

## Saia PCD<sup>®</sup> Supervisor V4.11

### Easy Healthy Building



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# Document History

Date	Description
August, 2021	First draft
November, 2021	Updated the supervisor version <b>4.11</b> on the front cover page.

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# ABOUT HEALTHY BUILDING DASHBOARD

Healthy Building provides a score (Healthy building Score) that enables the person responsible for a building to understand their building's Key Performance Indicators (KPIs). The following KPIs are used by Healthy Building Temperature, CO2, Humidity, PM2.5, TVOC, and Occupancy in conjunction with sensor feedback values to calculate the Healthy Building Score.

The Healthy building score indicates of comfort level and environment safety of the building environment. It is an index score based on the building's sensors and other devices monitoring environmental factors and occupants. Honeywell intelligent sensors, combined with powerful computing, evaluate live sensor output and historical data to provide real-time insights into the health of the building.

## Healthy Building Dashboard

The Healthy Building Dashboard provides visibility of this information in a user- friendly way. It provides visibility of the health of a portfolio/Region/Building and its underlying zones. This helps the build manager understand the issue in the build and prioritize corrective actions in a zone based on performance score.

**Note:** *The Healthy Building score is computed at the zone level.*

Healthy Building can be used on Niagara Workbench or Controller.

The Healthy Building Dashboard provides high visibility of the healthiness of a portfolio / Region / Facility and underlying zones. It consists of four tabs:

- ALL KPI'S,
- ZONE WISE SUMMARY
- HEALTHY BUILDING ALARMS
- ZONE CONFIGURATION

The information displayed on the Healthy Building Dashboard depends on the user type.

There are two types of user:

- Admin
- Non-Admin

### Admin View (Admin User)

The Admin view (shown below) contains all four tabs.

The Admin View dashboard displays four tabs: ALL KPI'S, ZONE WISE SUMMARY, HEALTHY BUILDING ALARM, and ZONE CONFIGURATION. The main content area is divided into several sections:

- HEALTHY BUILDING NOTIFICATION:** Shows 2/9 total notifications. Includes counts for Urgent (1), High (0), and Low (1).
- AIR QUALITY:** Displays metrics for Temperature (EXCELLENT), Humidity (INADEQUATE), CO2 (INADEQUATE), PM2.5 (1 zone out of range), TVOC (1 zone out of range), and Occupancy (INADEQUATE).
- ALL ZONES WELLNESS:** Shows POOR status for all zones.

The HEALTHY BUILDING ALARM section includes a table of notifications:

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State
🔴	06-May-21 3:10:33 PM IST	Points-tvoc		Offnormal	255	0 Acked / 5 Unacked
🔴	15-Apr-21 1:51:44 PM IST	Points-temp1		Offnormal	255	0 Acked / 0 Unacked / 1 Pending
🔴	15-Apr-21 1:51:44 PM IST	Points-tvoc1		Offnormal	255	1 Acked / 0 Unacked

### Non-Admin View (Non-Admin User)

The Non-Admin view (shown below) has restricted access and does not display the **ZONE CONFIGURATION** tab:

The Non-Admin View dashboard is identical to the Admin View but lacks the ZONE CONFIGURATION tab. The main content area is divided into several sections:

- HEALTHY BUILDING NOTIFICATION:** Shows 2/9 total notifications. Includes counts for Urgent (1), High (0), and Low (1).
- AIR QUALITY:** Displays metrics for Temperature (EXCELLENT), Humidity (INADEQUATE), CO2 (INADEQUATE), PM2.5 (1 zone out of range), TVOC (1 zone out of range), and Occupancy (INADEQUATE).
- ALL ZONES WELLNESS:** Shows POOR status for all zones.

The HEALTHY BUILDING ALARM section includes a table of notifications:

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State
🔴	06-May-21 3:10:33 PM IST	Points-tvoc		Offnormal	255	0 Acked / 5 Unacked
🔴	15-Apr-21 1:51:44 PM IST	Points-temp1		Offnormal	255	0 Acked / 0 Unacked / 1 Pending
🔴	15-Apr-21 1:51:44 PM IST	Points-tvoc1		Offnormal	255	1 Acked / 0 Unacked

# ALL KPI'S TAB

The ALL KPI'S tab comprises of four sections:

- SCROLLER
- BUILDING IMAGE
- HEALTHY BUILDING NOTIFICATION
- AIR QUALITY
- ALL ZONEWELLNESS
- HEALTHY BUILDING ALARMS

The screenshot shows the 'ALL KPI'S' tab with the following sections:

- HEALTHY BUILDING NOTIFICATION:** Shows 2/9 total notifications. Includes 1 Urgent (red exclamation mark), 0 High (yellow exclamation mark), and 1 Low (blue exclamation mark) notification.
- AIR QUALITY:**
  - Temperature: EXCELLENT (green checkmark) - All Zones
  - Humidity: INADEQUATE (yellow exclamation mark) - All Zones
  - CO2: INADEQUATE (yellow exclamation mark) - All Zones
  - PM2.5: INADEQUATE (yellow exclamation mark) - 1 Zone out of Range
  - TVOC: INADEQUATE (yellow exclamation mark) - 1 Zone out of Range
  - Occupancy: INADEQUATE (yellow exclamation mark) - All Zones
- ALL ZONEWELLNESS:** Shows POOR (yellow exclamation mark) for All Zones.
- HEALTHY BUILDING ALARM:** A table of recent alarms with filters for Time Range and Notification Type.
 

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State
	06-May-21 3:10:33 PM IST	Points-tvoc		Offnormal	255	0 Acked / 5 Unacked
	15-Apr-21 1:51:44 PM IST	Points-temp1		Offnormal	255	0 Acked / 0 Unacked / 1 Pending
	15-Apr-21 1:51:44 PM IST	Points-tvoc1		Offnormal	255	1 Acked / 0 Unacked

## Scroller

The scroller displays the primary and secondary emergency contacts of the are configured.

Emergency Contact primarycontact@company.com | tel: 0123456789



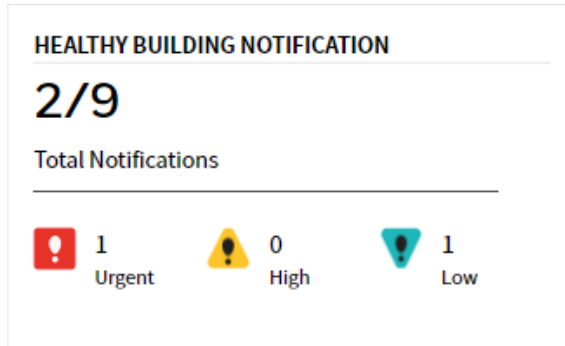
# Building Image

The building image appear in the top left of the tab. when shipped it shows a generic build, but can be changed to something more representative.


















# Healthy Building Notification Section


The Healthy Building Notification section (shown below) indicates the total number of active notifications out of the total number of notifications raised.



Active alarms are further classified as Urgent, High, or Low as described below.



KPI Point	Alarm Category	Description
<b>Temperature</b> (°C, °F, K, or mK)	 Urgent	Urgent If the point value is out of the recommended range by <ul style="list-style-type: none"> <li>• 15 °C - 24 °C</li> <li>• 59 °F - 75.2 °F</li> <li>• 288.15 K - 297.15 K</li> <li>• 288150 mK - 297150 mK</li> </ul>
	 High	High If the point value is out of the recommended range by <ul style="list-style-type: none"> <li>• 17 °C - 22 °C</li> <li>• 62.6 °F - 71.6 °F</li> <li>• 290.15 K - 295.15 K</li> <li>• 290150 mK - 295150 mK</li> </ul>
	 Low	Low If the point value is out of the recommended range by <ul style="list-style-type: none"> <li>• 18 °C - 21 °C</li> <li>• 64.6 °F - 69.8 °F</li> <li>• 291.15 K - 294.15 K</li> <li>• 291150 mK - 294150 mK</li> </ul>
<b>Carbon Dioxide</b> <b>CO2 (PPM)</b>	 Urgent	Urgent The point value is greater than equal to 1801 PPM.
	 High	High The points value is between 801 - 1800 PPM.
	 Low	Low The points value is between 601 - 800 PPM.
<b>Relative Humidity</b> (%RH)	 Urgent	Urgent The point value is <10 % or > 90 %.
	 High	High The point value is <30 % / > 70 %.
	 Low	Low The point value is <40 % / > 60 %.
<b>Total Volatile</b> <b>Organic</b> <b>compound (TVOC)</b> <b>(mg/m³)</b>	 Urgent	Urgent The point value is $\geq 1.0$ mg/m <sup>3</sup> .
	 High	High The point value is between 0.3 to 0.99 mg/m <sup>3</sup> (Poor or Fair status).
	 Low	Low The points value is between 0.1 to 0.29 mg/m <sup>3</sup> (Good status).
<b>Particulate Matter</b> <b>2.5 (PM 2.5)</b> <b>µg/m³</b>	 Urgent	Urgent The point value is $\geq 65$ µg/m <sup>3</sup> .
	 High	High The point value is in between 42 to 64 µg/m <sup>3</sup> .
	 Low	Low If point value is in between 24 to 41µg/m <sup>3</sup> .



KPI Point	Alarm Category	Description
Occupancy	 Urgent	<p>If the zone is occupied, the zone's Occupancy KPI value is <b>True</b>.</p> <p>If the zone is not occupied, the zone's Occupancy KPI value is <b>False</b>.</p> <p>When the Occupancy value is "<b>False</b>", it falls under the "<b>Urgent</b>" Notification type.</p>

## Air Quality Section

The **AIR QUALITY** section (shown below) section provides a summary of the building's Indoor Air Quality (IAQ) based on the zones. Indoor Air quality is calculated using the Honeywell Standard Healthy Building Algorithm.

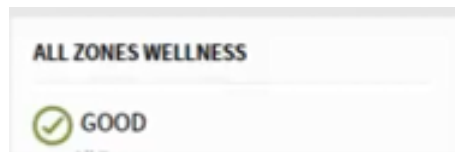


It indicates status (Excellent, Good, Fair, Poor) of Temperature, CO2, Humidity, PM2.5, TVOC, and Occupancy KPIs.

Icon Indication	Description
	The KPI is in the recommended range. Click on the icon to see details in the ZONE WISE SUMMARY tab.
	The KPI is out of recommended range. Click on the icon to see details in the ZONE WISE SUMMARY tab.

## All Zone Wellness Section

The ALL ZONES WELLNESS section provides the overall health status of the building.

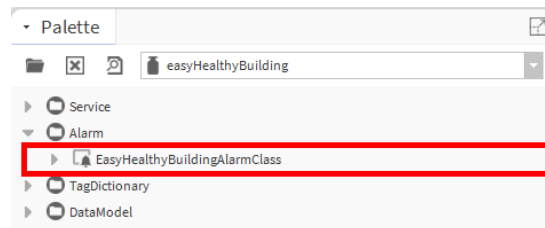


The value is calculated using the wellness of the underlying zones, for example, If there are three zones.

Individual Zone Status Condition	ALL ZONE WELLNESS Status
If all three zones are in the Excellent Status	EXCELLENT
If two zones are in Good status and one in Excellent	GOOD
If two zones are in Good status and one in Poor	GOOD
If all zones are in Poor status	POOR
If two are in Poor status and one in Good status	POOR

## Healthy Building Alarm Section

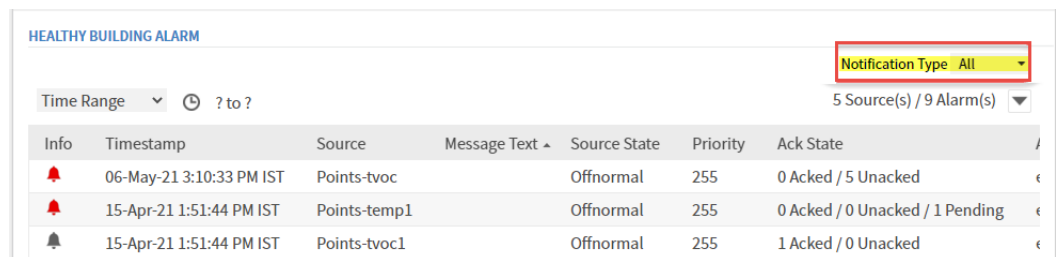
The **HEALTHY BUILDING ALARM** section displays alarms related to the KPI points (linked to the easyHealthyBuildingAlarmClass) are recorded in the alarm console and can be viewed in this area of the Healthy Building dashboard.



The Healthy Building dashboard supports two type of alarm consoles:

- honAlarmConsole
- Niagara alarm console.

Using the honAlarmConsole, the HEALTHY BUILDING ALARM Section appears as shown below.



You can filter by alarm type by selecting the required alarm type in **Notification Type** box or by clicking the Urgent, High, and Low icon in HEALTHY BUILDING NOTIFICATION Section.

If honAlarmConsole is not available (not licensed), then the HEALTHY BUILDING ALARM section uses the Niagara alarm console as shown below.

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State	Alarm Class
	23-Mar-21 2:13:52 PM IST	co2		Normal	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 4:32:16 PM IST	new Temp		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 2:26:18 PM IST	pm2		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 2:25:57 PM IST	temp		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	17-Mar-21 2:01:13 PM IST	co2		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class
	17-Mar-21 1:59:28 PM IST	hum		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class
	17-Mar-21 1:58:25 PM IST	temp		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class

You can click on HEALTHY BUILDING ALARM in the left top to view the detailed alarm console HEALTHY BUILDING ALARMS Tab.

**Note:** Alarms related to KPI points linked to any alarm class other than *easyHealthyBuildingAlarmClass* are recorded in the alarm console but not shown in the dashboard.

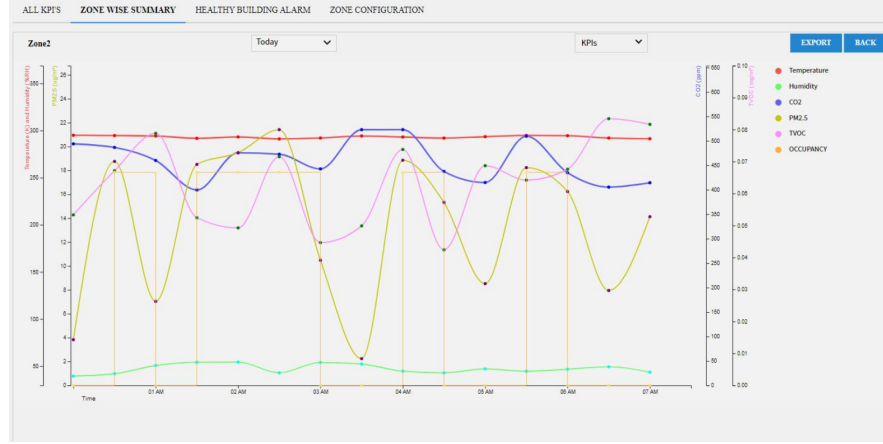
## Zone Wise Summary Tab

The Zone Wise Summary tab displays the Temperature (TEMP), Humidity (HUM), Carbon dioxide (Co2), air pollutant (PM 2.5), Total Volatile Organic Compounds (TVOC), and Occupancy (OCC) parameters for each zone.

STATUS	ZONE	TEMP	HUM	CO2	PM2.5	TVOC	OCCUPANCY	
GOOD	Z1	22.0 °C	70.0 %RH	--	0.0 ug/m <sup>3</sup>	0 mg/m <sup>3</sup>	--	<a href="#">VIEW TREND</a>
POOR	Z2	14.0 °C	10.0 %RH	1200.0 ppm	0.0 ug/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	--	<a href="#">VIEW TREND</a>
GOOD	Z3	21.0 °C	50.0 %RH	1200.0 ppm	0.05 ug/m <sup>3</sup>	0.8 mg/m <sup>3</sup>	--	<a href="#">VIEW TREND</a>

Columns	Description										
STATUS	The zone status is calculated for each Portfolio/Region/Facility from sensor metric data in terms of percentage as per ASHRAE 62.1 standard. The zone status range can be EXCELLENT, GOOD, FAIR, or POOR. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Status</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>The percentage value is between 90% - 100%.</td> </tr> <tr> <td>GOOD</td> <td>The percentage value is between 75% - 89 %.</td> </tr> <tr> <td>FAIR</td> <td>The percentage value is between 60% - 74%.</td> </tr> <tr> <td>POOR</td> <td>The percentage value is between 0% - 59%.</td> </tr> </tbody> </table>	Status	Description	Excellent	The percentage value is between 90% - 100%.	GOOD	The percentage value is between 75% - 89 %.	FAIR	The percentage value is between 60% - 74%.	POOR	The percentage value is between 0% - 59%.
Status	Description										
Excellent	The percentage value is between 90% - 100%.										
GOOD	The percentage value is between 75% - 89 %.										
FAIR	The percentage value is between 60% - 74%.										
POOR	The percentage value is between 0% - 59%.										
Zone	The name of the zones configured in the building.										
TEMP	The zone's temperature KPI value.										
HUM	The zone's humidity KPI value.										

Columns	Description
CO2	The zone's CO2 KPI value.
PM2.5	The zone's PM2.5 KPI.
TVOC	The zone's TVOC KPI value.
OCC	The zone's occupancy KPI value.
VIEW TREND	Displays a graph (point trend) of the KPIs. Once displayed a particular time-period can be selected from the Time Range drop-down. The KPIs drop-down allows the required KPIs to be selected. EXPORT allows the underlying data to be exported to a .CSV file.

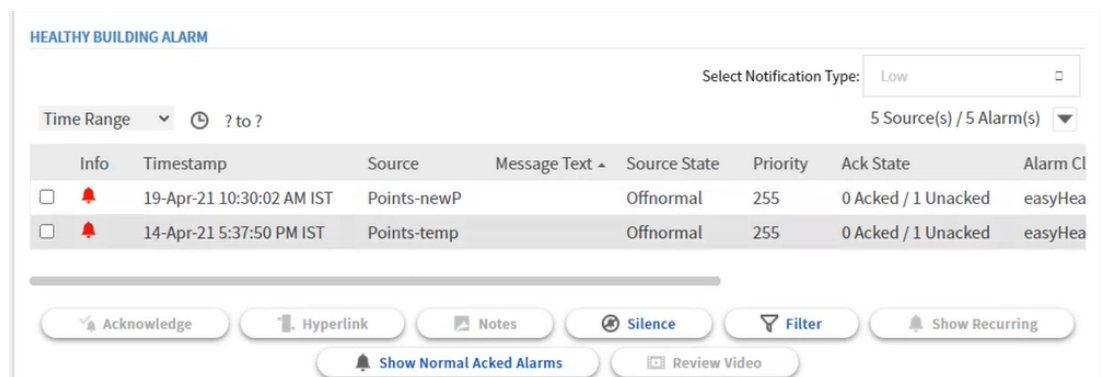


## Healthy Building Alarms Tab

Alarms related to the KPI points (linked to the easyHealthyBuildingAlarmClass) are recorded in the alarm console and can be viewed in this area of the Healthy Building dashboard. The Healthy Building dashboard supports two types of alarm consoles:

- honAlarmConsole
- Niagara alarm console
- Refer local:|module://docAlarms/doc/alarm-AlarmUxConsole.html

If using the honAlarmConsole, the HEALTHY BUILDING ALARM tab appears as shown below.



**HEALTHY BUILDING ALARM**

Select Notification Type:

Time Range  ? to ? 5 Source(s) / 5 Alarm(s)

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State	Alarm Cl
<input type="checkbox"/>	19-Apr-21 10:30:02 AM IST	Points-newP		Offnormal	255	0 Acked / 1 Unacked	easyHea
<input type="checkbox"/>	14-Apr-21 5:37:50 PM IST	Points-temp		Offnormal	255	0 Acked / 1 Unacked	easyHea

The list of alarms can be filtered by alarm type by selecting the required alarm type in the **Select Notification Type** box.

If honAlarmConsole is not available (not licensed), the Niagara alarm console is used, and the section appears as shown below.

HEALTHY BUILDING ALARM

Time Range ? to ? 7 Source(s) / 7 Alarm(s)

Info	Timestamp	Source	Message Text	Source State	Priority	Ack State	Alarm Class
	23-Mar-21 2:13:52 PM IST	co2		Normal	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 4:32:16 PM IST	new Temp		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 2:26:18 PM IST	pm2		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	18-Mar-21 2:25:57 PM IST	temp		Fault	255	0 Acked / 1 Unacked	easyHealthyBuildingAlarmClass
	17-Mar-21 2:01:13 PM IST	co2		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class
	17-Mar-21 1:59:28 PM IST	hum		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class
	17-Mar-21 1:58:25 PM IST	temp		Offnormal	255	0 Acked / 1 Unacked	Default Alarm Class

Clicking HEALTHY BUILDING ALARM in the left top displays the detailed alarm console HEALTHY BUILDING ALARMS tab.

**Note:** Alarms related to KPI points linked to any alarm class other than *easyHealthyBuildingAlarmClass* are recorded in the alarm console.

## Zone Configuration Tab

This tab is only available for Admin users. It enables Admin users to create a new zone, edit an existing zone, and delete a zone.

ALL KPI'S   ZONE WISE SUMMARY   HEALTHY BUILDING ALARM   **ZONE CONFIGURATION**

Reached maximum 2 licensed zone

**CREATE ZONE**

Zone Name  Add Zone


<b>TEMPERATURE</b> <small>Drag and Drop points corresponding to TEMPERATURE</small>	<b>HUMIDITY</b> <small>Drag and Drop points corresponding to HUMIDITY</small>	<b>CO2</b> <small>Drag and Drop points corresponding to CO2</small>
<b>PM2.5</b> <small>Drag and Drop points corresponding to PM2.5</small>	<b>TVOC</b> <small>Drag and Drop points corresponding to TVOC</small>	<b>OCCUPANCY</b> <small>Drag and Drop points corresponding to OCCUPANCY</small>

**ZONE MANAGER**

ZONE	STATUS	TEMPERAT...	HUMIDITY	CO2	PM2.5	TVOC	OCCUPANCY	ZONE WELL...	EDIT ZONE	DELETE ZONE
Z1	<input checked="" type="checkbox"/>	GOOD	GOOD	--	EXCELLENT	EXCELLENT	--	GOOD		
Z2	<input checked="" type="checkbox"/>	INADEQUATE	POOR	FAIR	EXCELLENT	GOOD	--	POOR		
Z3	<input checked="" type="checkbox"/>	EXCELLENT	EXCELLENT	FAIR	EXCELLENT	POOR	--	GOOD		

< ( 1 ) >

The table below describes the areas of the tab in detail.

Area no.	Elements	Description
1	Zone Name*	The name of the building zone.
2	KPI Tiles	<p>Six smart tiles are available for KPI points.</p> <p>Tiles only accept points with facets that match the required facet for the type of tile (Temperature, Humidity, CO2, PM2.5, TVOC, and Occupancy). Therefore, it is necessary to configure the facets for the points before attempting to add a point to a tile. For example, if point measuring temperature is not configured with one of the following facets degree Celsius, Fahrenheit, Kelvin, millikelvin the temperature tile will not understand the KPI, and an error is displayed,</p>  <p><b>NOTE:</b> Only one point can be added per tile.</p>
3	Add Zone	Add a zone.
4	Zone Manager	<p>The status of all the KPI points associated with the zone.</p> <p>It also allows zones to be edited, deleted, and enabled/disabled.</p>



# INSTALLATION REQUIREMENTS AND LICENSING

This section provides information about the system requirements, licensing and the installation process of the Healthy Building Dashboard.

## System Requirements

To use the Healthy Building dashboard Services user requires the following:

- Niagara 4.10
- Web browser (Chrome, Firefox, Microsoft Edge)
- Windows 10 (64 bit) or higher version
- Healthy Building License

## Recommendations

Parameter	Niagara Supervisor Recommendations	Niagara Controller Recommendations
Zones Configuration	For optimum performance in a supervisor station (with 100,000 data points 500 History extension points with 1-minute logging and 270 Alarm extensions configurd, it is recommended to configure 45 zones in the Healthy Building Dashboard.  <b>NOTE:</b> It is necessary to adjust the resources of the Supervisor according to the need of the zones.	For optimum performance in Niagara Controller ( with 475 data points , 110 History extension points with COV logging and 89 Alarm extensions configured ) , it is recommended to configure 5 zones in the Healthy Building Dashboard.  <b>Compatible Niagara Controllers:</b> WEB-8000, CIPer Model 50, CIPer Model 30, and CIPer Model 10.  <b>NOTE:</b> It is necessary to adjust the resources of the Niagara Controller according to the need of the zones.
Memory	8 GB minimum	4 GB minimum
NRE Memory	4 GB NRE pool memory	1 GB NRE pool memory
Polling Frequency	Set the polling frequency of the Healthybuilding sensor data points to 5 minutes.	Set the polling frequency of the Healthybuilding sensor data points to 5 minutes.

# Installation

Niagara created using the supplied template station include the Healthy Building Dashboard. If this is not the case the Healthy Building Dashboard service must be installed.

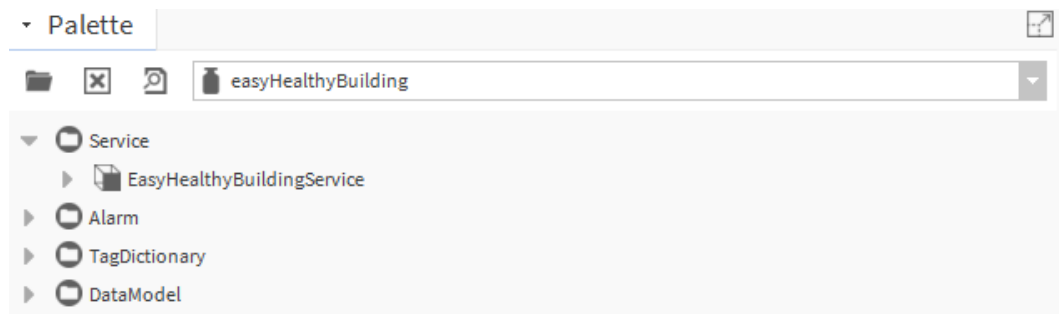
- Install the EasyHealthyBuildingService

## Install the EasyHealthyBuildingService

**To install the healthy building service:**

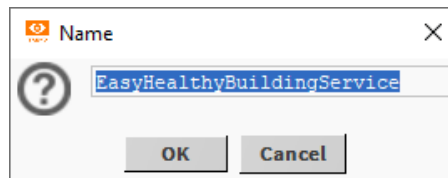
Step 1. Open the **easyHealthyBuilding** palette.

Step 2. In the palette expand the Service folder.

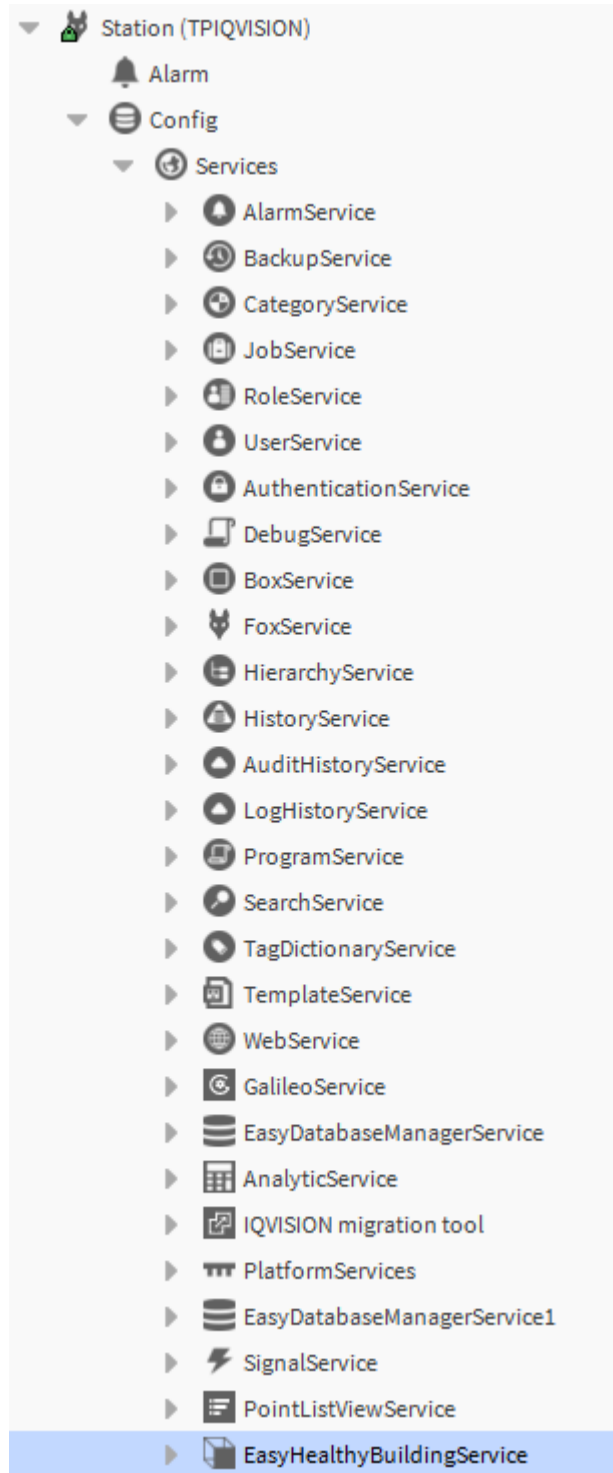


Step 3. In the Nav tree open the **Station > Config** folder.

Step 4. Drag the **EasyHealthyBuildingService** service on to the **Station > Config > Services** folder. The **Name** dialogue box is displayed.



Step 5. Click **OK**. The EasyHealthyBuildingService is added to the station.



# Healthy Building License

The Healthy Building comes with a trial license for 30-days. This trial feature is available only for one supervisor station and only five zones are considered for calculating wellness. After completion of the 30-day trial, it will be necessary to purchase a license to continue using Healthy Building. It is necessary to consider the number of zones required for building to allow the healthy building calculation to be performed correctly.

There are two types of license:

1. Commercial License
2. Enterprise License

## Commercial License

Commercial licenses are available for one year, three years, or five years and come in two sizes:

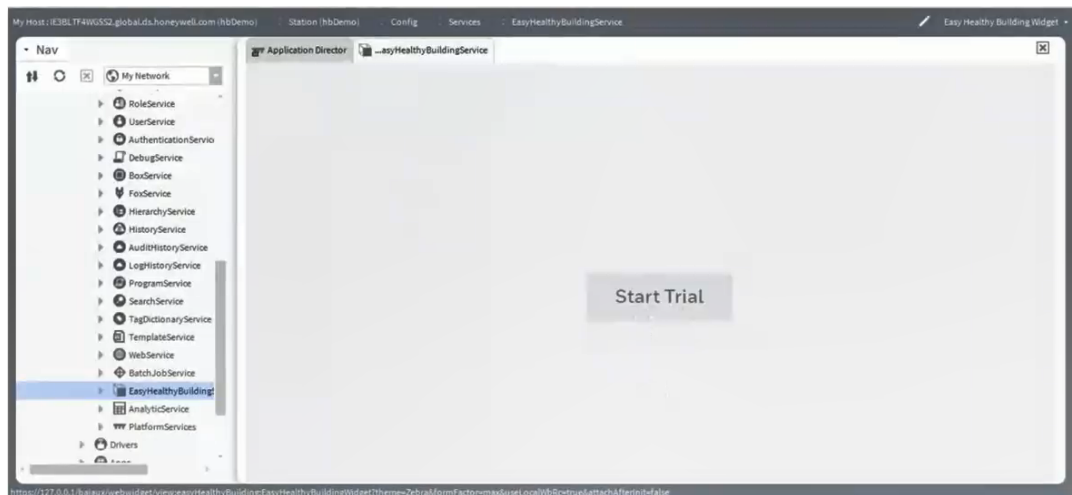
- **Small commercial license** - This license has a one year expiration period with a zones limitation of two.
- **Medium Commercial license** - This license has a three year expiration period with a zones limitation of five.

## Enterprise License

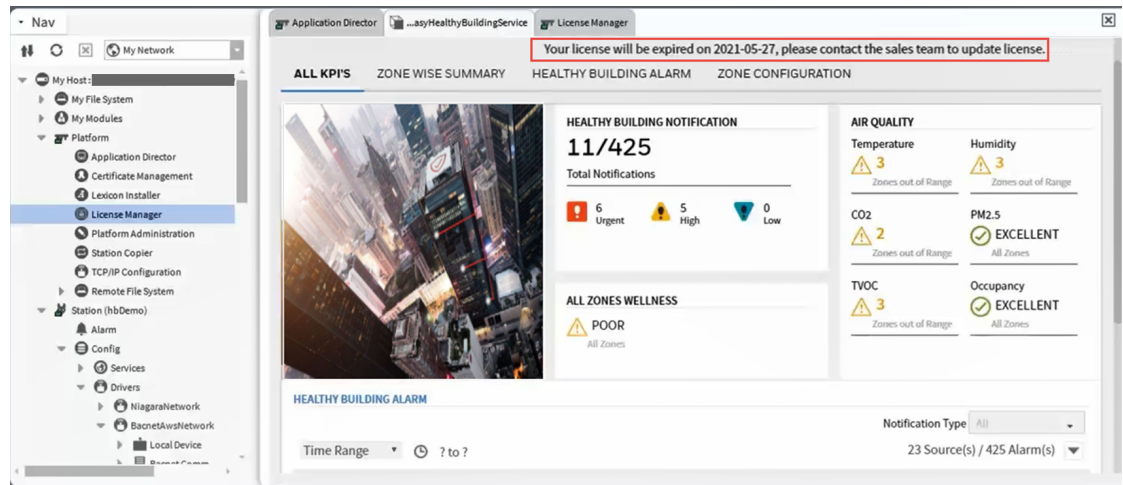
This license is available for three years with unlimited zones.

To use the trial license:

- Step 1. Open the station running **Healthy Building**, see [Open the easyHealthyBuilding Palette](#) section.
- Step 2. In the Nav tree open the **Station > Config > Services** folder.
- Step 3. Double-click **EasyHealthyBuildingService**. The screen will appear as below:




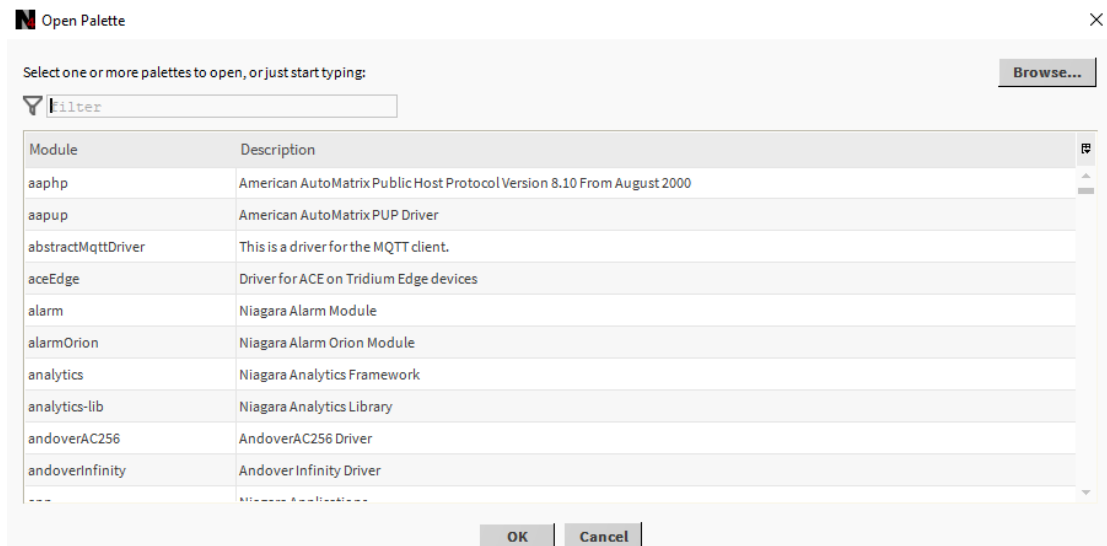
- Step 4. Click **Start Trial**. The license notification is seen on the dashboard as shown below. A notification is displayed in the top-right if the zone limit count is exceeded.



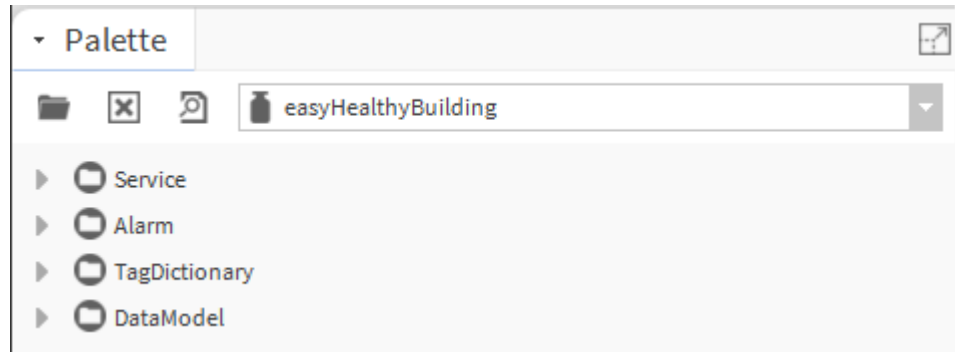
## Open the easyHealthyBuilding Palette

### Steps to open easyHealthyBuilding palette

- Step 1. On the menu bar select **Window > Side Bars** and ensure **Show Side Bar** is checked.
- Step 2. Navigate to **Window > Side Bars** and select **Palette**. to open the palette pane.
- Step 3. Click . The **Open Palette** dialog box is displayed.



Step 4. Enter **easyHealthyBuilding** in the filter field.



Step 5. Select the **easyHealthyBuilding** module.

Step 6. Click **OK**.

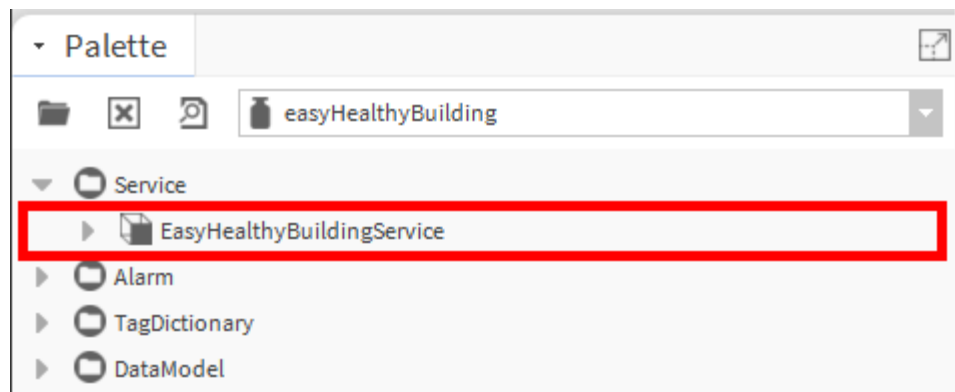
## Install the Healthy Building Service

**Note:** The Healthy Building service is integrated into the station template. If this is not the case it can be installed.

### Steps to launch Healthy Building

Step 1. Open the easyHealthyBuilding palette, see [Open the easyHealthyBuilding Palette](#).

Step 2. In Palette expand the **Services** folder and select **EasyHealthyBuildingService**.



Step 3. In the **Nav** tree open the **Station > Config > Services** folder.

Step 4. Drag the **EasyHealthyBuildingService** on to the **Station > Config > Services** folder.  
The Name dialogue box is displayed.

Step 5. Click **OK**. The **EasyHealthyBuildingService** is added to the station.

# CONFIGURE THE HEALTHY BUILDING DASHBOARD

To configure the Healthy Building Dashboard, follow the procedure below:

- Configure the Station's Alarm Handling
- Configure the Station's Users
- Configure the KPI Points Facets
- Configure Zones
- Configure which Users Can Access Healthy Building Dashboard
- Configure the License Expiry Notifications
- Configure the Emergency Contact Details
- Change the Dashboard Theme
- Change the Scroller Speed
- Specify the Building Image

**Note:** Before configuring Healthy Building Dashboard ensure it is licensed - see [Healthy Building License](#) and the service has been added to the station - see [Install the EasyHealthyBuildingService](#).

## Configure the Station's Alarm Handling

The station must be configured to receive the alarms from the system and route them to the 'easyHealthyBuildingAlarmClass' alarm class.

Any alarms related to KPI points that are to be shown on the Healthy Building Dashboard must be linked to an alarm class called 'easyHealthyBuildingAlarmClass'. Alarms related to KPI points linked to an alarm class other than 'easyHealthyBuildingAlarmClass' are recorded in the alarm console but not shown in the Healthy Building Dashboard.

The devices on the network need to be configured to send the alarms to the station. Refer to the appropriate device documentation for details of configuring the alarm handling



# Configure the Station's Users

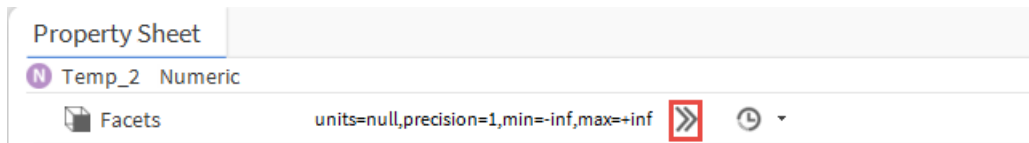
Access to the Healthy Building Dashboard is controlled by the users set up in the station. You must ensure that the required users are available in the station and if necessary, create any additional users that are required. Users in the 'Admin' category that are given access to the Healthy Building Dashboard will be an admin user for the Healthy Building Dashboard.

# Configure Facets for the KPI Points

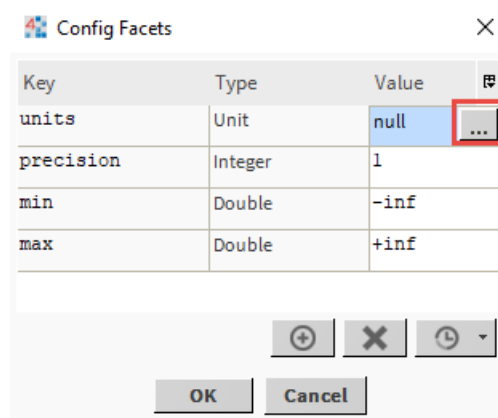
In order to use the Healthy Building Dashboard, the facets for each KPI point must be configured to use one of the facets supported for that KPI type. For example, temperature supports the following facets degree Celsius, Kelvin, millikelvin, Fahrenheit.

### To configure a KPI point's facet:

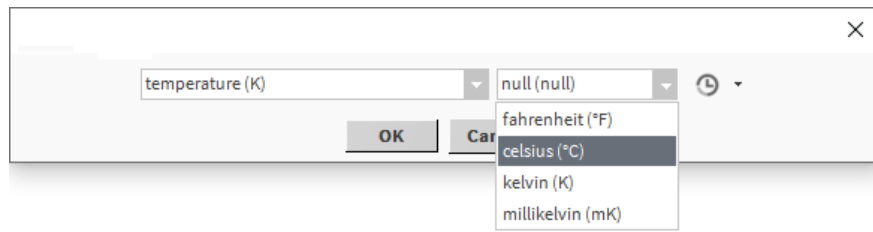
Step 1. In the Nav tree navigate to the point and double click the point. The property sheet for the selected point is displayed.



Step 2. Click >> next to facet. The **Config Facets** dialogue box is displayed.



Step 3. Click next to Unit another dialogue box is displayed.



Step 4. In the first drop-down select parameter type e.g. temperature.

In second drop-down select the required facet.

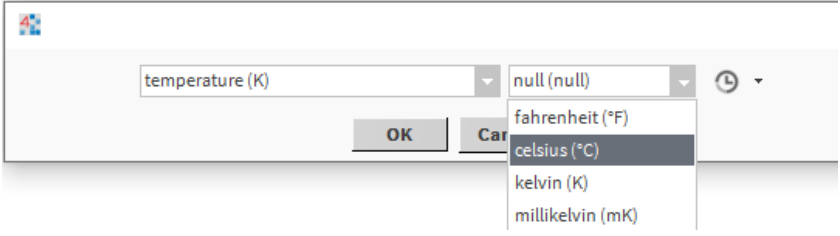
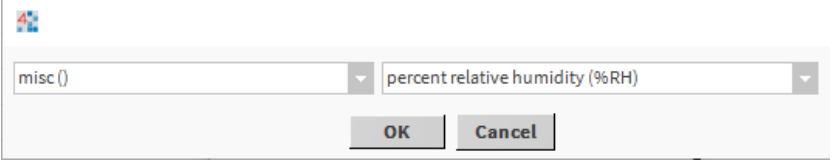

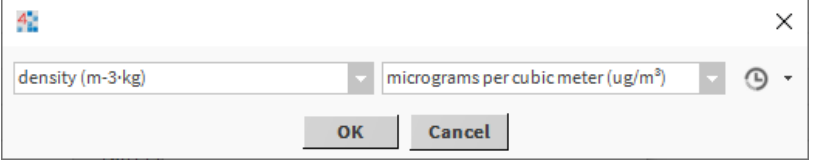
For details of the supported facets for each KPI see Supported Facets.

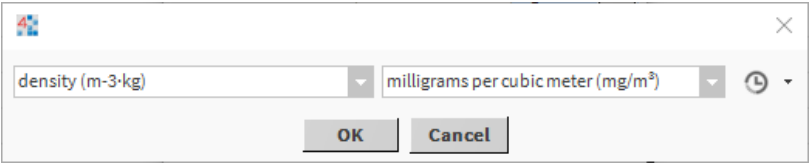
Step 5. Click **OK**.

Step 6. Click **OK**.

## Supported Facets

The following table provides information about the KPI point units that are supported by the healthy building.

KPI Point	Units Supported by Healthy Building Dashboard
<p><b>Temperature</b></p>	<p>Celsius (°C) Fahrenheit (°F) Kelvin (K) Millikelvin (mk)</p> 
<p><b>Relative Humidity</b></p>	<p>Percent relative humidity %RH</p> 
<p><b>Carbon-dioxide</b></p>	<p>parts per million (ppm)</p> 
<p><b>Particulate Matter 2.5</b></p>	<p>Micrograms per Cubic meter (µg/m<sup>3</sup>)</p> 

KPI Point	Units Supported by Healthy Building Dashboard
Total Volatile Organic compound (TVOC)	Milligrams per Cubic meter (mg/m <sup>3</sup> ) 

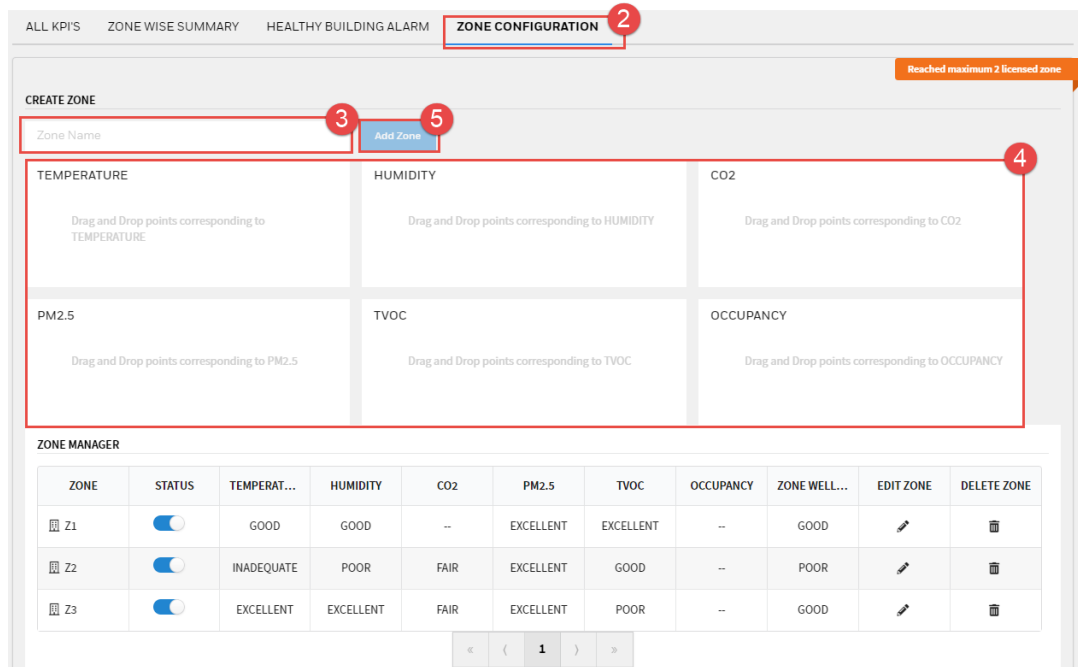
# Configure Zones

The build zones define the area of the build used to calculate the healthiness of the building. to configure the building zones:

- Create a Building Zone
- Edit a Building Zone
- Delete a Building Zone

### To create a building zone

- Step 1. Launch the Healthy building Dashboard.
- Step 2. Select the **ZONE CONFIGURATION** tab.
- Step 3. Enter the building zone name in the **Zone Name** field.



Reached maximum 2 licensed zone

CREATE ZONE

Zone Name  Add Zone

TEMPERATURE  
Drag and Drop points corresponding to TEMPERATURE

HUMIDITY  
Drag and Drop points corresponding to HUMIDITY

CO2  
Drag and Drop points corresponding to CO2

PM2.5  
Drag and Drop points corresponding to PM2.5

TVOC  
Drag and Drop points corresponding to TVOC

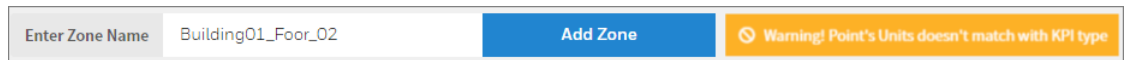
OCCUPANCY  
Drag and Drop points corresponding to OCCUPANCY

ZONE MANAGER

ZONE	STATUS	TEMPERAT...	HUMIDITY	CO2	PM2.5	TVOC	OCCUPANCY	ZONE WELL...	EDIT ZONE	DELETE ZONE
Z1	<input checked="" type="checkbox"/>	GOOD	GOOD	--	EXCELLENT	EXCELLENT	--	GOOD		
Z2	<input checked="" type="checkbox"/>	INADEQUATE	POOR	FAIR	EXCELLENT	GOOD	--	POOR		
Z3	<input checked="" type="checkbox"/>	EXCELLENT	EXCELLENT	FAIR	EXCELLENT	POOR	--	GOOD		

Step 4. Drag and drop the Healthy Building points from the NAV tree to the required tiles.

**Note:** Correct facets must be assigned to the KPI point. If an incorrect point is assigned to a tile an error is displayed.

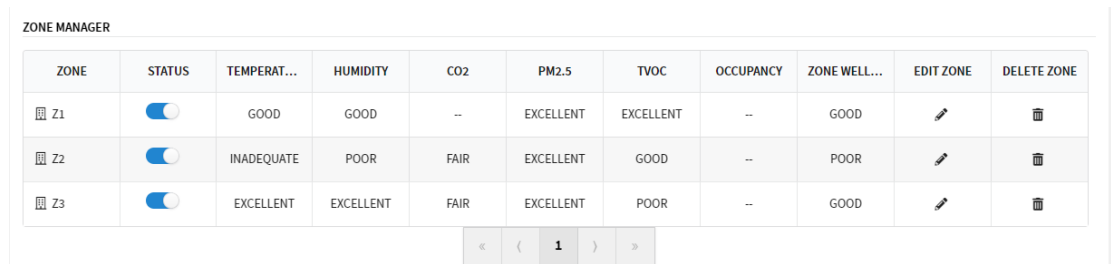


Enter Zone Name Building01\_Floor\_02 **Add Zone** Warning! Point's Units doesn't match with KPI type

Step 5. Click **Add Zone**. The building zone is added in the **Zone Manager**.

## Modifying a Building Zone

A building zone can be edited or deleted using the ZONE MANAGER section.



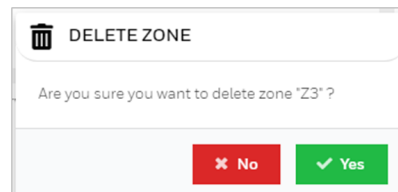
ZONE	STATUS	TEMPERAT...	HUMIDITY	CO2	PM2.5	TVOC	OCCUPANCY	ZONE WELL...	EDIT ZONE	DELETE ZONE
Z1		GOOD	GOOD	--	EXCELLENT	EXCELLENT	--	GOOD		
Z2		INADEQUATE	POOR	FAIR	EXCELLENT	GOOD	--	POOR		
Z3		EXCELLENT	EXCELLENT	FAIR	EXCELLENT	POOR	--	GOOD		

### To edit a zone:

- Step 1. Launch the Healthy building Dashboard.
- Step 2. Select the **ZONE CONFIGURATION** tab.
- Step 3. In the **ZONE MANAGER** section, use the <<, <, >, >> buttons to navigate to the zone that is to be edited.
- Step 4. Click next to the zone to be edited.
- Step 5. Add or remove the KPI points as required.
- Step 6. Click **Save**.

### To delete a zone:

- Step 1. Launch the Healthy building Dashboard.
- Step 2. Select the **ZONE CONFIGURATION**.
- Step 3. In the **ZONE MANAGER** section, use the <<, <, >, >> buttons to navigate to the zone that is to be edited.
- Step 4. Click the delete icon next to the zone that is to be deleted. A confirmation dialog box is displayed.



**DELETE ZONE**

Are you sure you want to delete zone 'Z3'?

**No** **Yes**

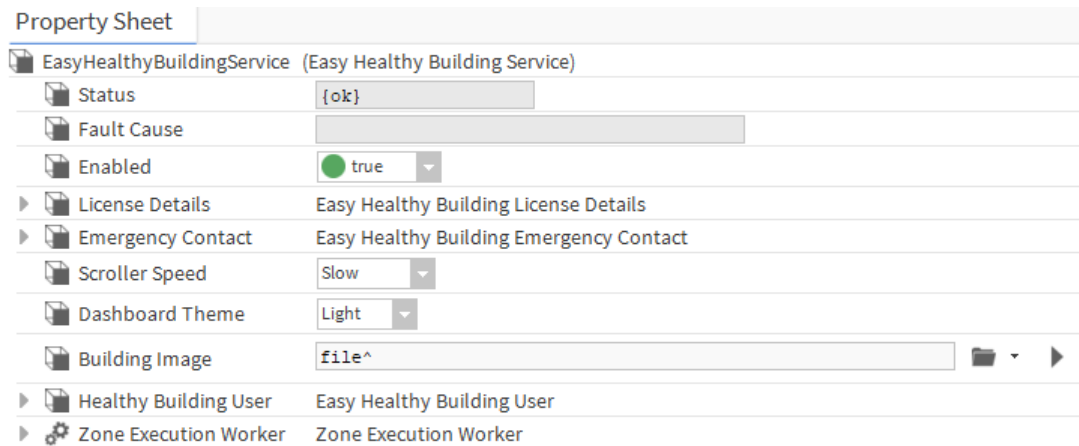
Step 5. Click **Yes**.

# Configure for which Users Healthy Building Dashboard is Automatically Displayed

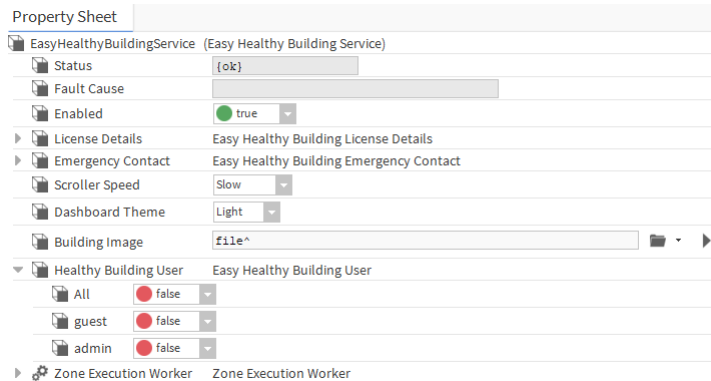
For users access Healthy Building Dashboard for a web client the Healthy Building Dashboard may automatically be displayed when they log on.

## To change the healthy building user:

- Step 1. In the Nav tree open the **Station > Config > Services** folder.
- Step 2. Right click **EasyHealthyBuildingService** and select **Views > AX Property Sheet**. The **EasyHealthyBuildingService** property sheet is displayed.



- Step 3. Expand the **Healthy Building User** section.



- Step 4. In the **Healthy Building User** section set each user for which Healthy Building Dashboard is to automatically display when they log on using a web client to 'true'.
- Step 5. Click **Save**.

# Configure the License Expiry Notifications

Notifications are displayed before the license expires.

## To view the license expiry notifications:

- Step 1. In the Nav tree open the **Station > Config > Services** folder.
- Step 2. Double click **EasyHealthyBuildingService**. The **EasyHealthyBuildingService** property sheet is displayed.
- Step 3. Expand the **License Details** section.
- Step 4. Expand the **License Check Config** section.
- Step 5. Expand the **Rule1**, and **Rule2** sections.

The screenshot shows the 'Property Sheet' for 'EasyHealthyBuildingService (Easy Healthy Building Service)'. The configuration is as follows:

Status	{ok}
Fault Cause	
Enabled	<input checked="" type="checkbox"/> true
<b>License Details</b>	Easy Healthy Building License Details
License Status	License Expiration Is Safe
License Expiration	2022-03-31
Zone Limit	none
Show Notification Time	+000000h 00m 00s
<b>License Check Config</b>	License Check Config
<b>Rule1</b>	License Notification Rule
If License Expires In	90 day
Show Notification For	30 min [30 - max]
<b>Rule2</b>	License Notification Rule
If License Expires In	45 day
Show Notification For	60 min [60 - max]
<b>Rule3</b>	License Notification Rule
If License Expires In	15 day
Show Notification For	Always
License Check Interval	+00024h 00m 00s

- Step 6. In the **Show Notification For** boxes specify how long each notification is to be displayed.
- Step 7. Click **Save**.

# Configure the Emergency Contact Details

The emergency contacts are displayed in the scroller. If both the 'Primary Contact' and 'Secondary Contact' fields are empty the scroller is not displayed.

## To configure the emergency contact details:

- Step 1. In the **Nav** tree open the **Station > Config > Services** folder.
- Step 2. Double click **EasyHalthyBuildingService**. The EasyHealthyBuildingService property sheet is displayed.
- Step 3. Expand the **Emergency Contact** section.

The screenshot shows a 'Property Sheet' for 'EasyHealthyBuildingService (Easy Healthy Building Service)'. The 'Emergency Contact' section is expanded, revealing two empty text input fields for 'Primary Contact' and 'Secondary Contact'. Other visible fields include 'Status' (value: {ok}), 'Fault Cause' (empty), 'Enabled' (checked), 'License Details' (Easy Healthy Building License Details), 'Scroller Speed' (Slow), 'Dashboard Theme' (Light), 'Building Image' (file^), 'Healthy Building User' (Easy Healthy Building User), and 'Zone Execution Worker' (Zone Execution Worker).

- Step 4. Enter contact details for the primary contact in the **Primary Contact** box.
- Step 5. Enter contact details for the secondary contact in the **Secondary Contact** box.
- Step 6. Click **Save**.

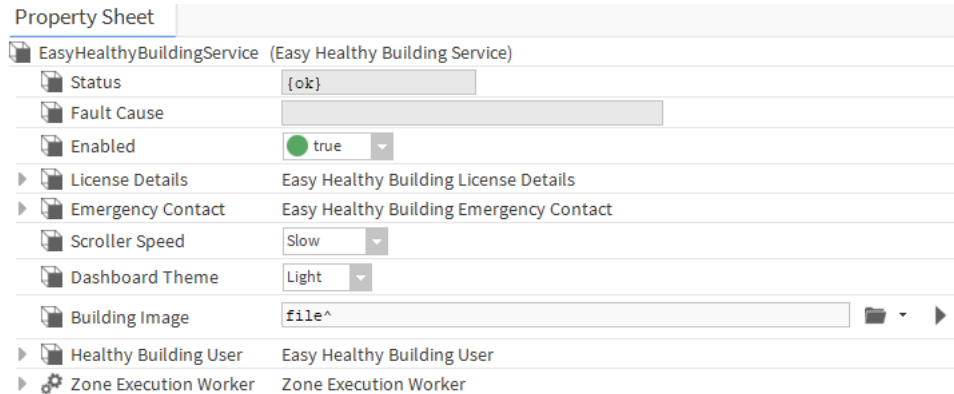


# Change the Scroller Speed

The speed of scrolling notification on the dashboard can be configured.

## To change the scroller speed:

- Step 1. In the **Nav** tree open the **Station > Config > Services** folder.
- Step 2. Double click **EasyHalthyBuildingService**. The EasyHealthyBuildingService property sheet is displayed.



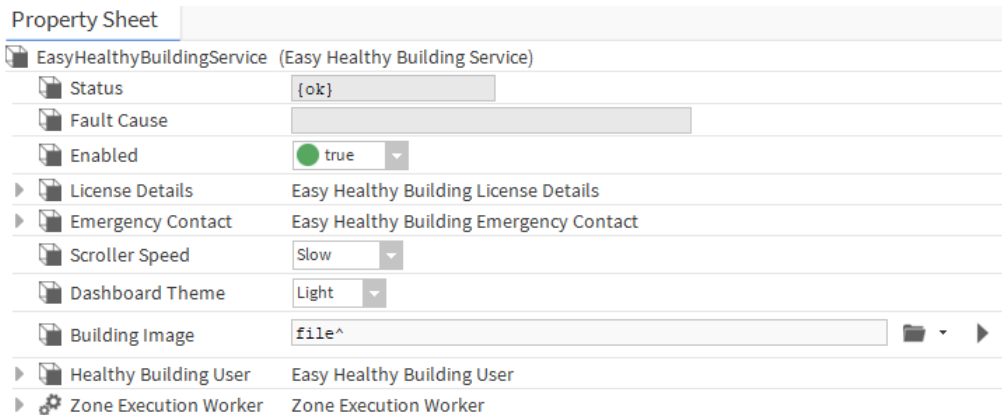
- Step 3. In the **Scroller Speed** box to select the required speed.
- Step 4. Click **Save**.

# Change the Dashboard Theme

The Healthy Building Dashboard's theme can be changed. There are two themes available, dark and light.

## To change the dashboard theme:

- Step 1. In the **Nav** tree open the **Station > Config > Services** folder.
- Step 2. Right click **EasyHalthyBuildingService** and select **Views > AX Property Sheet**. The **EasyHealthyBuildingService** property sheet is displayed.



- Step 3. In the **Dashboard Theme** box select the required theme. Default = Light.
- Step 4. Click **Save**.

## Specify the Building Image

The image displayed in in the top left of the Healthy Building Dashboard can be changed e.g. to represent the building being monitored.

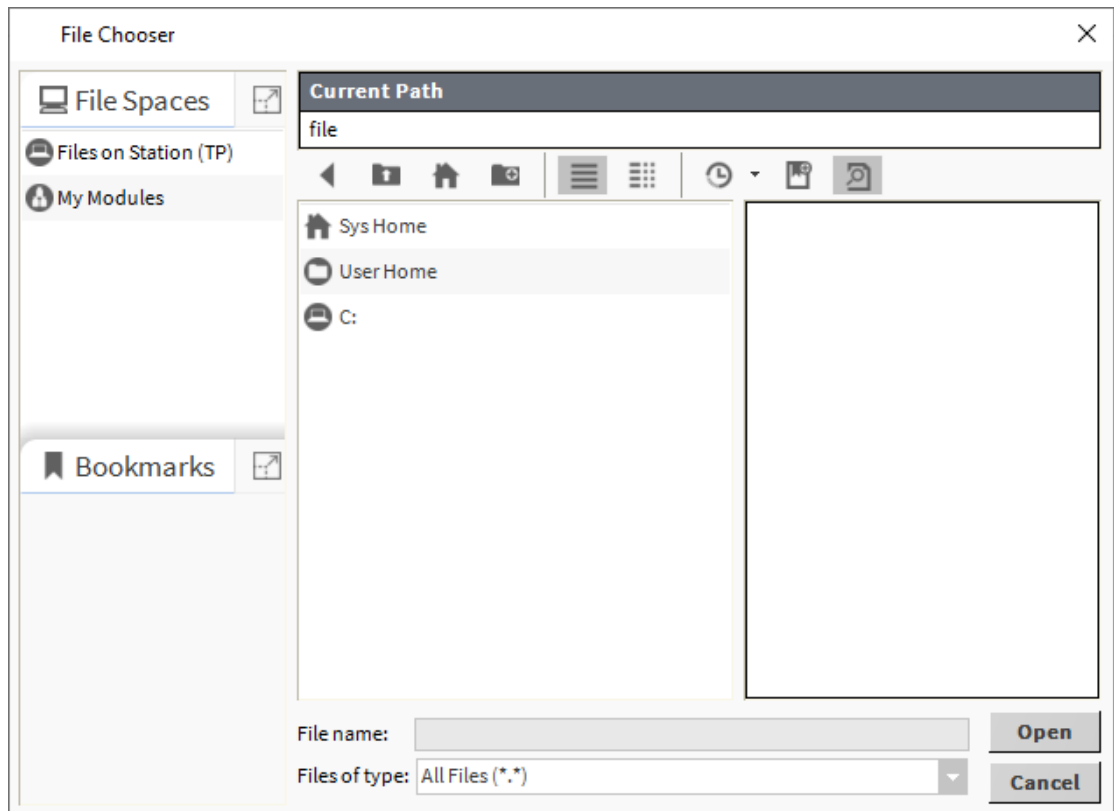
### To change the building image:

- Step 1. In the **Nav** tree open the **Station > Config > Services** folder.
- Step 2. Double click **EasyHalthyBuildingService**. The EasyHealthyBuildingService property sheet is displayed.
- Step 3. Expand the **Emergency Contact** section.

The screenshot shows a 'Property Sheet' window for 'EasyHealthyBuildingService (Easy Healthy Building Service)'. The interface includes several configuration fields:

- Status:** {ok}
- Fault Cause:** (empty text field)
- Enabled:** true (with a green indicator and dropdown arrow)
- License Details:** Easy Healthy Building License Details
- Emergency Contact:** Easy Healthy Building Emergency Contact
  - Primary Contact:** (empty text field)
  - Secondary Contact:** (empty text field)
- Scroller Speed:** Slow (with dropdown arrow)
- Dashboard Theme:** Light (with dropdown arrow)
- Building Image:** file^ (with a folder icon and right arrow)
- Healthy Building User:** Easy Healthy Building User
- Zone Execution Worker:** Zone Execution Worker

Step 4. Click . The **File Chooser** is displayed.



Step 5. Navigate to the required image file and select it

Step 6. Click **Open**.

Step 7. Click **Save**.

# Use the Healthy Building Dashboard

This section describes how to access and use the Healthy Building Dashboard.

- Display the Healthy Building Dashboard
- View a Graph of KPIs

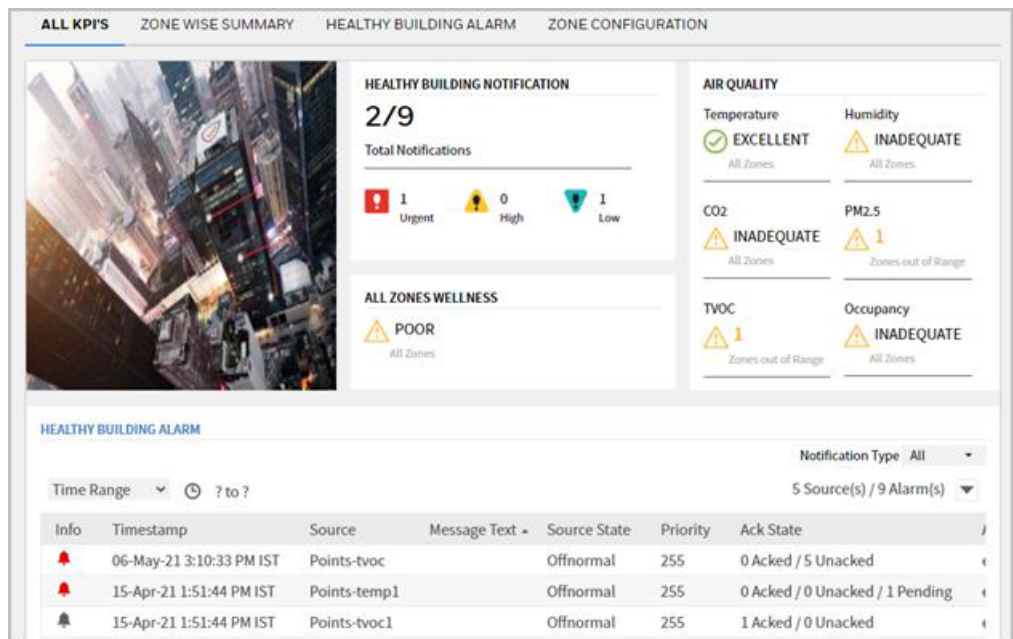
## Display the Healthy Building Dashboard

The Healthy Building Dashboard can be displayed from the Nav tree.

**Note:** If accessing Niagara using a web client the Healthy Building Dashboard may automatically be displayed when you log on.

**To display the Healthy Building Dashboard from the Nav tree:**

- Step 1. In the In the **Nav** tree open the **Station > Config > Services** folder.
- Step 2. Double click **EasyHealthyBuildingService**. The Healthy Building Dashboard is displayed.

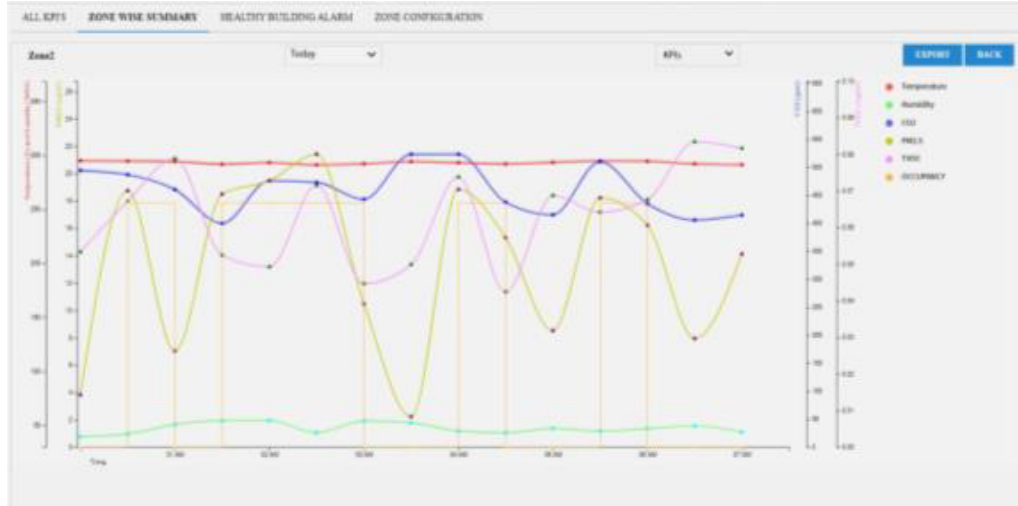


For details of the Healthy Building Dashboard, see [Healthy Building Dashboard](#)

# View a Graph of KPIs

To view a graph of KPIs:

- Step 1. Select the **ZONE WISE SUMMARY** tab.
- Step 2. Click **VIEW TREND** for the required zone. The graph is displayed.



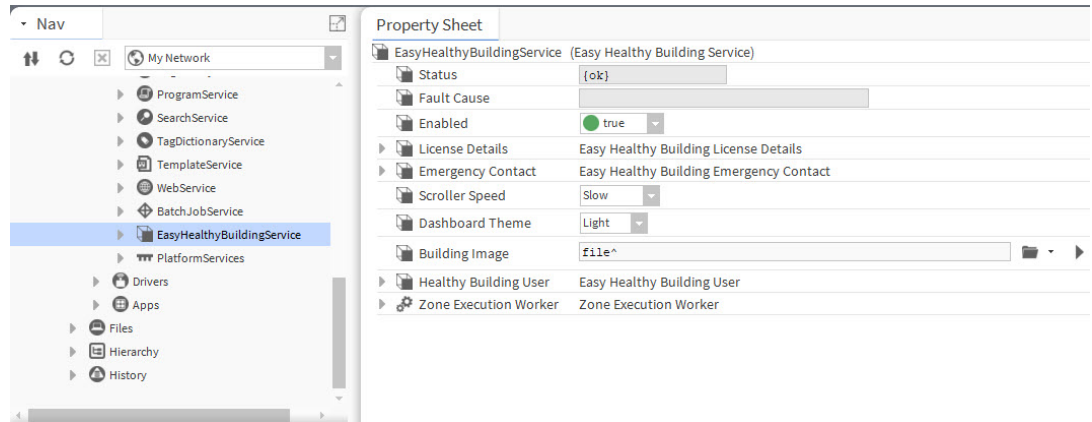
- Step 3. Select the required KPIs from the **KPIs** drop-down.
  - Step 4. Specify the required from the **Time Range** drop-down.
- The underlying data from the graph can be exported to a .CSV file by selecting **EXPORT**.

# Healthy Building Dashboard Properties

Admin users can view dashboard properties in EasyHealthyBuildingServices property sheet.

Steps to open EasyHealthyBuildingServices property sheet:

- Step 1. In the Nav tree open the **Station > Config > Services folder**.
- Step 2. Right-click **healthybuildingservice** > and select **Views > AX property sheet**



The Healthy Building Dashboard properties are described below.

Properties	Description
Status	Read only. Shows Healthy Building status
Fault Cause	Read only. The reason a system object (network, device, component, extension, etc.) is not working properly (in fault). This property is empty unless a fault exists.
Enabled	User can select True (to enable) or False (to disable) in order to view the Healthy Building dashboard.
License Details	<p>Details of the License status, License expiration, Zone limit, and License configuration.</p>

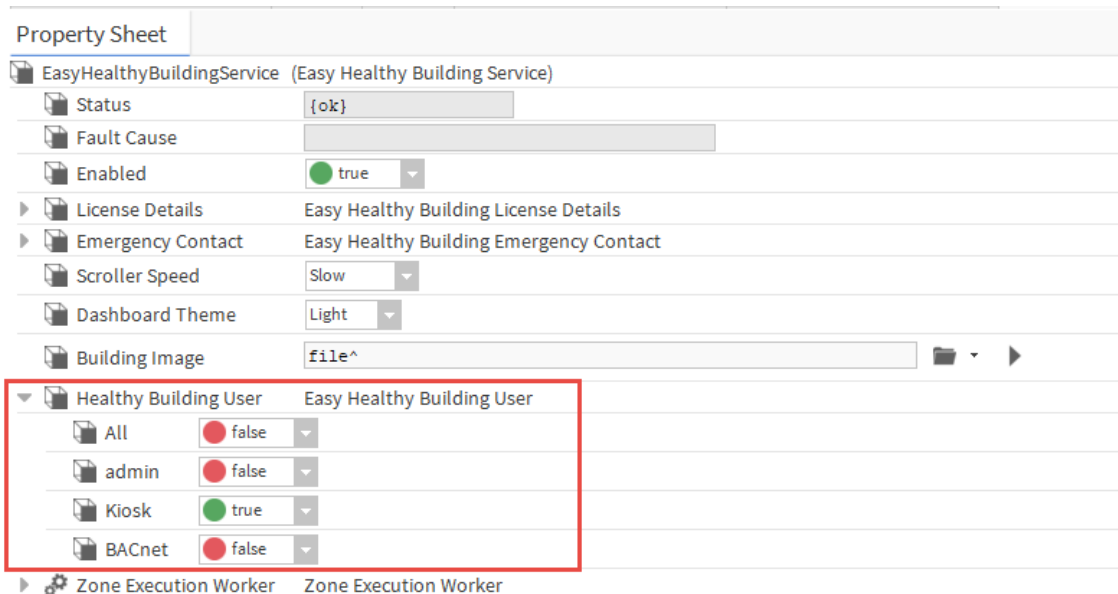
Properties	Description
Emergency Contact	The Primary and secondary contact details (Email, Website link, or contact number of technical support) in case of emergency.
Scroll Speed	The speed of scrolling notification on the dashboard.
Dashboard Theme	The dashboard theme (Light/Dark theme).
Building Image	The images that are available in station shared location as per the requirement.
Healthy Building User	Allows the admin user to provide access to other user with restricted Healthy building dashboard view. To create new user in workbench, refer below Ord. local: module://docUser/doc/baja-UserService.html
Zone Execution worker	Advance configuration, it allows to change the refresh rate of Healthy Building Dashboard to be changed.

## Healthy Building User

There are two types of users for Healthy Building (Admin and Non-admin).

### To change the healthy building user

- Step 1. In the NAV tree open the **Station > Config > Services** folder
- Step 2. Right-click **EasyHealthyBuildingService > Views > click AX Property Sheet**. The property sheet of **EasyHealthyBuildingService** is displayed.



- Step 3. In the **Healthy Building** box, select 'true' for the users that are to have access to the Healthy Building Dashboard.

- Step 4. Click **Save**.

**Note:** Users that are in the 'Admin' category will have Admin access to the Healthy Building Dashboard.

# FAQ's

## **What happens behind the screens when points are drag and dropped on tiles?**

Whenever point is attached to the tile, then we are tagging the point, adding History extension and alarm extension in order to get history and alarm from that KPI point.

## **What is the concept when I use Healthy Building in the controller?**

Only JACE or equivalent controllers are supported by Healthy Building and the concept is exactly the same as per supervisor design.

## **How can the single dashboards from the controllers be merged on "master" dashboard level (entire site)?**

For Release 1 the different controllers have to share data to the main WEB-8000 (or equivalent) or the supervisor, to cumulate all the sensor data to represent the Zone / Building view in Healthy Building Dashboard.



# Contact

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### IMPORTANT



Saia Burgess Controls Technical Support are only able to provide support for Saia PCD® Supervisor and the Saia Burgess Controls driver features described in this manual. They are unable to provide support for 3rd party drivers and undocumented aspects of Saia PCD® Supervisor's operation.