SensorSpace® Cloud Platform QuickStart

SensorSpace

Cloud Storage & Analytics Platform

mantracourt

SensorSpace® QuickStart

Overview of SensorSpace

The SensorSpace Cloud platform offers browser-based access to data collected from our wireless telemetry instrumentation anywhere, at any time. Send data to the Cloud from any PC. Cloud gateway hardware now available for standalone systems.

SensorSpace allows you to view and analyse your data, configure actions and alerts based on realtime data and unlock the value of your data through visual tools. SensorSpace is designed for ease. The user-friendly interface allows you to configure solutions in no time!

SensorSpace has several components.

1. T24 Transmitter(s). Sends sensor data from strain bridges, 0-10 V, 4-20 mA and more. For more information on this section, see https://www.mantracourt.com/products/wireless-telemetry or the T24 manual https://www.mantracourt.com/userfiles/documents/t24_telemetry_user_manual.pdf
2. SensorSpace Device. This collects the data from T24 transmitters and sends it to the cloud. There are hardware and software versions.
3. SensorSpace Platform. This receives and stores the data and allows management and viewing through
    a. Devices. Manage your devices and their variables. Create new variables based on incoming data
    b. Dashboards. Create dashboards to help viewing and interpreting data
    c. Events. Create events that trigger emails, text messages and more when conditions are reached

(SensorSpace will work with both T24 and Broadweigh transmitters. If you are a Broadweigh user, please read Broadweigh whenever T24 is mentioned. Further information on Broadweigh and software is available here: broadweigh.com)

Plans and Tiers

Use of SensorSpace requires an account that is paid monthly. Each device (hardware or software) will need a separate Plan and Tier. The Plan refers to the type of device (P1 is software, P2 is hardware ethernet etc.) The Tier is based on the amount of data that you are going to use (T1 is the lowest, T6 is the highest). This is simplified by the fact that the devices will limit the amount of data based on the tier that you are. If you require a faster data update rate there will be less channels available to send. It is possible to change tier without sending hardware back to Mantracourt. Contact us for more details. Full details and prices of plans and tiers are available on our website.

Getting going with a software device

Install LOG100

If you don't already have LOG100 installed, you can download it from our website:

https://www.mantracourt.com/software/t24-range/t24log100-channel-data-logging-visualisation-software

Download and run the software, following the on-screen instructions.

Install SensorSpace Software Device Plug-in

You will have been provided with a link to the SensorSpace plug-in for LOG100. Download and run it and follow the on-screen instructions.

Configure LOG100 project

Configure the LOG100 project as required. There is a short setup tutorial on our YouTube channel: https://www.youtube.com/user/mantracourt/videos. Make sure that you think about all the channels required. Channels will be limited depending on the tier that you are on and the rate that you are sending to SensorSpace. You can select the individual channels that are sent to SensorSpace in the configure project window. If you select more channels than allowed then only the first *n* channels will be sent.

Also within the **Configure Project** window is the **Cloud** button. Click this and we see this window.

1) The device name will be how this device appears on SensorSpace.

2) The name of the project that is currently set to send data to SensorSpace. Click 'Bind To Current' to change to the current active project.

3) The current Plan and Tier for this device. Max channels will be shown based on how often data is to be sent to SensorSpace. (4)

5) Allows you to choose a lower security data tranfer type designed for metered connections

6) Opens the log window that shows communications with SensorSpace.

Now we can configure the SensorSpace part of project, including when to send and data transfer type.
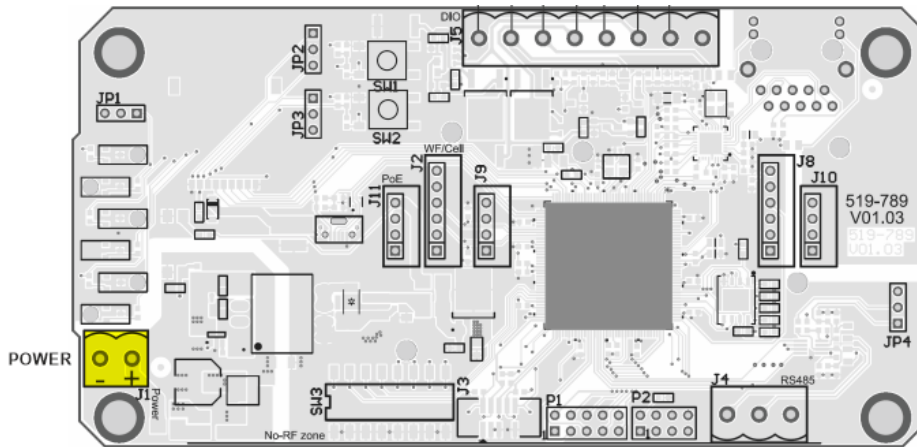
Select bind to current for only the current project to send data to SensorSpace. This ensures that when you open a new project it doesn't instantly start sending its data to SensorSpace.

Now go to **Using your account on SensorSpace**.

Getting going with a hardware device

Connecting up

Remove the lid of the device and connect an 8-36 V dc power supply to the two part connector, J1.

Connect the ethernet port to a network with connection to the internet.

Install T24 Toolkit

If you don't already have T24 Toolkit installed, you can download it from our website:

https://www.mantracourt.com/software/t24-range/telemetry-toolkit-for-2-4ghz-modules

Download and run the software, following the on-screen instructions.

Configure the hardware device

The simplest way to connect to the device is with a hard pair. Plug your T24 base station into your PC, open the T24 Toolkit, remove power from the device, click pair on the Toolkit homepage and then reapply power to the device. You should now be paired.

Firstly, make sure that the radio settings of your device match those of your transmitters. If you are going to use autofill then setting a group key is a good idea.

Select the inputs tab and you will see the following:

1) Set to at least three times the longest transmit interval of the linked transmitters.

2) This is how fast the data is sent up to SensorSpace. This will then set how many channels can be sent depending on your tier.

3) When selected this mode automatically populates the list with transmitters as the device receives them.

4) If not in Auto Fill Mode, you can manually enter the data tag here.

5) Here you can select the data that is sent to the cloud. Choose from the most recent data received or the average or maximum or minimum reading since the last upload to SensorSpace.

6) Clear the Data Tag from this list entry.

7) Clear the list completely.

It is useful to check your SensorSpace connection on this page:

This shows your device's connection status and a log of the connection sequence.

There are LED indicators on the gateway device to allow for easy checking of operation.

Full details are available in the manual but generally:

Green LED, slow flash- startup/connecting

Green LED, fast flash- good

Red LED, off- good

Red LED, any flash- error

Now go to **Using your account on SensorSpace**.

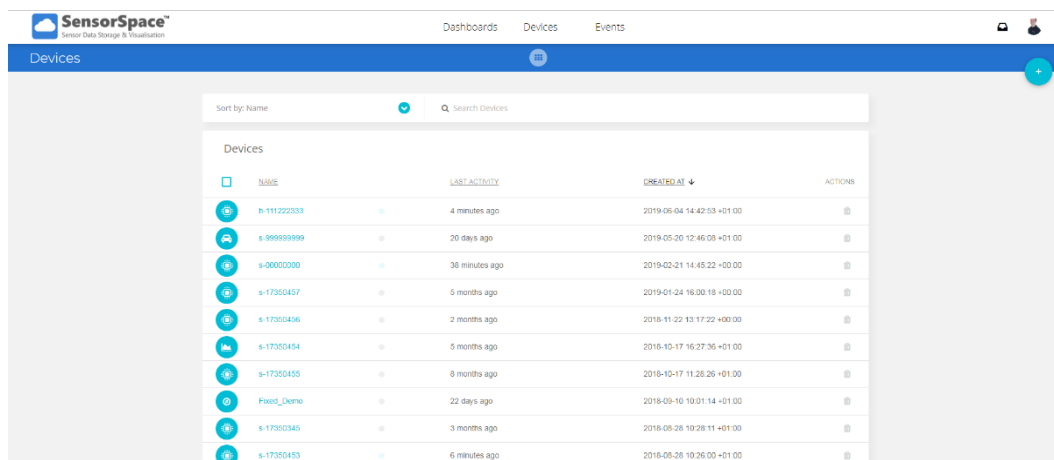# Using your account on SensorSpace

Logging in

Use a browser (Chrome is recommended and **MS Internet Explorer is unsupported**) to navigate to
sensorspace.com

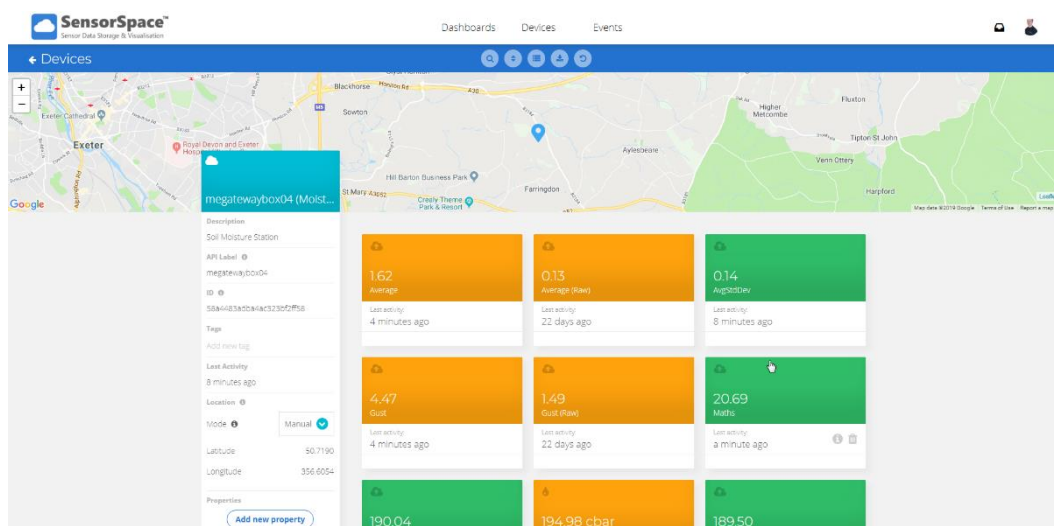There are three levels of user. You will have been provided with usernames, passwords etc.

- **Manager**
    - o Managers can do everything except creating, editing or deleting users and devices. To do that, contact Mantracourt.
- **Explorer**
    - o Explorers can create, edit, view and delete dashboards and events. They can view the devices, variables and values, but can't edit or delete them.
- **Dashboards**
    - o These users can only see all the dashboards of their organization but cannot change them.

Check Device

If you have manager or explorer status, click on **Devices** tab (at the top). Your device(s) should be here. (You will need to have started the SensorSpace plugin sending data in LOG100 first, see above). Click on the device you want to check.

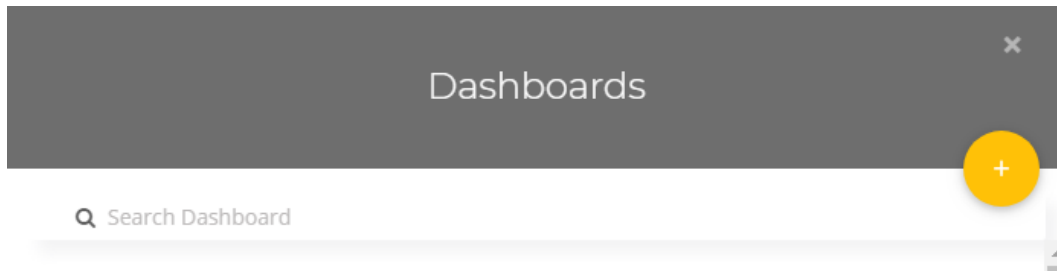You will now see the variables that are delivered by this device.

In the above picture the orange variables are delivered by the device and the green ones are 'synthetic' variables which are made by the user. They can take various forms including sums or averages of variables.

To start with it's a good idea just to check that the variables that you expect are there. There will be an extra variable called **Status**. This variable allows you to check on the status of all channels in LOG100. The higher the number shown by Status (0-100), the more severe the problem. This is decoded by using a dashboard widget. (See below)

If you delete any variables you will permanently lose that data. If the variable is being delivered by a hardware or software device then it will be re-created the next time data is delivered (But data that existed before the variable was deleted will not be re-created).
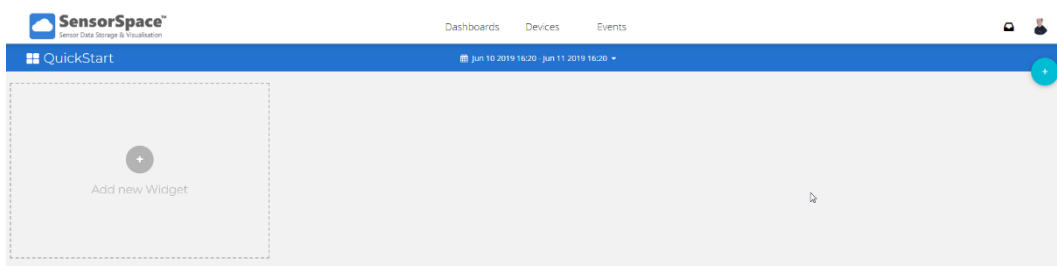
Create a Dashboard

Dashboards allow easy viewing and analysis of your data. Click on the **Dashboards** tab then click the 'window' icon. This will show any already created dashboards.
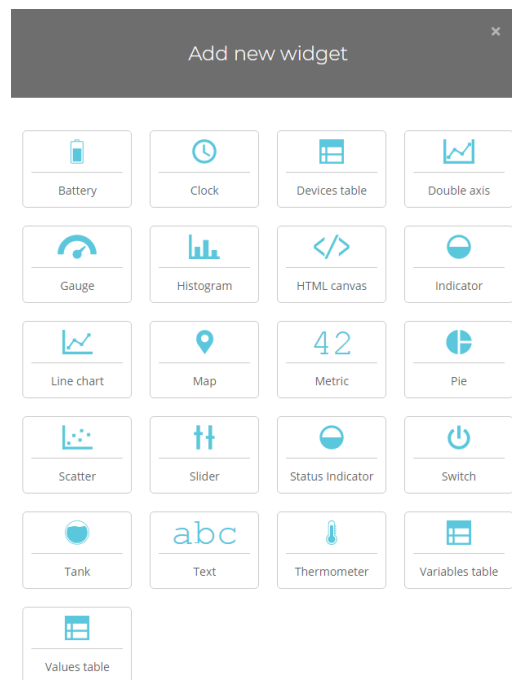

Click the 'plus' sign to create a new dashboard. Name it and click the green 'tick'. You can also change other settings but this will give a good start.

Now click on your new dashboard from the list on the left. You will see a page similar to this.
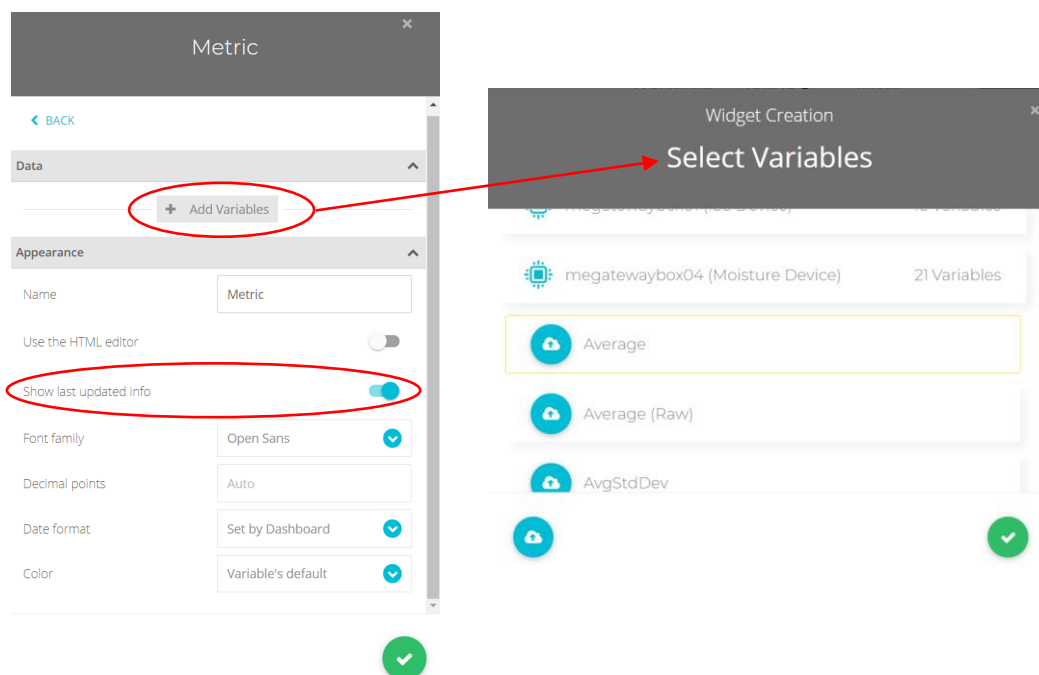

Widgets are different methods of displaying the data. Click the 'plus' sign to create a new widget.
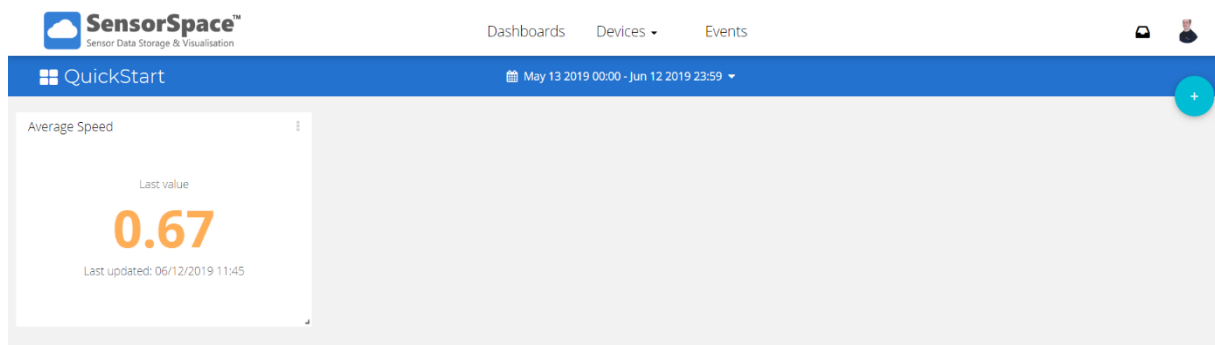
For this guide we will look at two simple tiles: **Metric** and the **Status Indicator**.

Metric

When you select Metric widget, the above window will appear. Name the widget and click Add Variables to choose which variable you would like to display. (You can choose from any of your available variables in your devices).
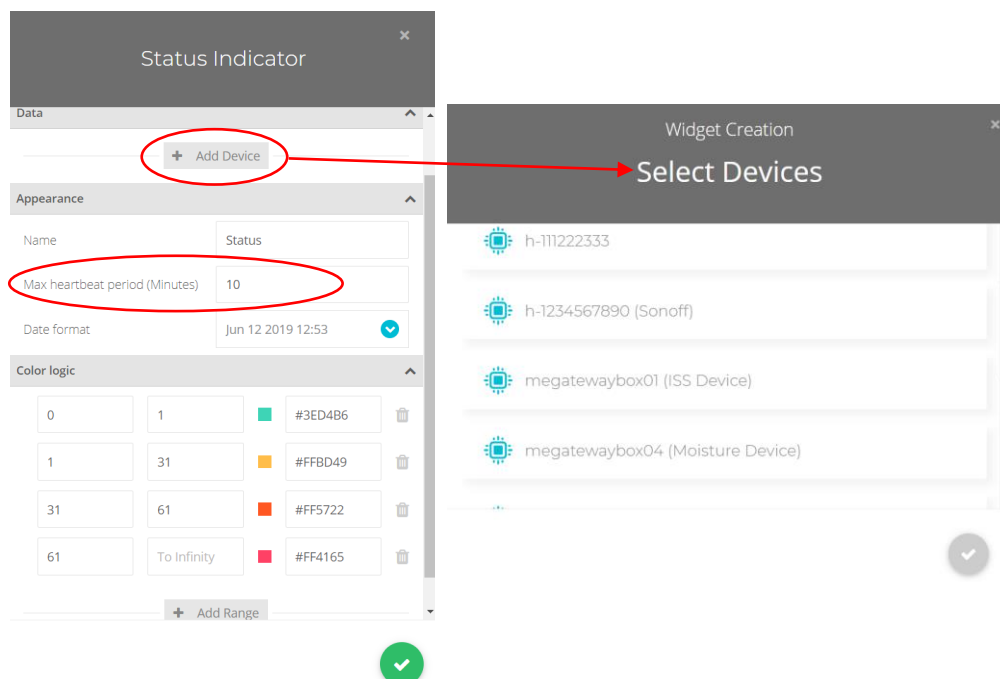
You can choose various other options but probably the most useful is the 'Show last updated info' which lets you know when the last data for this widget arrived.

We can resize the widget by grabbing the bottom right corner. Move the widget to where you want on the screen by clicking and holding the top of it. Clicking the three dots in the top right of the widget allows you to **Download** the widget's data, **Share** the widget via a weblink, **Edit** the settings or **Delete** the widget. Note: deleting the widget does not delete the data, this is fed from the Device(s).
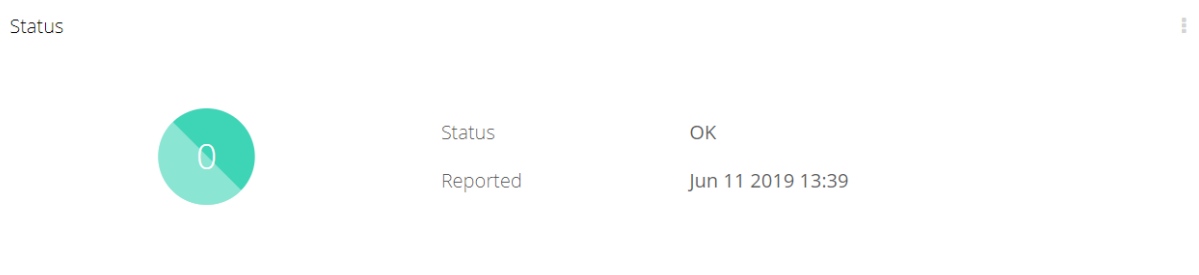
Status Indicator

The **Status Indicator** widget has a special type that uses the Status variable. This allows you create a widget which shows the most recent Status update and when it was received.
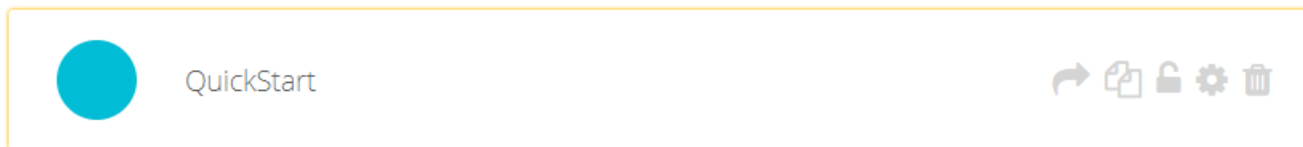

You select the device that you want to monitor, name the widget and set the max heartbeat period (This will show a timeout error (100) if no data is received within that period). You can set the colours that will be displayed at different values of Status.

This lets you monitor how the device is doing. More details are available in the main manual but essentially, the bigger the number, the bigger the problem.

You can keep adding widgets until you have enough information displayed. Then you can **Share**, **Copy**, **Lock**, **Edit** or **Delete** the Dashboard.
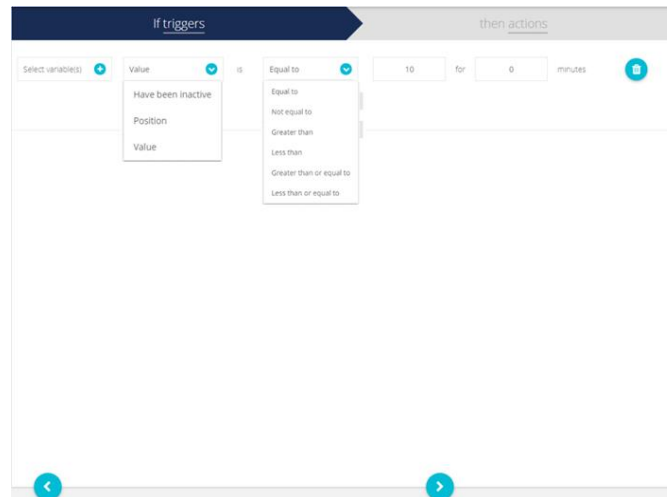

Click **Share** and you will get a link that you can share with anyone you want. They will be able to follow the link and view the dashboard that you have created. They will not be able to change anything or download any data.

You can add multiple **Dashboards.**
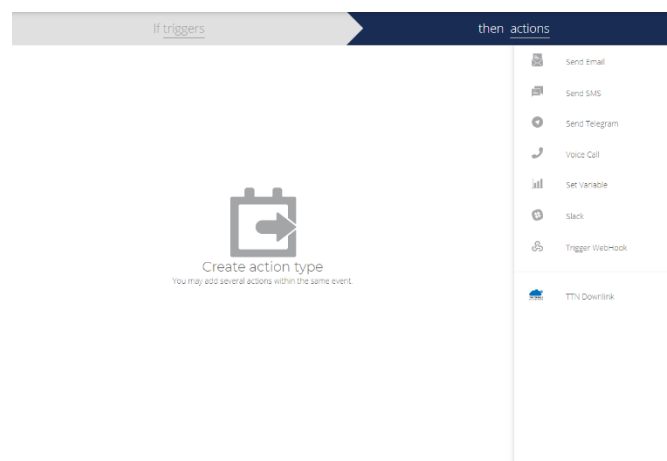
Create an Event

Events allow you to set triggers for text messages and emails etc based on variables.

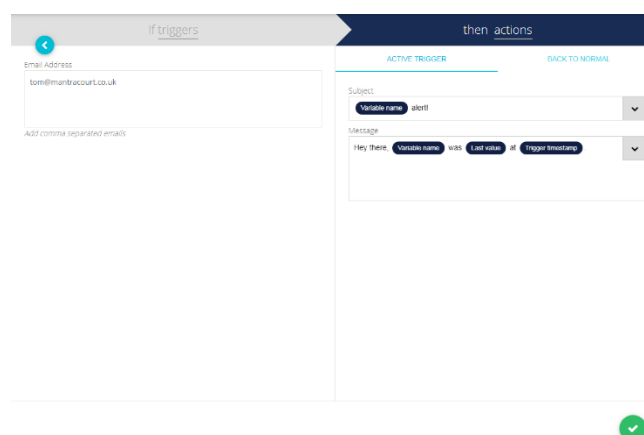Go to the **Events** tab and click on the 'plus' sign.

This page lets you set up the **trigger**(s) for the event. You select the variable and how it triggers. You can have multiple and/or triggers. Click the right arrow to move to the next page.
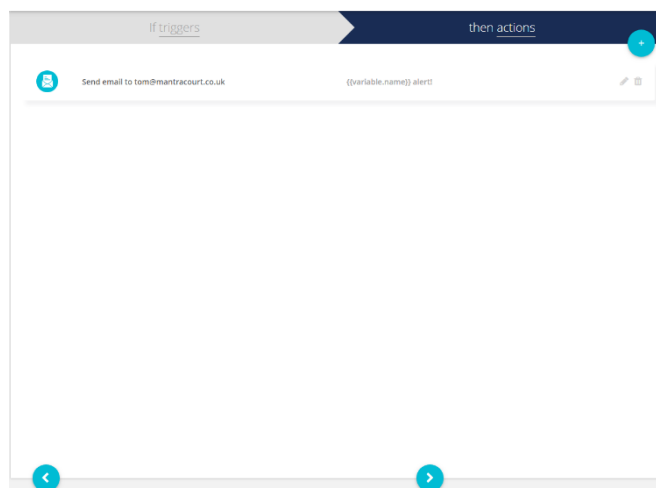
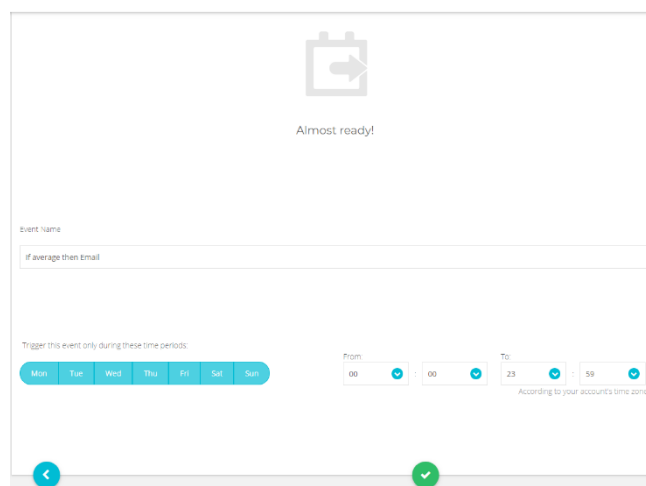Click the plus sign to create an action type.

Here you select the action type then fill in the relevant parts. This includes setting the message contents using text and the **Custom Fields** to reference variables and times etc.

Click the right arrow again to see a summary:

Clicking the pencil will allow you to edit the event. Click the right arrow again when you are happy.

Now you can set when you want the event to trigger and name it. Click the tick when you are happy.

The event will now be in the Events list.

You can hover over various parts in the summary and view the event log. It is also possible to edit from here and disable the event.

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