AAW Control Systems Limited
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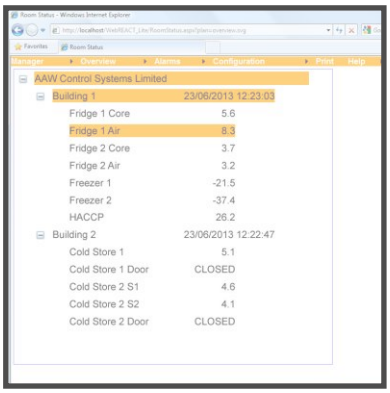
User Manual:

WebREACT Lite



AAW Control Systems Limited
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User Manual: WebREACT Lite

Introduction

WebREACT Lite is a PC-based supervisory control and data acquisition system that enables you to monitor sensor inputs from a practically unlimited number of different areas and devices on a single PC. It will raise alarms if any sensor input is outside of acceptable limits, and keeps a full log of historical data to meet your needs. For further report requirements please ask one of our AAW Team about the Full WebREACT system.

Contents

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Accessing Your WebREACT Lite System

WebREACT is a web-enabled system that can be accessed via any PC that has Internet Explorer and a connection to the Internet.

1. Open Internet Explorer

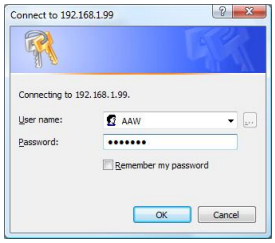
   You will need to be running at-least Internet Explorer version 7.

2. Type in the address (URL) for your WebREACT Lite system and press Enter on the keyboard.

   Once your WebREACT Lite system has been set up, you will be given a unique URL for accessing it. It will probably be worth making this your home page so that you are taken to it directly when you open Internet Explorer.

3. If required, enter your network user name and password and click **OK**

   Depending on your security setup, you may be prompted for a network user name and password. These should have been issued to you by your IT Services department.



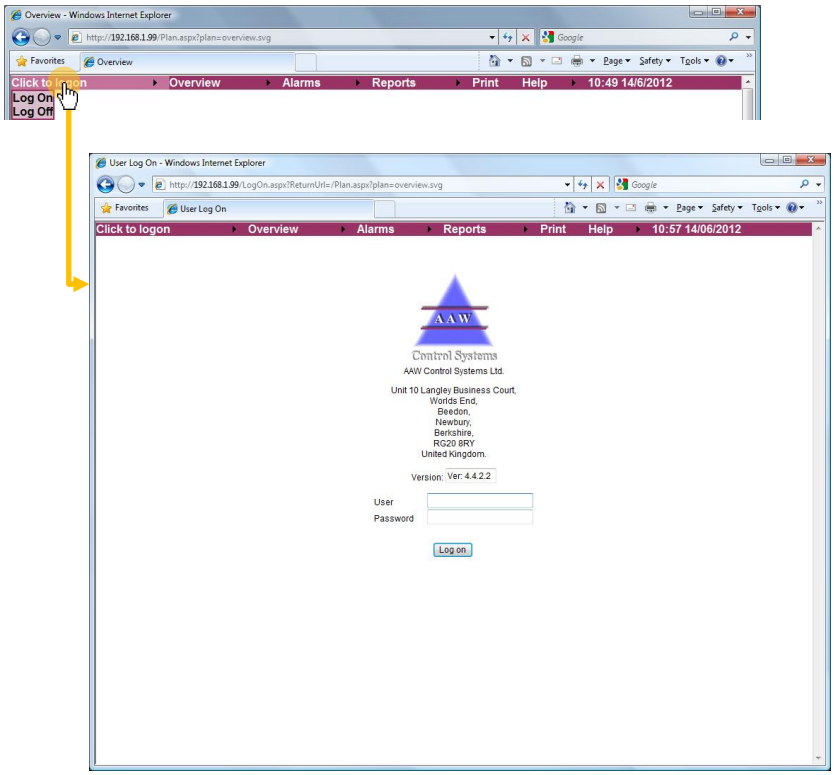
4. Wait for the *Overview* page to be displayed.

Logging On to WebREACT Lite

In order to perform certain functions you will first need to log on as a specific user.

1. Click ***'Click to logon'*** in the menu bar.

   The *User Log On* page will be displayed.

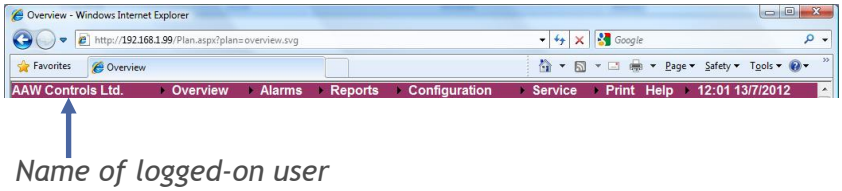


2. Type in your user name and password and click **Log on**

3. Wait to be returned to the main WebREACT Lite system.

   You will be returned to the page from where you initiated the logon process.

   The name of the logged-on user will be shown in the menu bar.



Name of logged-on user

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Viewing Your Locations and Facilities

WebREACT Lite offers an interface for viewing the locations and facilities that you're monitoring. As a general rule, if you want to look at a particular location or facility in more detail then simply click on it.

Tip: the cursor will change from an arrow to a hand when it is positioned over something on the page that is active for you to click on.

The Overview Status Page

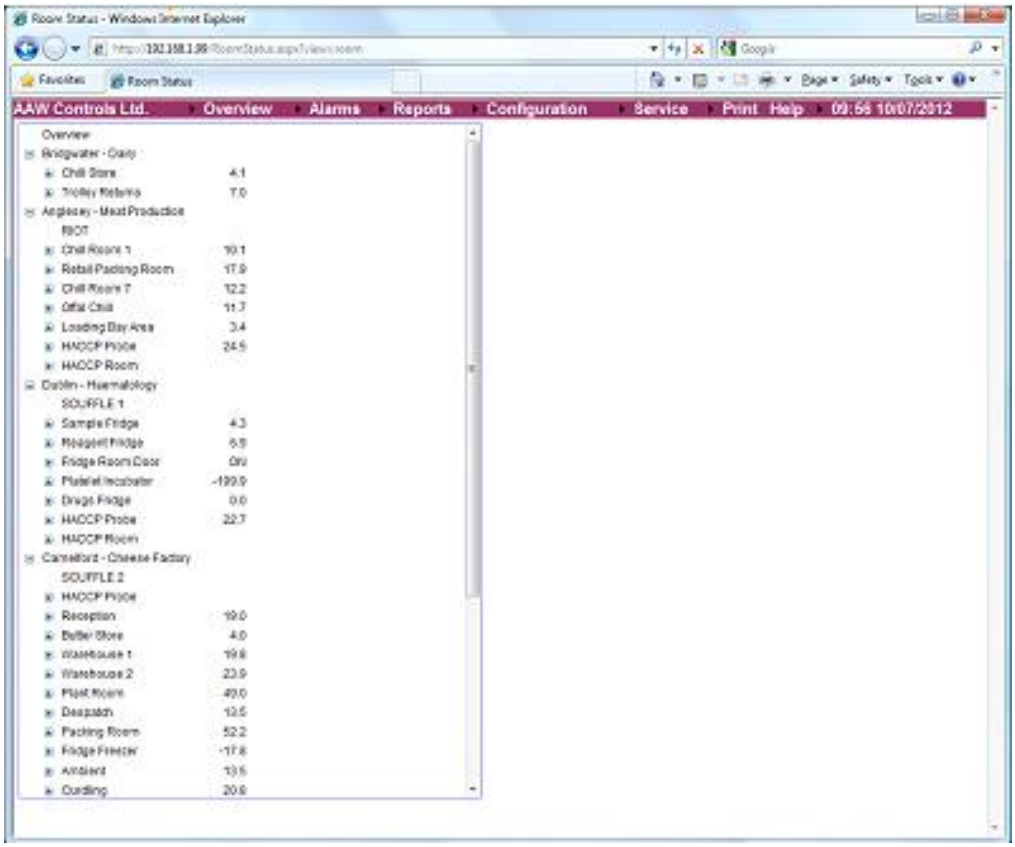
The *Overview* page provides a tree-view summary of all the monitored points. It allows you to quickly see the alarm condition of each point and to enter the room relating to that point - for example to acknowledge an alarm.

1. To view the Status screen, click the

2. The *Room Status* page will be displayed.

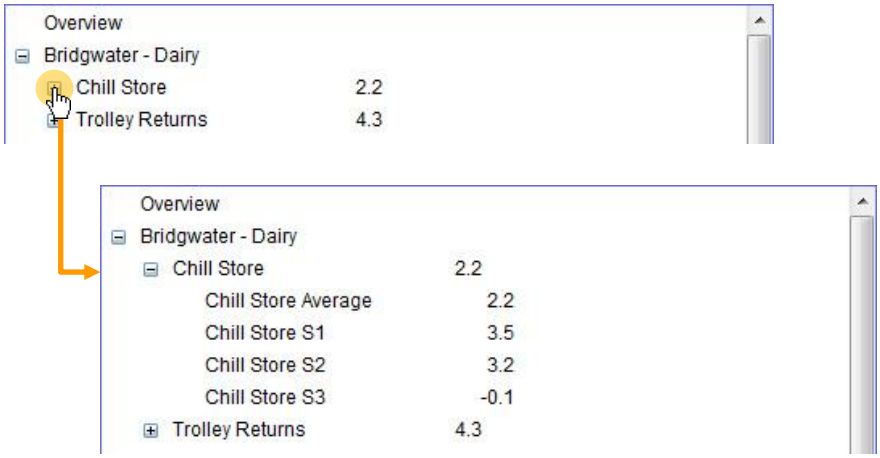
   If a room has an unacknowledged alarm it will be flashing orange.

   If a room has an acknowledged alarm that has not yet cleared, then it will be highlighted in yellow.



3. To expand or collapse a particular branch of the tree i.e. to see more or less detail, click on the ⊞/⊟ symbol next to the title of the branch.

   The symbol will change from a ⊞ to a ⊟ and vice versa depending on whether the branch is collapsed or expanded.

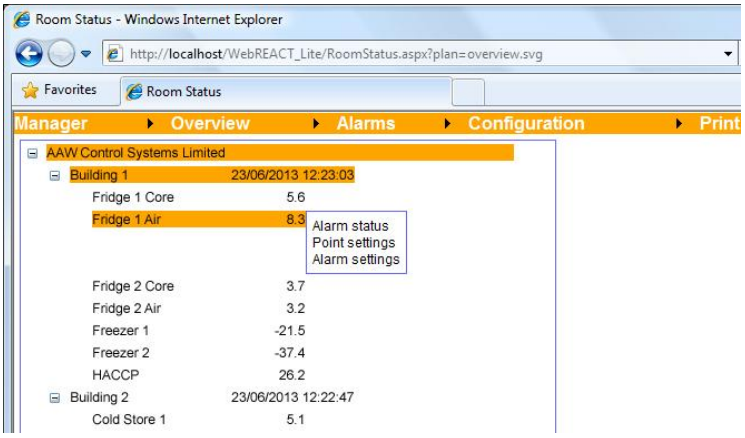


4. To enter a room - for example to acknowledge an alarm, click the name of the room.

   The *Room Graph* page for that room will be displayed.

   Please note: If you've expanded a branch so that it shows the individual inputs within a room, then to enter the room you need to click the name of the room not the name of any of the inputs.

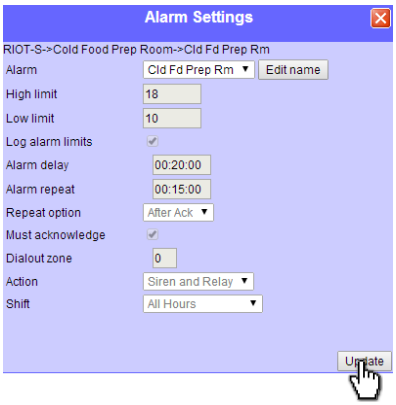
5. The configuration of each input can be accessed by clicking on the temperature shown on the overview screen.



From here the *'Point Settings'* (Enabling and disabling points), and *'Alarm Settings'* (Adjusting the configuration of an input alarm) can be selected.

Clicking the Alarm Settings will display the window below.

Note: If the boxes are greyed out and cannot be selected you may not be signed in, or your account does not have the required permissions to make these changes.



Changes will only be made once the update button is click at the bottom of the window.

*Please not, multiple changes can be made in one go but once the update button is clicked **you must wait** for the changes to be received by the unit, this may take up to 5 minutes. **No waiting can lead to some changes not being saved**.*

The description of each of the configuration settings are below.

Input Configuration Settings:

Setting:	Description:
Alarm enable	Controls whether the input will trigger an alarm if the sensor reading goes outside the allowed limits. **Please note:** It is highly recommended that your alarms are enabled at all times.
Sensor enable	Controls whether the input is taking/logging readings.
Action	Controls the actions that will take place in the event of an alarm being triggered.
Alarm from Alarm until	Shows the times for today during which the input will trigger an alarm. 00:00:00 to 00:00:00 means all of the day. 12:00:00 to 12:00:00 means none of the day. **Please note:** This setting cannot be changed directly from the *Room Picture* page, but is instead controlled through the *Shift* that is associated with the selected *Alarm Action*. See Configuration on the overview toolbar.
High limit	Controls the maximum value allowed for the input before a high alarm is triggered.

Low limit	Controls the minimum value allowed for the input before a low alarm is triggered.
Alarm delay	Controls the length of time that the sensor reading needs to remain outside the allowed limits before an alarm is triggered. This delay helps to avoid the system being over-sensitive to momentary temperature fluctuations.
Alarm repeat	Controls the length of time that the sensor reading can remain outside the allowed limits after the initial alarm has been acknowledged before the alarm is triggered again.
Flat line count	Controls the length of time (in seconds) that can elapse since a sensor's last reading was received before a "Flat line" alarm is triggered to indicate a loss of communication with that sensor.
Log alarm limits	Controls how often the alarm limits are plotted on the sensor graphs. Usually the alarm limits remain unchanged so do not need to be plotted too frequently.
Dial-out:	Selects whether to use the phone dial out function when going into alarm.
Email : Alarm Email	Selects whether to send emails out when a point goes into alarm.
SMS:	Selects whether to send SMS texts out when a point goes into alarm.
Input name	The name of the sensor input.
Address	Indicates whether the input is wired (I/O) or wireless. If wireless, …

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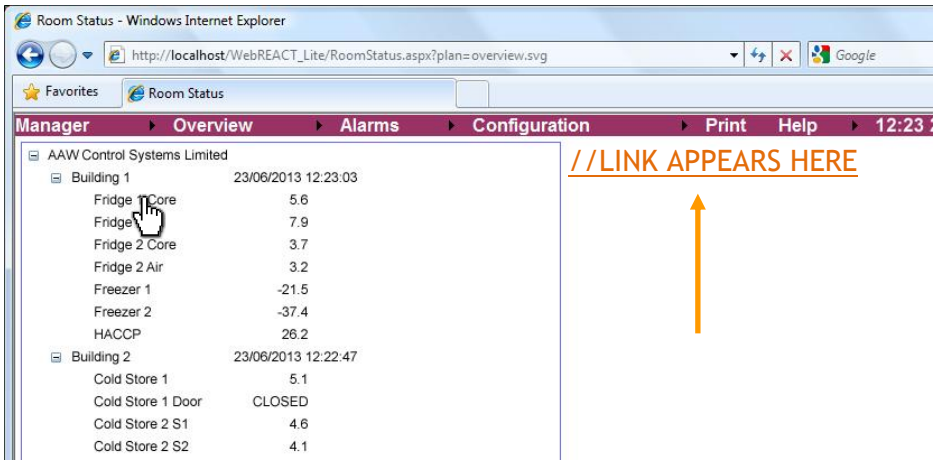
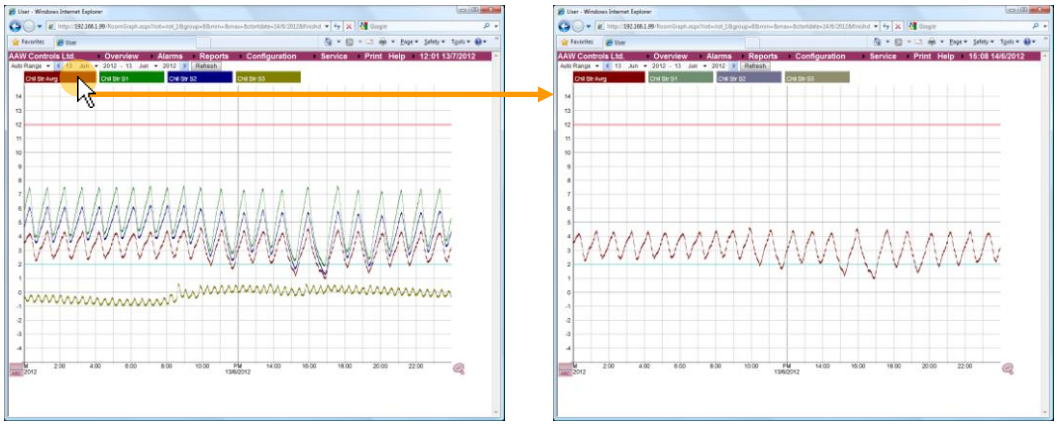
Viewing the Sensor Graphs

WebREACT Lite provides an interactive graphical display of the data collected by each sensor.

1. To view a sensor graph, go to the *Room View* page for that sensor by clicking on the link at the top of the page. The link for the room will appear when the room is selected from the overview list.

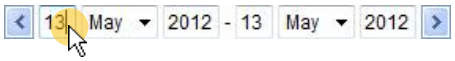


2. If there are multiple sensor traces shown on the same graph, you can double click on the name of a sensor to hide the other traces.

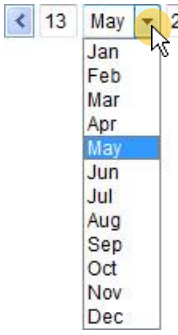


Alternatively you can single click on the name of a sensor name to show/hide that particular trace.

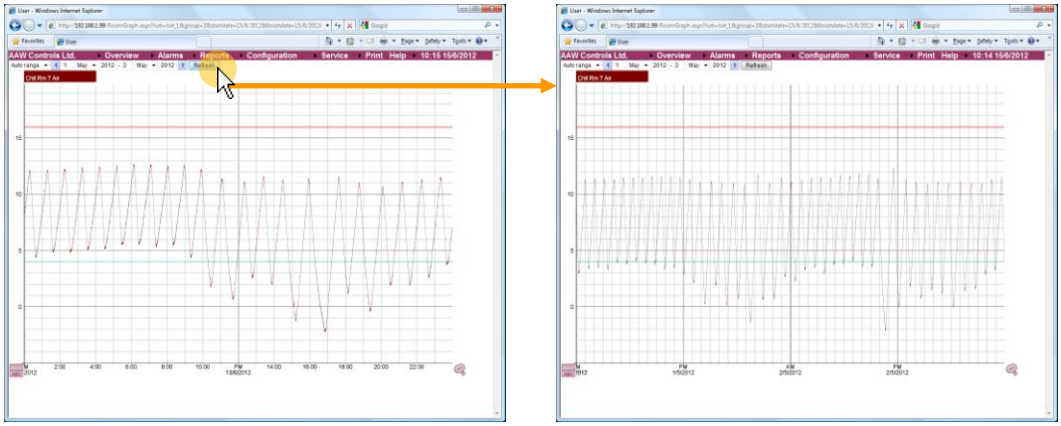
3. To change the period that the data is displayed for, click in the appropriate date boxes, enter/select the required date values, and click **Refresh**.



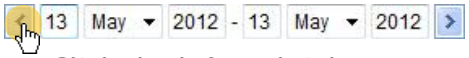
Click in the day or year boxes to edit the value.



Select the month from the drop-down list.



Alternatively, click the left and right arrows on either side of the date range to move the date range forwards/backwards. The sensor graph will be updated automatically i.e. you do not need to click the *Refresh* button.



Click the left and right arrows to move the date range forwards/ backwards.

The dates will be moved forwards/backwards according to the duration of the current date range.

For example, if the current date range is for a single day, then clicking an arrow will move the dates forwards/backwards by a single day.

If the current date range is for 7 days, then clicking an arrow will move the dates forwards/backwards by 7 days.

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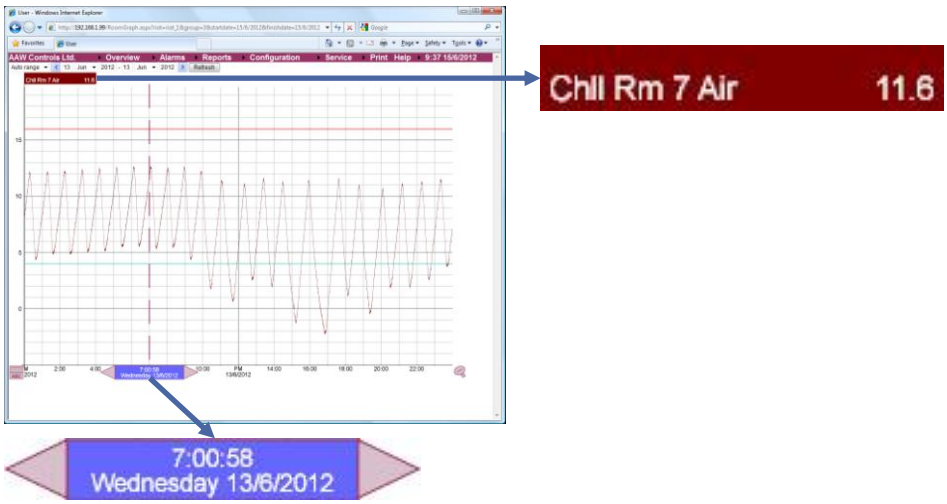
4. To see the exact measurement for a given point on the graph, double click on the point you're interested in.

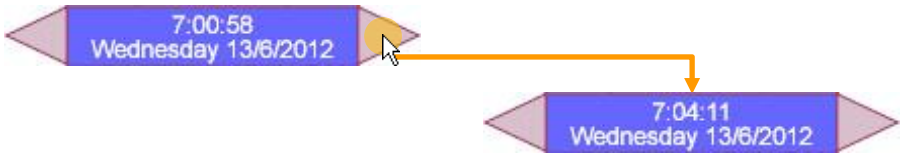
A vertical line will be displayed at that point with the exact date and time shown in a box at the bottom of the line and the measurement recorded shown next to the sensor name at the top of the graph.



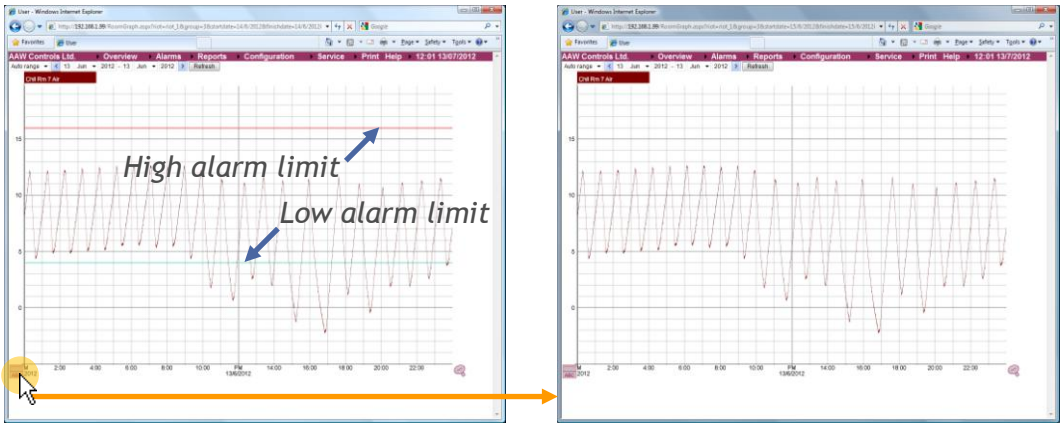
You can "nudge" the line forwards/backwards by clicking the arrows to either side of the time and date box.

The measurements shown next to the sensor names will be updated automatically.

How far the line is nudged will depend on how "zoomed in" you are...



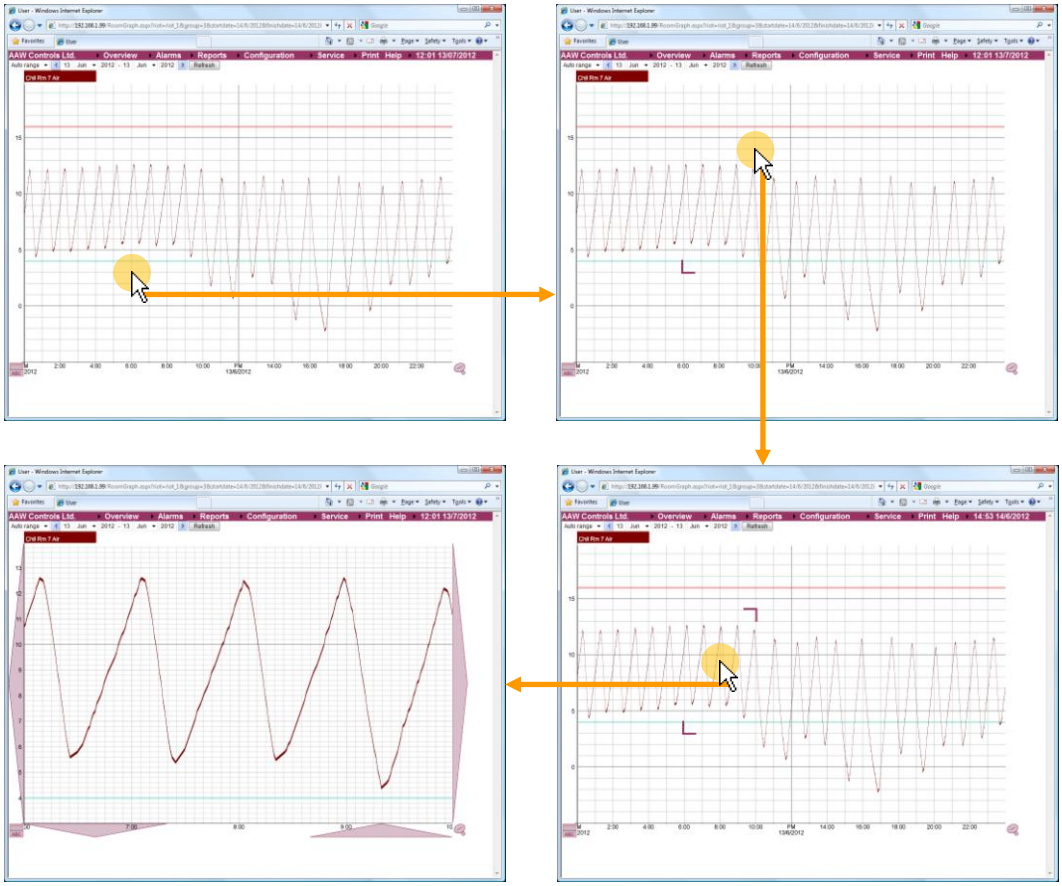
5. To show/hide the alarm limits, click the ABC button in the bottom left corner of the graph.



6. To “zoom in” on a part of the graph, click in one corner of the area you’re interested in. A right angle will be displayed at that point.

   Click in the diagonally opposite corner of the area you’re interested in, and a second right angle will be displayed.

   Finally click anywhere within the area enclosed by the two right angles to “zoom in”.



After zooming in on the graph, you can then scroll the view using the arrows to either side of the graph and underneath.

If required, you can zoom in repeatedly to get to the information/view that you need.

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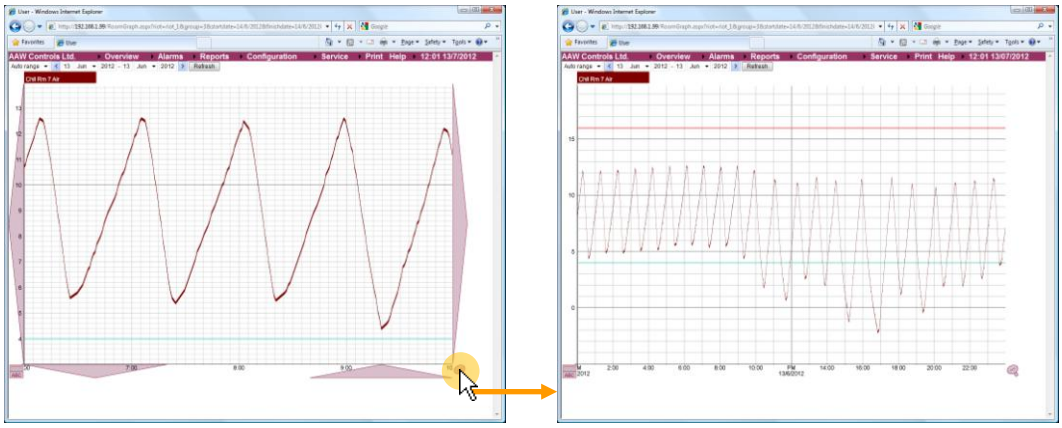
7. To “zoom out” of a graph, click the zoom out button in the bottom right corner of the graph.

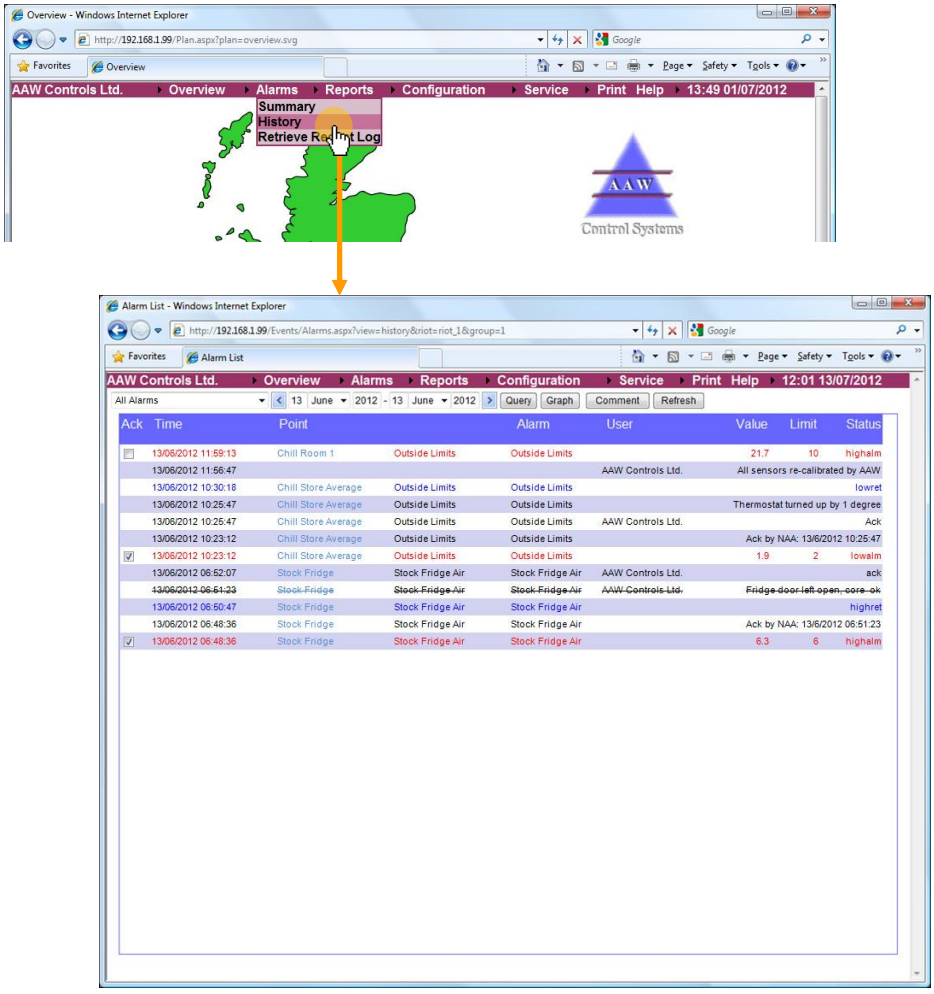


Viewing the Alarm History

The *Alarm History* page provides a chronological log of the events that have occurred on the system. This includes alarms, alarm acknowledgments, and configuration changes.

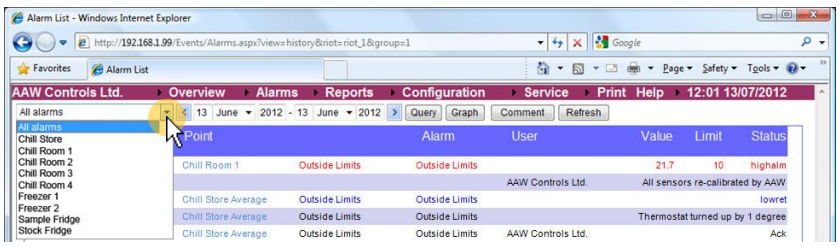
8. To view the Alarm History, go to the *Alarms* menu and click **History**

   The *Alarm List* page will be displayed, showing all events for today.



9. To filter the list of alarms/events to a particular room or facility, use the drop down list.

   The list of alarms/events will be updated automatically.



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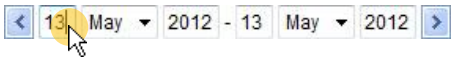
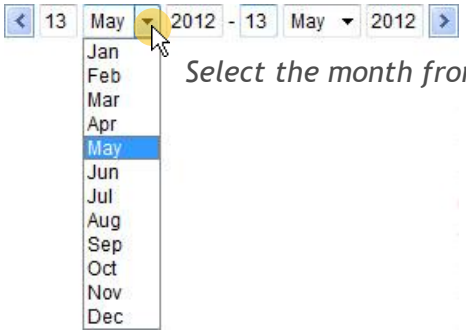
10. To change the period that the alarms/events are displayed for, click in the appropriate date boxes, enter/select the required date values, and click **Refresh**.



Click in the day or year boxes to edit the value.



Select the month from the drop-down list.

Alternatively, click the left and right arrows on either side of the date range to move the date range forwards/backwards. The list of alarms/events will be updated automatically i.e. you do not need to click the *Refresh* button.

Click the left and right arrows to move the date range forwards/backwards.

The dates will be moved forwards/backwards according to the duration of the current date range.

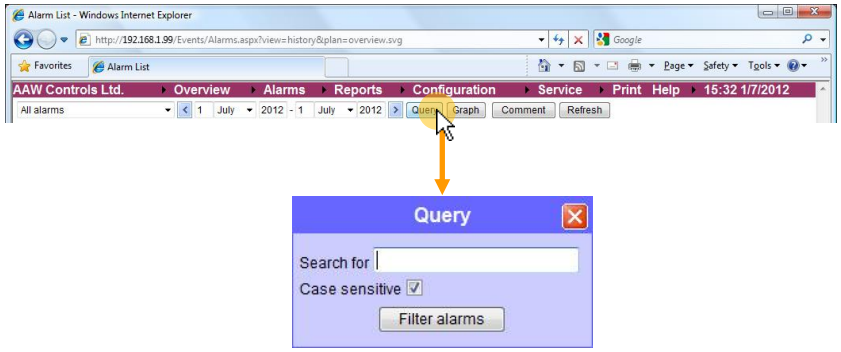
For example, if the current date range is for a single day, then clicking an arrow will move the dates forwards/backwards by a single day.

If the current date range is for 7 days, then clicking an arrow will move the dates forwards/backwards by 7 days.

11. To search the list of alarms/events for a particular word or phrase, click the *Query* button:

11.1. Click **Query**

A *Query* box will be displayed.



11.2. Enter the word or phrase you want to search for, select whether you want the search to be case sensitive, and click **Filter alarms**

The list of alarms/events will be updated to only show those that contain the required text.

Alarm History Events:

Status:	Description:
lowret	The graph temperature has returned from a low alarm to within limits.
highret	The graph temperature has returned from a high alarm to within limits.
ack	The alarm was acknowledged.
clr	The alarm has cleared (it has been acknowledged, and is back within limits).
highalm	The input temperature is outside the high limit.
lowalm	The input temperature is outside the low limit.
=>	Indicates a configuration change Duration " => 00:30:00 the " indicates that the setting was empty prior to the change

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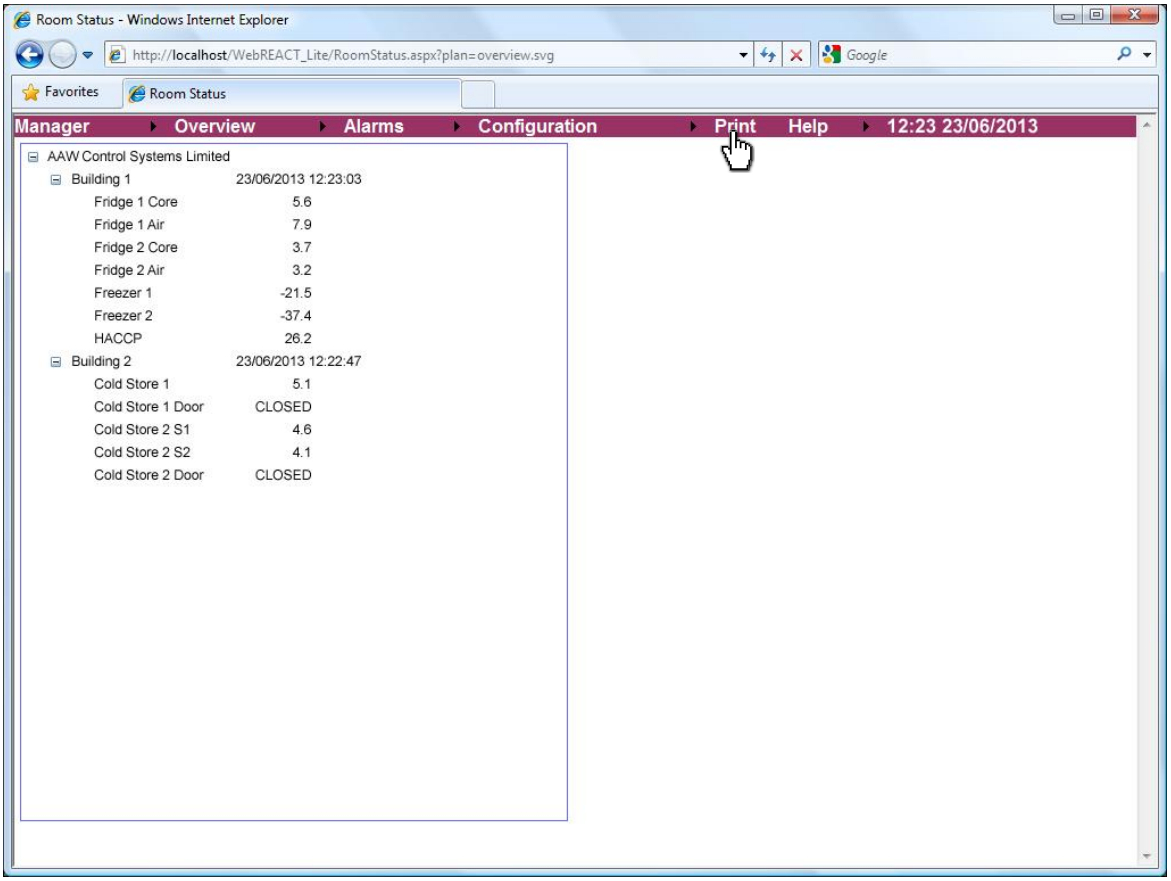
Printing from Your WebREACT Lite System

Selecting the print button from the main toolbar at any point will open a print window for whatever is currently on-screen. Clicking when on the overview page will give a print of the current point temperatures, clicking on print on a graph page will give a graph print-out for everything that is currently visible.

This can likewise be done for configuration, alarm history and summary pages.



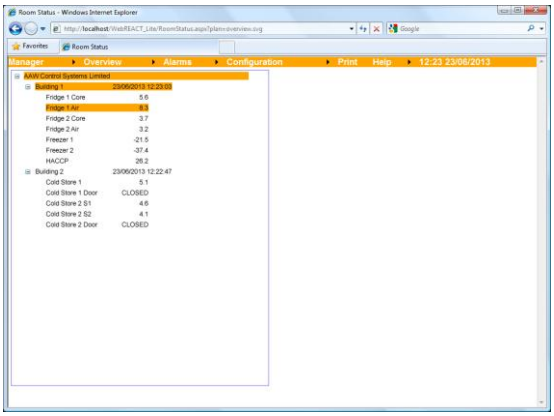
Recognising when WebREACT Lite is in Alarm

If a facility or item of equipment is found to be operating outside of its acceptable limits, then WebREACT Lite will go into alarm. For example, if a fridge is supposed to be operating between 2°C and 6°C, but a temperature of 7°C is recorded.

WebREACT Lite will also go into alarm if it loses communication with a sensor or other hardware unit such as a RIOT or RIOT-S.

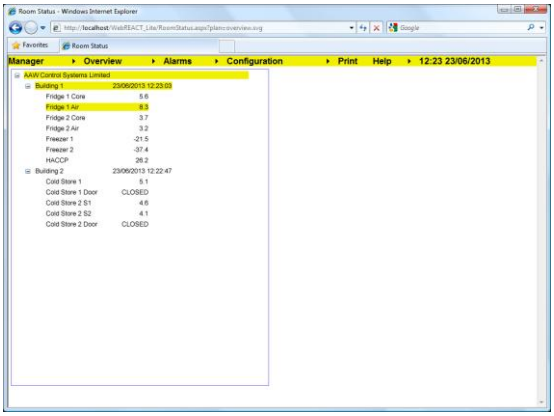
Flashing Orange - Unacknowledged Alarm

If a new alarm is triggered, or an alarm that has previously been acknowledged is repeated (due to the alarm condition persisting), then the menu bar and the location/ facility/piece of equipment that is in alarm will flash orange.



Yellow - Acknowledged Alarm

If an alarm has been acknowledged but the facility or item of equipment continues to operate outside of its acceptable limits, then the menu bar and the location/facility/ piece of equipment that is in alarm will be shown in yellow.



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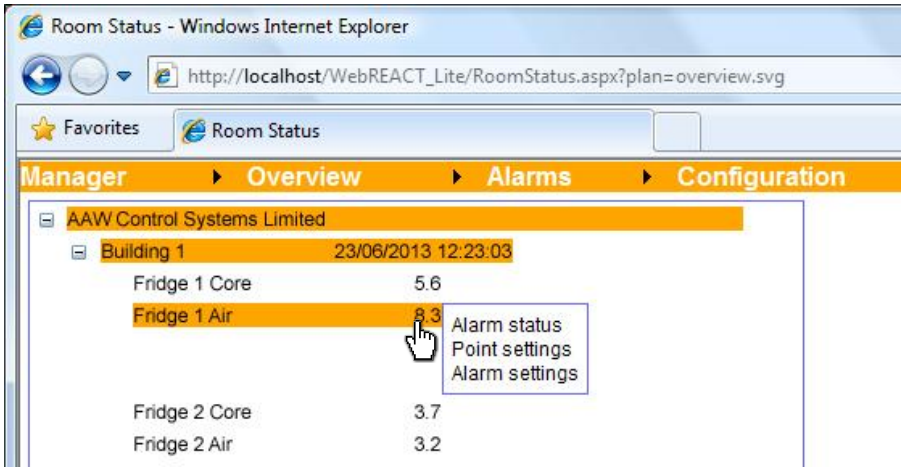
Acknowledging an Alarm

1. Go to the *Overview* page for system

You can click into the required *Room* from the *Overview* page.

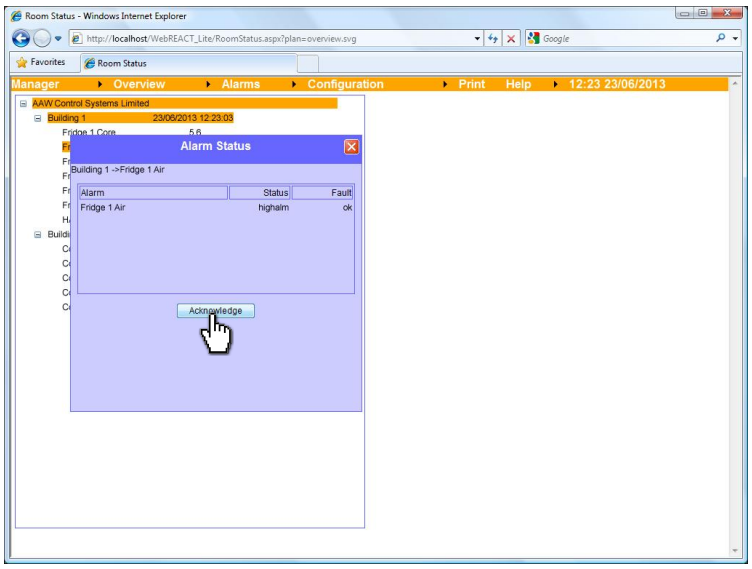
This will enable you to see exactly which area/item of equipment is in alarm so that it can be investigated and resolved.

Clicking on the temperature of the point in alarm will bring up the option *'Alarm Status'*.



2. Acknowledging the alarm

Clicking on *'Alarm Status'* displays a window showing the current status of that point. A button on the window allows the acknowledgement of a point in alarm. Clicking this and waiting will proceed to acknowledge the alarm.



Understanding the Confirmation Message when Acknowledging an Alarm

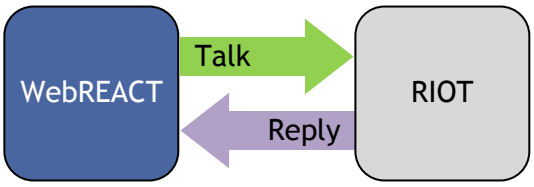
When you acknowledge an alarm on WebREACT Lite the confirmation message will either state "*1 alarm(s) acknowledged*" (if your WebREACT Lite system is running off a RIOT unit) or it will state "*1 alarm(s) acknowledged. Some alarms acknowledged offline*" (if your WebREACT Lite system is running off a RIOT-S unit).

The difference between these confirmation messages is due to the different way that WebREACT Lite communicates with a RIOT unit compared to a RIOT-S unit.

Communication with a RIOT unit is always initiated by WebREACT Lite, passing information such as alarm acknowledgments to the RIOT and pulling back any data in return. This means that the alarm acknowledgment is communicated to the RIOT immediately (assuming that the RIOT is online).

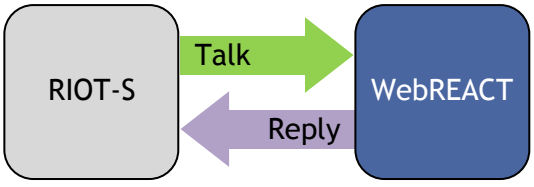
Communication with a RIOT-S unit is always initiated by the RIOT-S unit, which pushes data such as sensor readings to WebREACT Lite and receives any information such as alarm acknowledgments in return. This means that the alarm acknowledgment is not actually communicated to the RIOT-S until the RIOT-S initiates its next communication.

In both cases, however, WebREACT Lite logs the actual time when the user acknowledged the alarm – see *Understanding the Alarm History when an Alarm is* on page 21.



Communication between WebREACT Lite and a RIOT unit;

All conversations are initiated by WebREACT Lite.



Communication between WebREACT Lite and a RIOT-S unit;

All conversations are initiated by the RIOT-S unit.

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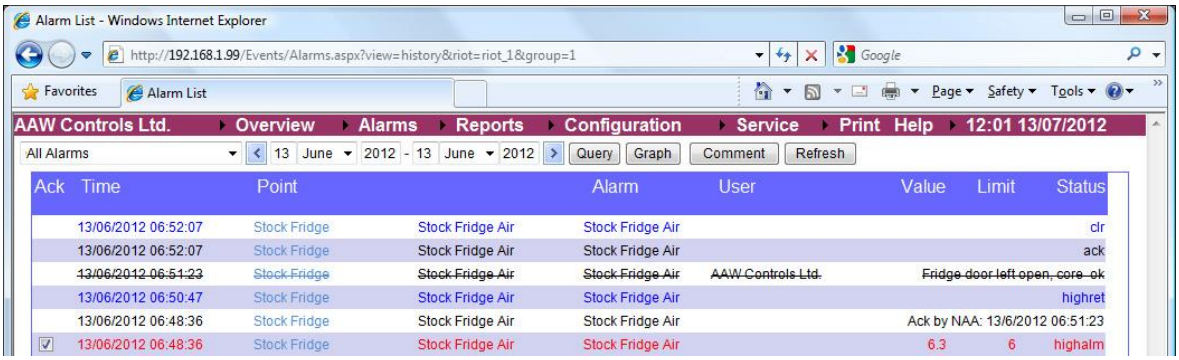
Understanding the Alarm History when an Alarm is acknowledged

When an alarm is triggered, WebREACT Lite keeps a detailed history of the events associated with that alarm and its subsequent acknowledgment. This audit trail can be seen within the Alarm History.

Example of a typical alarm history when an alarm is acknowledged on a point that is monitored via a RIOT-S control unit.



At 06:48:36 on 13/06/2012 the Stock Fridge was recognised as having been above limit for longer than the alarm delay period and an alarm was triggered.

At 06:50:47 the Stock Fridge was recognised as being back within limits.

Despite the reading being back within limits, the alarms on both WebREACT Lite and on the RIOT-S unit would have continued to beep/flash as they are configured to only clear an alarm after it has been acknowledged. This is to make sure that someone is aware and accountable that an alarm has been triggered.

At 06:51:23 the alarm was acknowledged on WebREACT Lite with a comment of "*Fridge door left open, core ok*" and a trace comment of "*Ack by NAA*".

At this point the alarm on WebREACT Lite would have stopped beeping/flashing. The alarm on the RIOT-S until would have continued for a few moments longer until the acknowledgement had been passed on to it.

The comment is shown with a line through it to indicate that WebREACT Lite would not have passed the acknowledgment on to the RIOT-S unit immediately. This is due to the way in which WebREACT Lite and the RIOT-S talk to each other with conversations only being initiated by the RIOT-S.

Although the trace comment shows a log time of 06:48:36 (the same as the alarm), it was actually recorded on the system at 06:51:23 – which is shown as part of the detail of the comment. It is necessary for the trace comment to be given the same log time as the alarm so that the comment can be placed on the sensor graph at the point when the alarm was triggered.

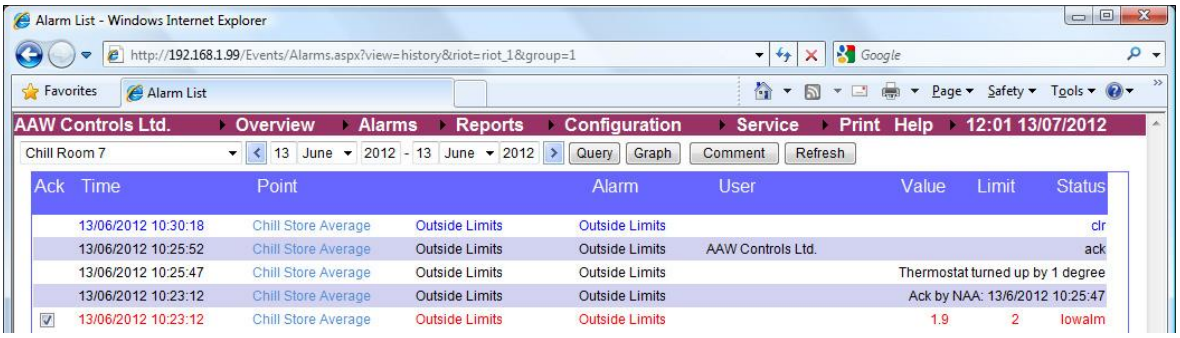
At 06:52:07 WebREACT Lite passed the acknowledgement through to the RIOT-S and the RIOT-S sent a reply back to WebREACT Lite confirming that the acknowledgement had been received.

This would have been when the RIOT-S next talked to WebREACT Lite.

At this point the alarm on the RIOT-S would have stopped beeping/flashing.

At this point the alarm was cleared as the reading was back within limits and the alarm had been acknowledged.

Example of a typical alarm history when an alarm is acknowledged on a point that is monitored via a RIOT control unit.



At 10:23:12 on 13/06/2012 the Chill Store was recognised as being below limit for longer than the alarm delay period and an alarm was triggered.

At 10:25:47 the alarm was acknowledged on WebREACT Lite with a comment of "*Thermostat turned up by 1 degree*" and a trace comment of "*Ack by NAA*".

At this point the alarms on WebREACT Lite and on the RIOT unit would have continued beeping/flashing.

At this point WebREACT Lite would have passed the acknowledgement immediately and directly to the RIOT unit (assuming that the RIOT unit was online*).

* *If the RIOT unit was not online, then the comment would be shown with a line through it to indicate that the acknowledgement was not passed immediately to the RIOT unit. There would then be a later "ack" in the alarm history which would indicate when communication with the RIOT was restored. At this point the RIOT would have been able to receive the acknowledgement from WebREACT Lite and send a reply back to WebREACT Lite confirming that the acknowledgement had been received.*

Although the trace comment shows a log time of 10:23:12 (the same as the alarm), it was actually recorded on the system at 10:25:47 – which is shown as part of the detail of the comment. It is necessary for the trace comment to be given the same log time as the alarm so that the comment can be placed on the sensor graph at the point when the alarm was triggered.

At 10:25:52 the RIOT sent a reply back to WebREACT Lite confirming that the acknowledgement had been received.

At this point the alarm on WebREACT Lite and the alarm on the RIOT unit would have stopped beeping/flashing.

At 10:30:18 the Chill Store was recognised as being back within limits and the acknowledged alarm was cleared.

Testing a Point on Your System

You should test each point on your system regularly to make sure it goes into high alarm and low alarm correctly, can be acknowledged correctly, and clears correctly.

To make sure the individual sensors are working correctly, you should aim to test every point at least once every 12 months.

To make sure the control units (RIOTs or RIOT-Ss) are working correctly, you should aim to test at least one of the points on each unit at least once every month.

1. Create an (artificial) high alarm condition on that room/point.

   This can either be done by removing the sensor to a different location where it will give a reading that is outside of the point's acceptable limits, or by temporarily changing the point's alarm limits so that the sensor's normal operational reading will fall outside of those limits.

   Tip: You will probably also want to reduce the point's alarm delay so that you don't have to wait too long for the alarm to be triggered.

2. Check that all expected alarms are triggered correctly.

   You should check that the alarm is triggered on both the PC-based WebREACT Lite system and also on the relevant control unit (RIOT or RIOT-S).

   You should also check that any text/email/voice dial-out alerts are raised according to the setup of your system.

3. Acknowledge the alarm.

4. Check that the alarm has been acknowledged correctly.

   Any audible alarms should stop beeping and the room on WebREACT Lite should be highlighted in yellow rather than flashing orange.

5. Remove the alarm condition.

   Depending on how you created the alarm condition, this will either mean replacing the sensor to its correct location, or restoring the alarm limits to their original values.

Please note: If you changed the alarm delay so that the alarm would be triggered more quickly, then don't forget to also restore this to its original value.

6. Check that the alarm condition has cleared correctly.

   The room on WebREACT Lite should be shown without any highlighting.

Please note: These steps should be repeated so that the point is tested for both its high alarm and its low alarm.

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