown in the Fig. 34.



To apply the changes you must click UPDATE.

#### 4.4.3 ADD A PRIVATE VIEWER USER

You can invite one or more users as private viewers of a dashboard. After adding the user in the Admin session, in the Private Viewer Access section on the properties of a dashboard, select it and click **ADD USER**.

Private Viewer Acce	SS
Enter User Email:	novuscloudusertest@gmail.com ▼
	ADD USER
Current Private Vie	wers:
User Email	Remove

Fig. 35 – Adding a private viewer user

#### 4.4.4 ADD WIDGETS TO A DASHBOARD

Widgets are objects used to display information to the user. This information may include variables of a device, images, maps, animated components, interactive components, among others. The platform has a set of standard widgets that require no programming, so you need just configuring it. There is also the possibility to create custom widgets, where the user can use multiple templates of widgets or write their own using javascript.

Click the **Dashboards** item on the left menu. After loading the new screen, click the **ADD WIDGET** button to start adding widgets. The next step is to select the type (Widget Type) and define a title. Then you must click on **CONTINUE**.

dd widget					$\boxtimes$
STEP:	Туре	CONFIG			
Widget Type:	Gauge		T		
Widget Description:	Shows the val	ue of a data s	ource on a configu	rable gauge.	
Block Title:	Temperature				
QUIT CONTINUE					

Fig. 36 - Adding a widget

In the above example, it was selected widget called Gauge. The next step is to configure the widget to display information.

Add widget
step: Type Config
Block Title: Temperature
Widget Type: Gauge
Min Level: -40
Max Level: 110
Low Level: 30 Color: #41C4DC
Mid Level Color: 🛛 #FFFFF
High Level: 90 Color: #A91E27
Default Data Source: Temperature
Set Caller:NONE
Refresh Rate: 10 Seconds ( 0 seconds = no refresh )
QUIT SUBMIT

Fig. 37 - Creating a widget

In the specific case of this widget, you can configure the following parameters:

- Min Level: Minimum limit of the object;
- Max Level: Maximum limit of the object;
- Low Level: Lower level of the object;
- High Level: Higher level of the object;
- Default Data Source: Variable of a device whose value will be displayed;
- Set Caller: Advanced parameter. Some widgets can call other (have the function of caller), while others may be called (for this, you must set parameter set caller). The purpose is the exchange of messages between widgets.
- Refresh Rate: Individual refresh rate of the object, in seconds. This is not the data transfer rate from the device!

After configure the widget, it will appear as follows on the dashboard:

no	
MANAGE Form Data Devices Dashboards Admin Script	Temperature 42 J J Last Reported Time 16:46:34 Jun 10, 2015

Fig. 38 - Widget

In the top bar of the widgets are three buttons with specific functions:



You can use this button to move the widget in the dashboard, repositioning it in relation to other widgets.

You can use this button to force the update of values in the widget.

You can use this button to view the properties of the widget or to delete it.

Example of a dashboard with two widgets:



Fig. 39 - Example of a dashboard with widgets

You can found more information about widgets on this link.

### 4.4.5 DELETING A DASHBOARD

To delete a dashboard, you must access to their properties and in the Delete Dashboard section, type the word confirm and click DELETE.

Delete Dashboard	
WARNING! If you delete this Dashboard, this Dashboard's configurations will be lost (no data will be affected, however	).
To delete, first type "confirm" below.	
	DELETE

Fig. 40 - Deleting a dashboard

# 4.5 ADMIN

Some portal information, the user inclusion and the summary use of contracted resources are available in this section.

### 4.5.1 RENAMING THE PORTAL

To rename the portal, click the Admin item on the left menu and in Portal Information section edit the field Portal Name and click UPDATE.



Fig. 41 - Renaming the portal

### 4.5.2 START DASHBOARD

Define this dahsboard as the homepage when logging into the account. To change this, click the Admin item in the left menu, and then in the Set Portal Home Page section, select the desired dashboard and click SUBMIT.



Fig. 42 - Dashboard home page

#### 4.5.3 NEW USERS

To add new users, click the **Admin** item on the left menu and in the Portal Roles section insert the user name and select the role for that user on the platform.

Portal Roles		
Enter User:	anotherviewer@gmail.com	
	Search for other users by entering either their name, I complete email address.	Username, or
Role:	Viewer •	
View Dashboard:	My Dashboard	
* An account creation invita	tion email will be sent to the user if they do not alread	ly have an account.
INVITE USER		
Current Roles:		
Current Roles:	User Name	Remove

Fig. 43 - Adding new users

There are two types of users available: Manager and Viewer. A Manager can edit all the properties of the application, while the Viewer can only access the permitted dashboards. There is an additional type, called Contact, which you cannot use.

Click the button **INVITE USER** to send an invitation to a new user. The guest user will receive an email with the information of its account activation. This invitation is valid for seven days. After this period, you will need to contact <u>iot@novusautomation.com</u> informing the email address of the user to renew the invite.

#### 4.5.4 PORTAL RESOURCE SUMMARY

When signing up a plane, there is a set of features associated with it. To view the summary, click on the **Admin** item on the left menu and then in the Portal Resource Summary section, to view the summary of use of the resources.

	Used	Total
Jsers	1	1
Custom Dashboards	1	5
Storage	0 B	-
Devices	1	1
Data Sources	3	100
Events	0	100
Alerts	0	100
Shares	0	100
Daily Email Limit	0	10
Daily SMS Limit	0	0
SMS Bucket	-	-
Daily XMPP	0	100
Daily HTTP Dispatches	0	100

Fig. 44 - Portal resource summary

The resources shown in red colour have reached their limit. If you need more features, please contact us at iot@novusautomation.com.

### 4.6 SCRIPT

The platform allows advanced programming language with Lua. The scripts run directly on the server, so do not depend on access to the site for execution. You can use the scripts to, for example:

- Perform advanced data analysis using mathematical functions and multiple platforms;
- Adjust and interpret the data;
- Convert the data to other formats;
- Send emails, update http pages, publish on twitter;
- Send data to other systems.

#### 4.6.1 ADDING A SCRIPT

To add a script, click the Script item in the left menu and after load the new screen, click + Add Script on the top right corner of the screen to start adding a new script.

A script can have the scope of the platform or device. In the following example, the Reference Device is My Device and the sample script (template) performs the dispatch of emails.

Scripting			C	X
STEP:	CONFIGURATION			
What is a Script? Scripts are based on a coding language called Lua. Reference manuals for Lua 5.2 can be found at http://www.lua.org/manual/5.2/	Reference Device: Script Name: Example Script: QUIT CONTINUE	My Device • My script Email Dispatch •	]	

Fig. 45 - Adding a script

The script editor allows debugging on the same programming environment, so that if there are any errors, the editor will display a message and the status will indicate the problem. The Fig. 46 shows an example of screen:

My script - My	Device Device Documentation	
Available Aliases:	Debug Log:	Status: 🔵 Running
Data Source Aliases 🖬	America/Campo_Grande	Message
newtemp		
gps		
temp		
Event Aliases 🖬		
4 local my_data = ali 5 local usermenail = 'v 6 vhile true do 8 local ts1 = my_dat 9 local va1 = my_dat 10 if 0 == va1 then 1 local message = 11 debug(message) 12 debug(message) 13 end	sg['YOUR DATA SOURCE ALIAS HERE'] YOUR EMAIL ADDRESS HERE' ta.wait() a[tal] string.format('Device sent data point (%s) on %s!', v 'Board Turned On',message)	val, date())
4 local my_data = ali 5 local useremail = 'v 6 vhile true do 8 local ts1 = my_dat 9 local val = my_dat 11 if 0 == val then 11 debugmessage 13 email(useremail) 14 end 15 end vote: Press F11(ShtH+F12 on Mac	sg['YOUR DATA SOURCE ALIAS HERE'] (OUR EMAIL ADDRESS HERE' ta.wait() a[tal] string.format('Device sent data point (%s) on %s!', v 'Board Turned On',message) OS X) to toggle full screen mode or press CM+Enter to update your script whi	<pre>val, date()) ie your cursor is focused on the editor.</pre>

Fig. 46 - Editing a script

Because the scope is for the device My Device, you can use just their own variables in the Available Aliases section. After editing the script and confirm that they will run smoothly, click **UPDATE**.



You can use one free script for each device. If you need to use more scripts, you need to buy more contacting us at <u>iot@novusautomation.com</u>.

See additional documentation on programming scripts on the platform here.

#### 4.6.2 SCRIPT PROPERTIES

To edit a script, click the Script item on the left menu and select a script to access its properties. The properties screen allows you to change all the parameters previously set. After you finish editing, click on the **UPDATE** button.

### 4.6.3 DELETING A SCRIPT

To delete a script, access their properties and in the Delete Script section, type the word confirm and click DELETE.

Delete Script	
Warning! If you delete this Script, you will not be able to rec Script contents.	over the
To delete, first type "confirm" below.	
	DELETE

Fig. 47 - Deleting a script

#### 4.6.4 SUPPORTED DEVICES

The NOVUS Cloud platform supports the next NOVUS devices and their variations:

- FieldLogger;
- AirGate-3G;
- AirGate-3G with GPS;
- TagTemp-NFC;
- TagTemp-NFC with digital input.