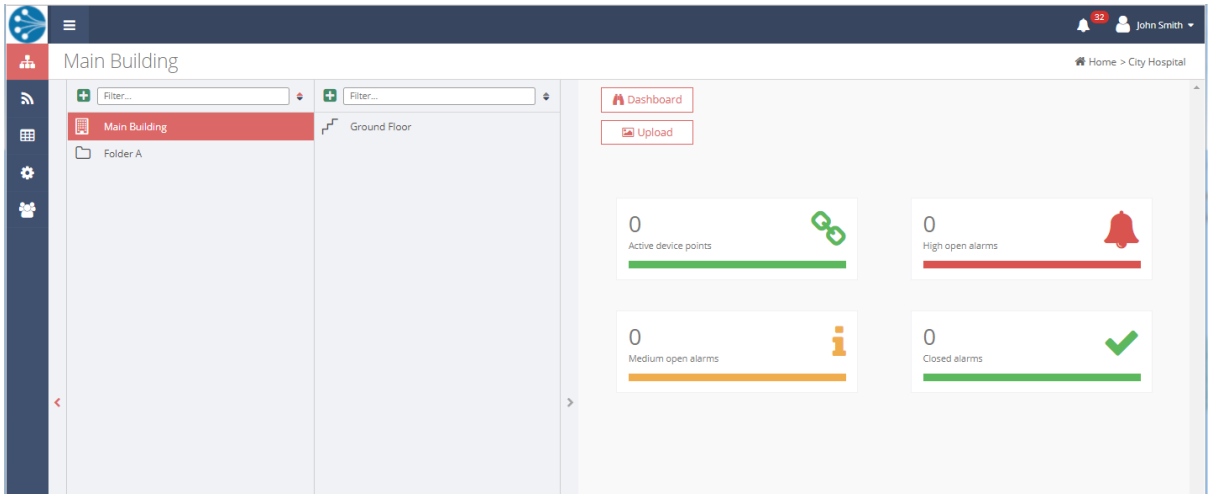
HOW TO… ANALYSE DATA

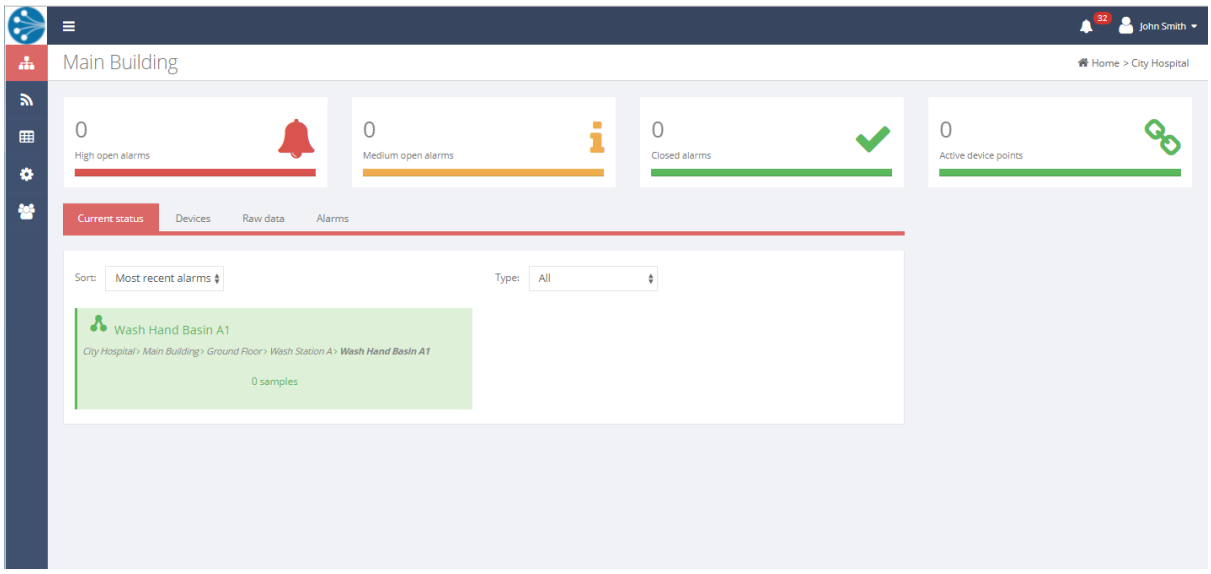
Reviewing the Data

There are several ways to review the data collected from the devices. Where multiple devices have been installed in the same section of the hierarchy you can view a high-level Red, Amber, Green (RAG) dashboard for that section to see the overall status of the device points they cover.

Select a location with multiple device points:

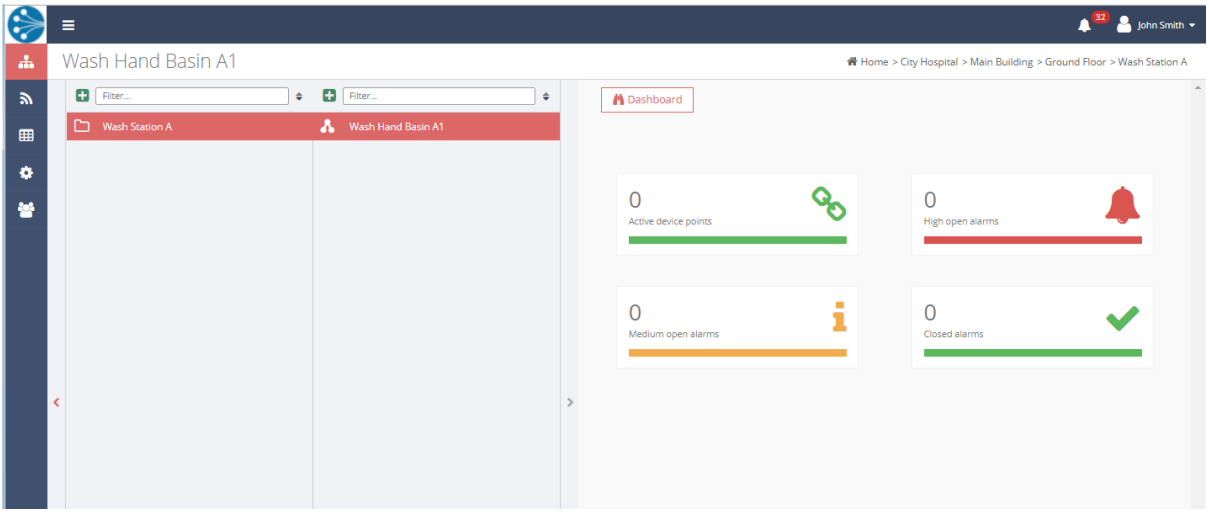


Click on the dashboard icon:



This shows a summary of the alarms and active device points.

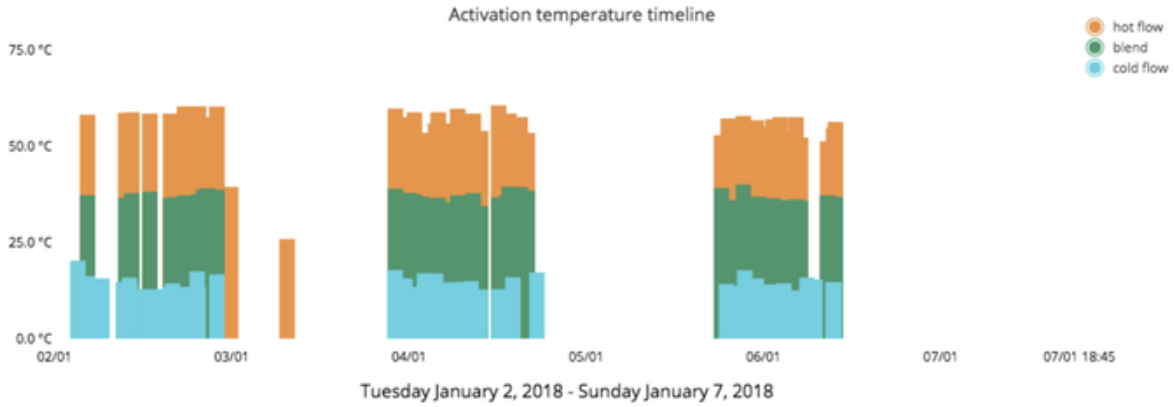
To analyse an individual device point select a device point in the hierarchy and click on dashboard:



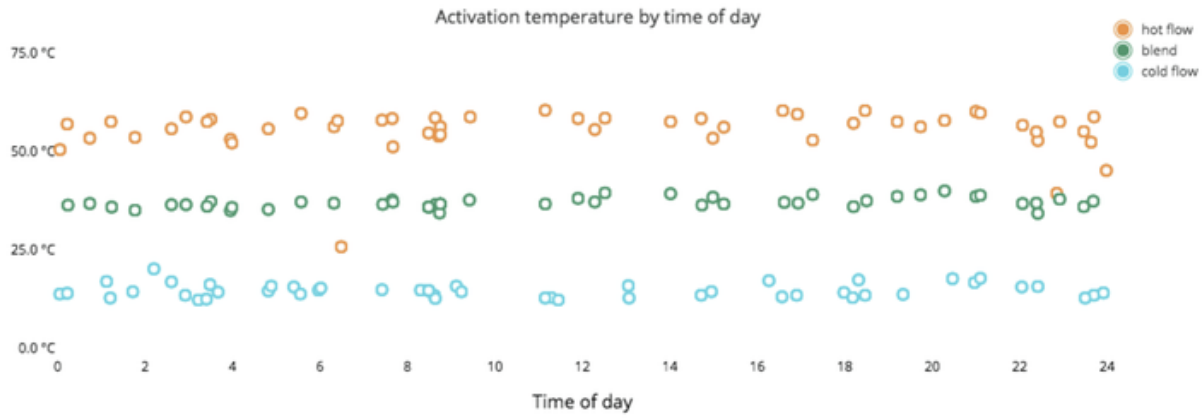
There are a number of analysis charts that appear for TMU device point types, although some charts may not appear if there are no sensors attached to provide the necessary data. The time range of the charts can be adjusted using the calendar widget on the page.

Flow event charts appear for individual outlets (such as TMV Wash hand basin, Wash hand basin, Shower and Riser Cupboard). These include:

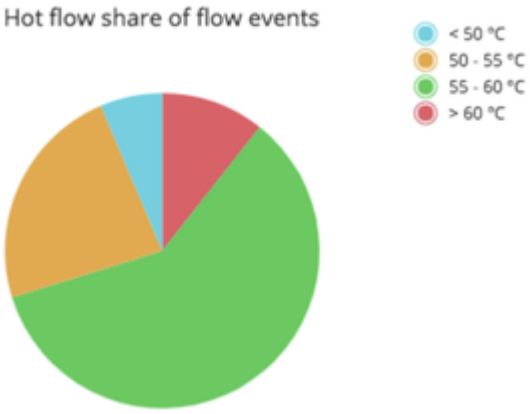
Activation temperature timeline: This chart shows all events that have been detected over the selected week. Each bar represents a single event and you can hover over the chart to view the time stamp and peak temperature reached for each event. This allows you to see gaps of infrequent usage (for example, weekends in an office building).



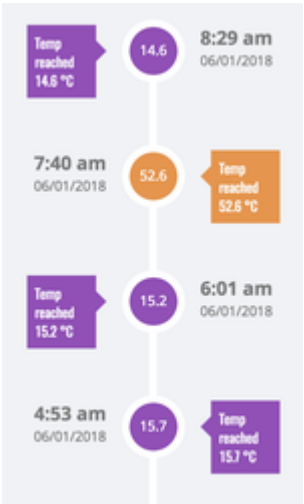
Activation temperature by time of day: This chart shows the same data as above, but arranged by the time the event occurred rather than the date. This allows you to see the patterns in usage, such as between 0800 and 1800 in an average office building.



Share of flow events: This pie-chart shows the percentage of events where the peak temperature was within the configured temperature bands. This shows you how often the outlet is reaching target temperatures, when in use.

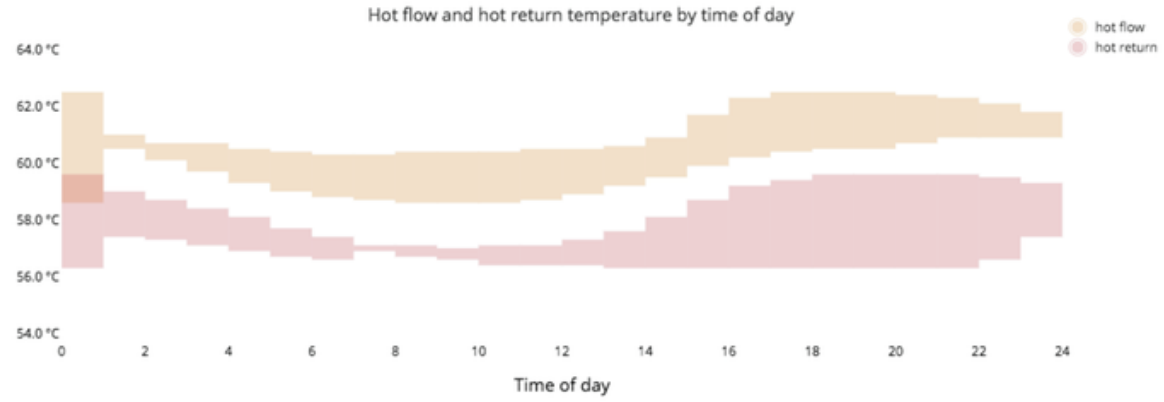


Flow event timeline: This graphic shows all detected events and alarms in chronological order.

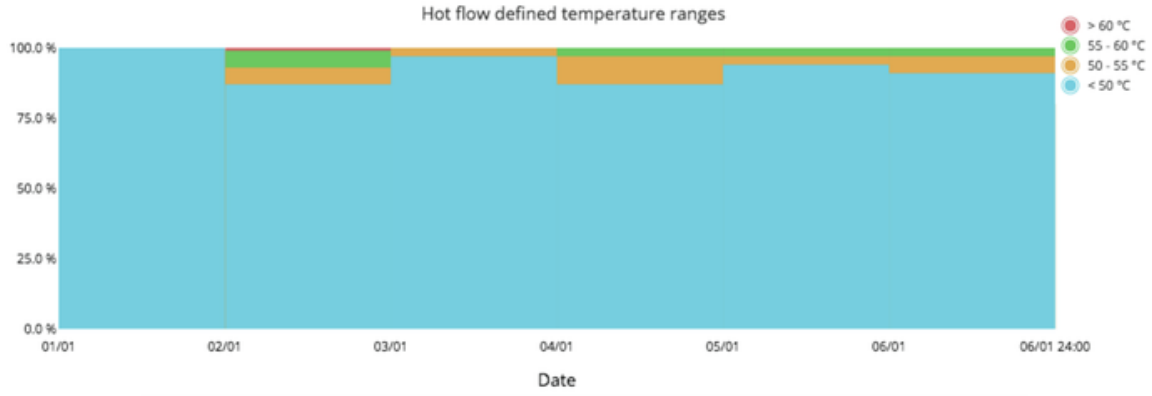


For device point types where flow events are not detected, there are different charts displayed.

Temperature by time of day: This chart shows the range of recorded temperatures (from the minimum to the maximum) for each hourly time period across every occurrence of this time period throughout the week (7 occurrences). This allows you to see patterns and spread of temperatures recorded.



Defined temperature ranges: All device points also display temperature band charts that are based on the configured settings on the device point configuration page. This chart shows the percentage of time that readings were in each of the defined temperature bands, based on readings recorded every 10 seconds by the device across the week.

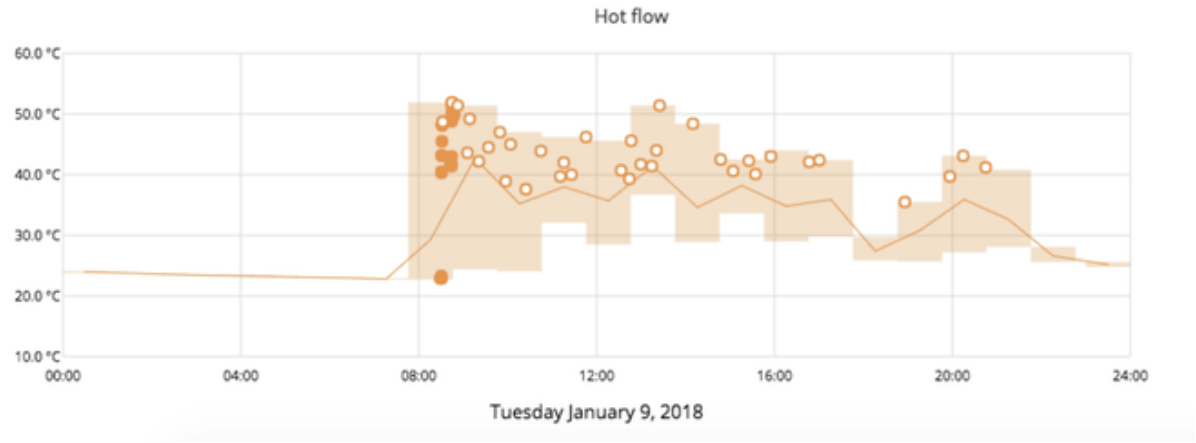


Calorifiers: A calorifier has an additional type of chart, showing the average difference in temperature between the hot flow and hot return readings.

Raw Data

The TMU devices perform some processing of the data before it is sent to the LinkThru platform every hour. All processing is based on temperature readings that are taken every 10 seconds, so while this causes no loss of data quality and insight, the reduction in volume of messages sent by the device greatly improves the battery performance. As such the raw data charts reflect the processed data message sent by the device and include details on the range of temperatures recorded as well as the events detected.

On this raw data chart you can view the hourly summary messages which display the minimum, maximum and average recorded temperature readings from that hour (from the 360 measurements taken). This is represented by the shaded orange areas and the orange trend line:



The white dots indicate a single event that was detected with a timestamp and the peak temperature that was reached for this event. This information comes from event messages.

The coloured-in orange dots indicate a detailed profile message is available to view. You can select any of these dots to view further data. This information comes from the temperature profile messages.

By selecting to view the detailed profile message detected by the device, the time range of the chart is focussed to show only the details of this event. These are temperature readings at 10 second intervals, allowing you to review how quickly peak temperatures are reached: