1643 Josephine Training

Maintenance User Guide

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How to Login

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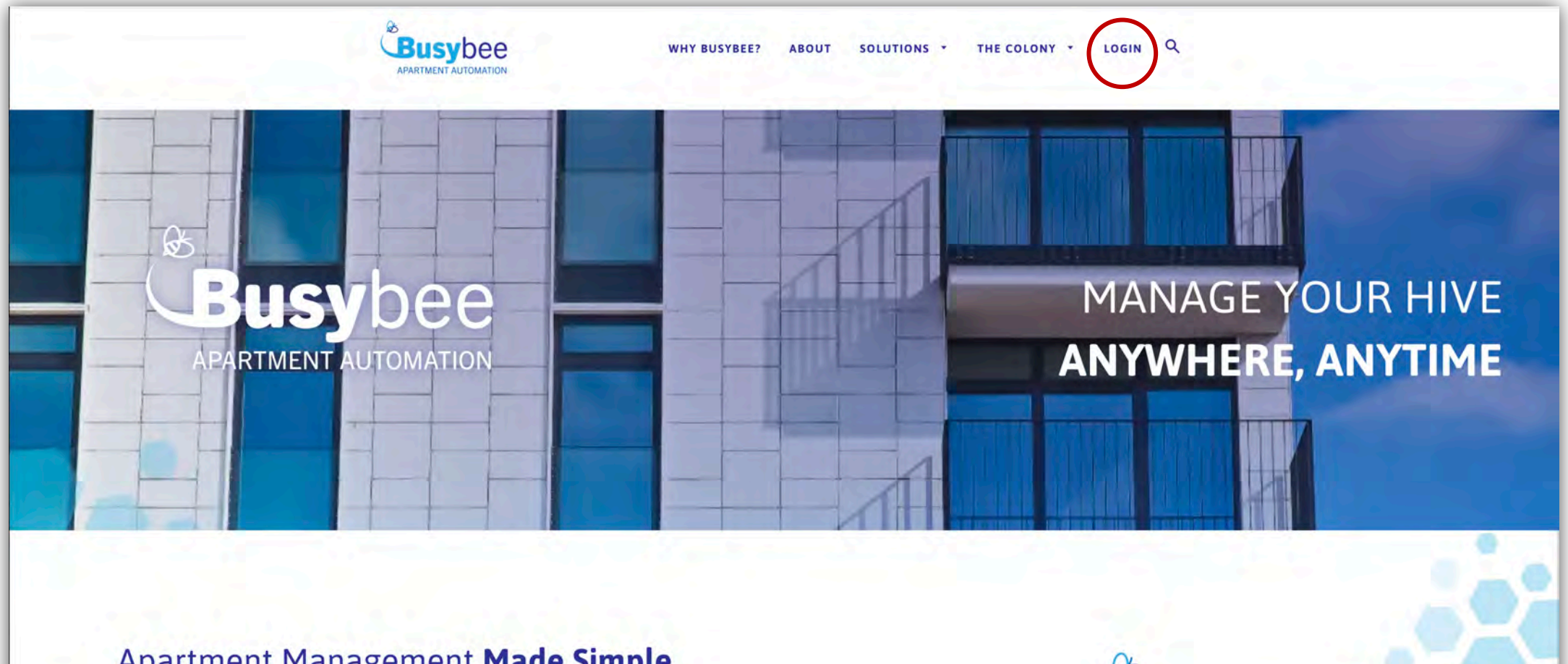
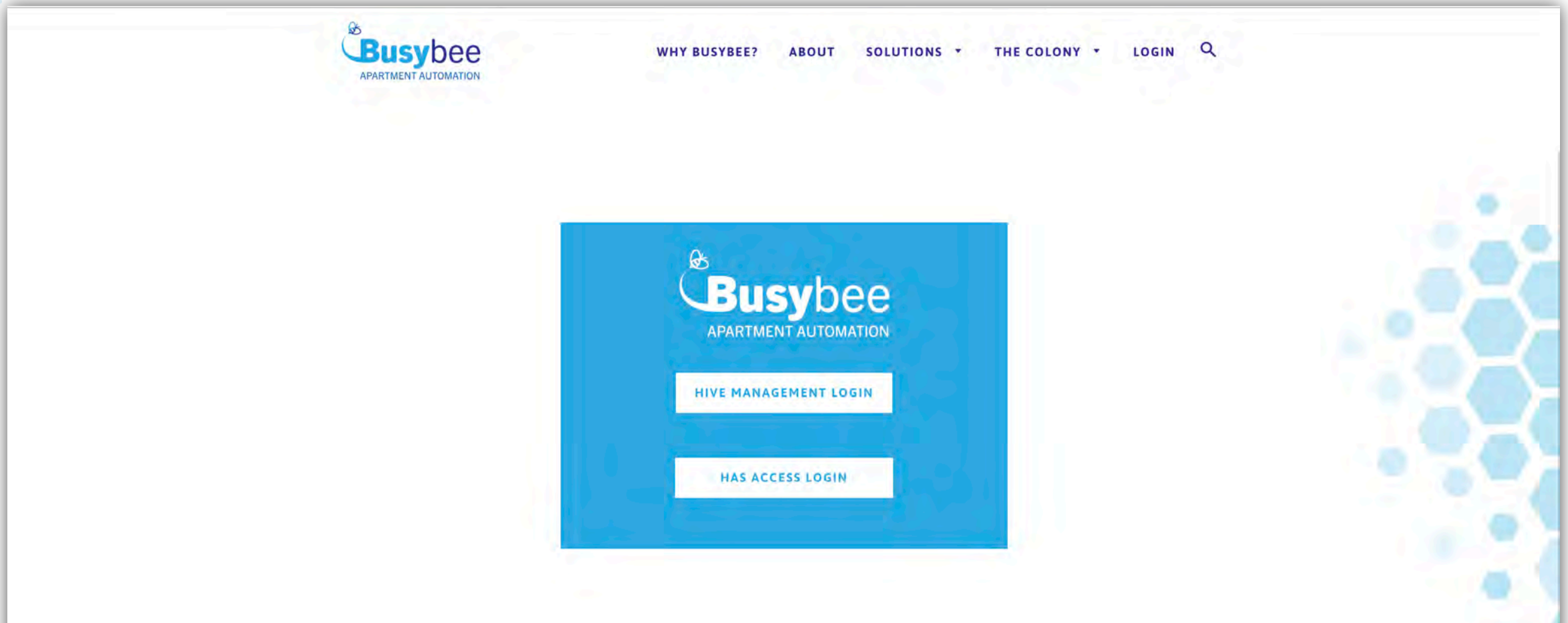
After receiving the automated activation email and creating your account you will have access to **THE HIVE Management Dashboard**.

The HIVE Management Dashboard is accessible via any device using your web browser. The Hive Management Dashboard login is found directly on the Busybee Automation Website.

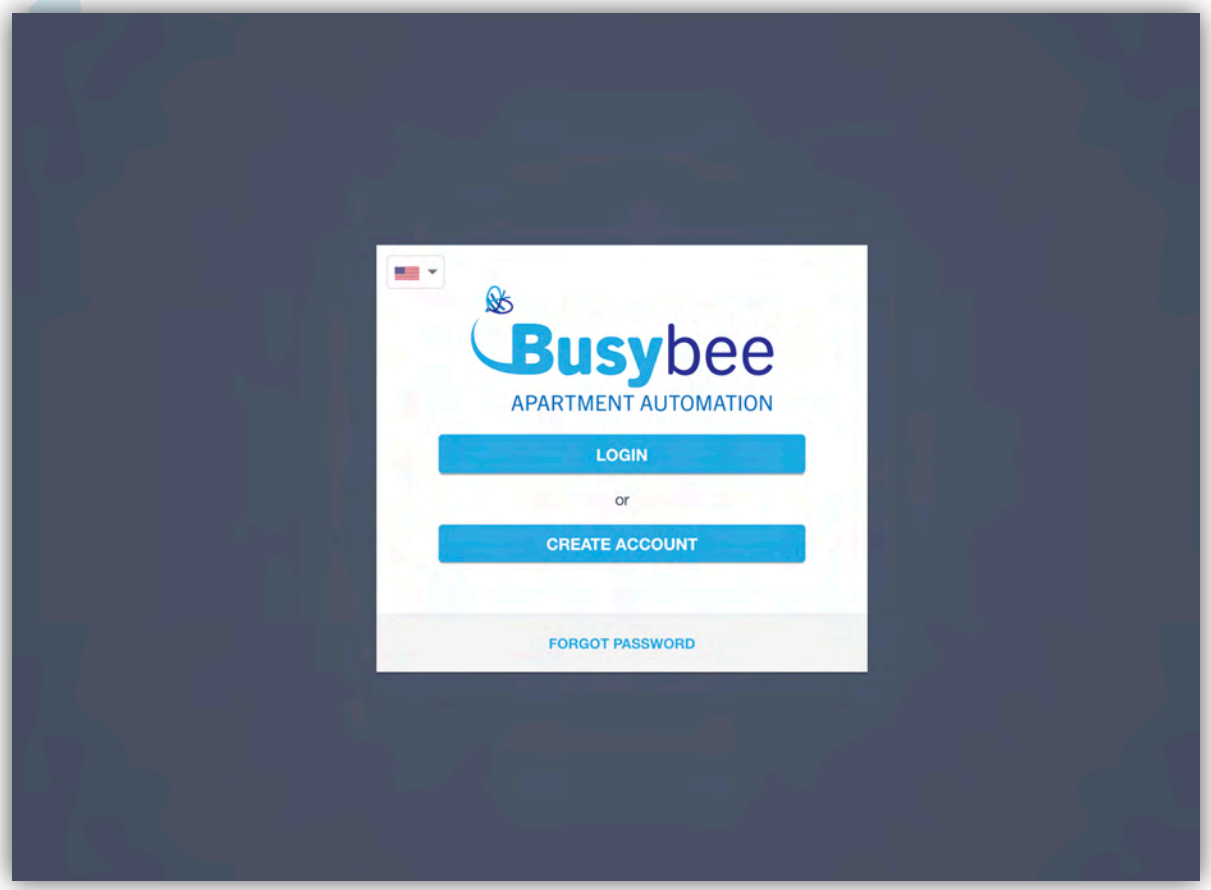


This will direct you to choose which login you would like to access. Super Administrators and Maintenance Supervisors will choose “**Hive Management Login**” to have access to the full Hive dashboard. Has Access and Temporary Access users will select “**Has Access Login**” to enter our quick access module to lock/unlock doors.

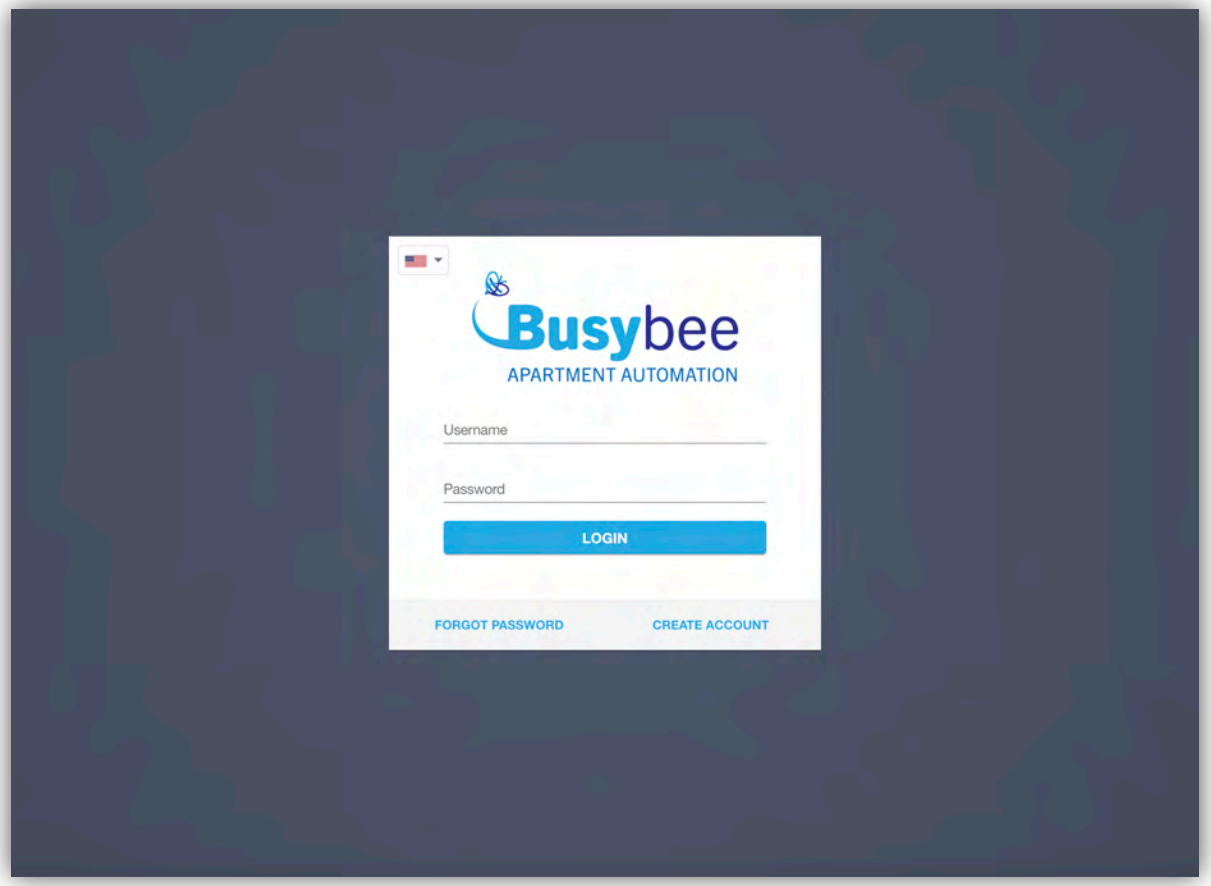


These are the separate login pages you will be directed to depending on the login you select

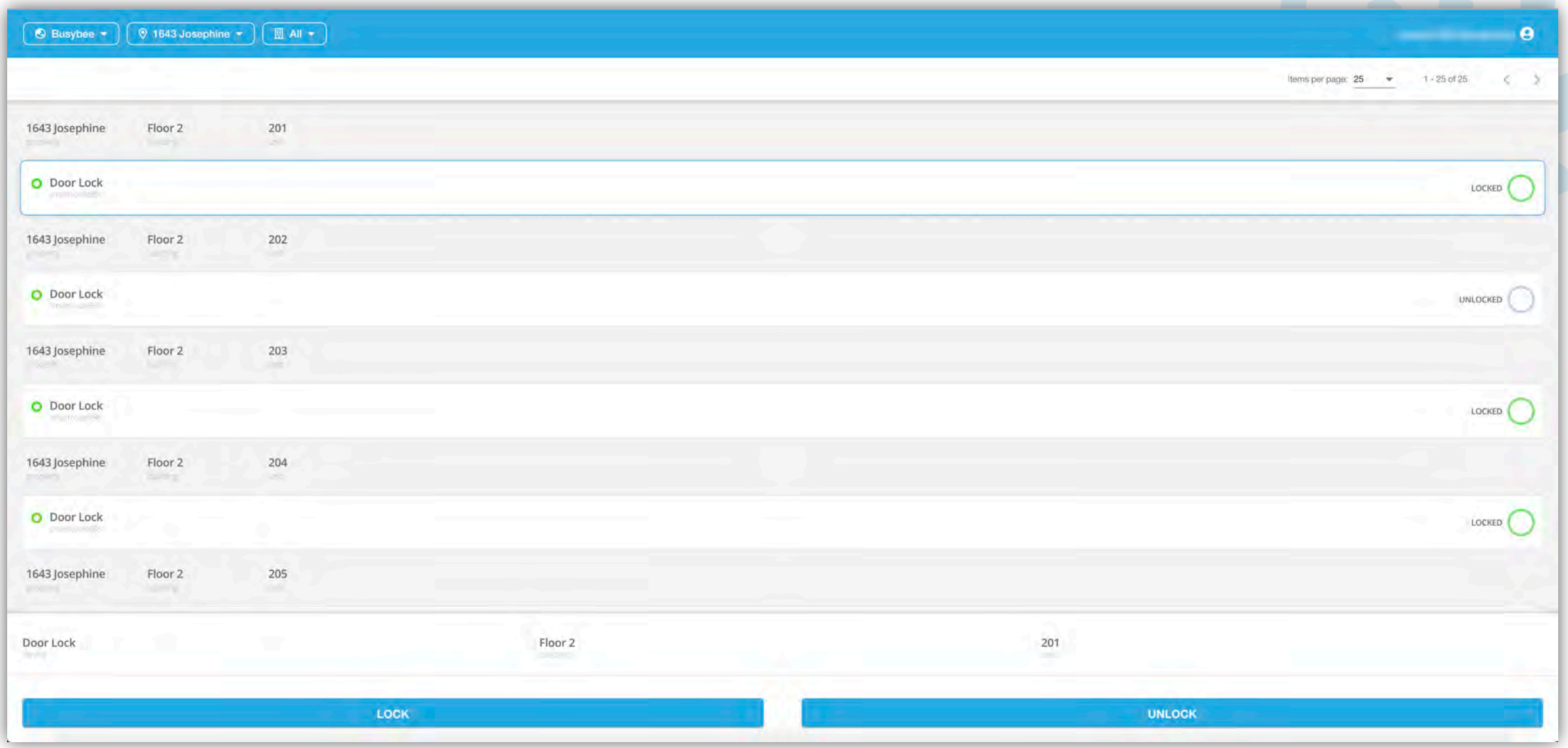
Has Access Login



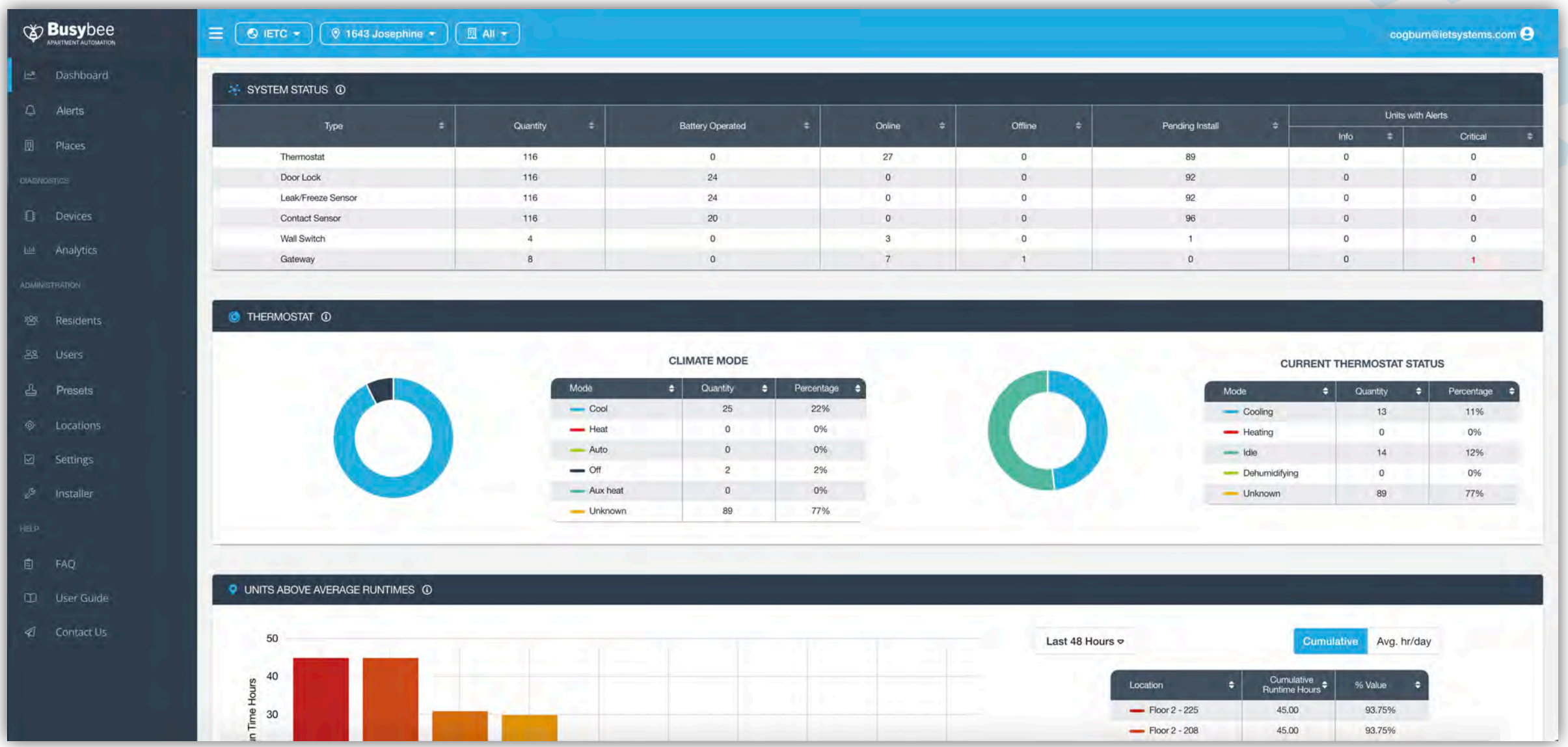
Hive Management Login



This is the Quick Access Module **Has Access** and **Temporary Users** will use.



This is the Hive Management Dashboard **Super Administrators** and **Maintenance Supervisors** will see.



The Hive Management Dashboard

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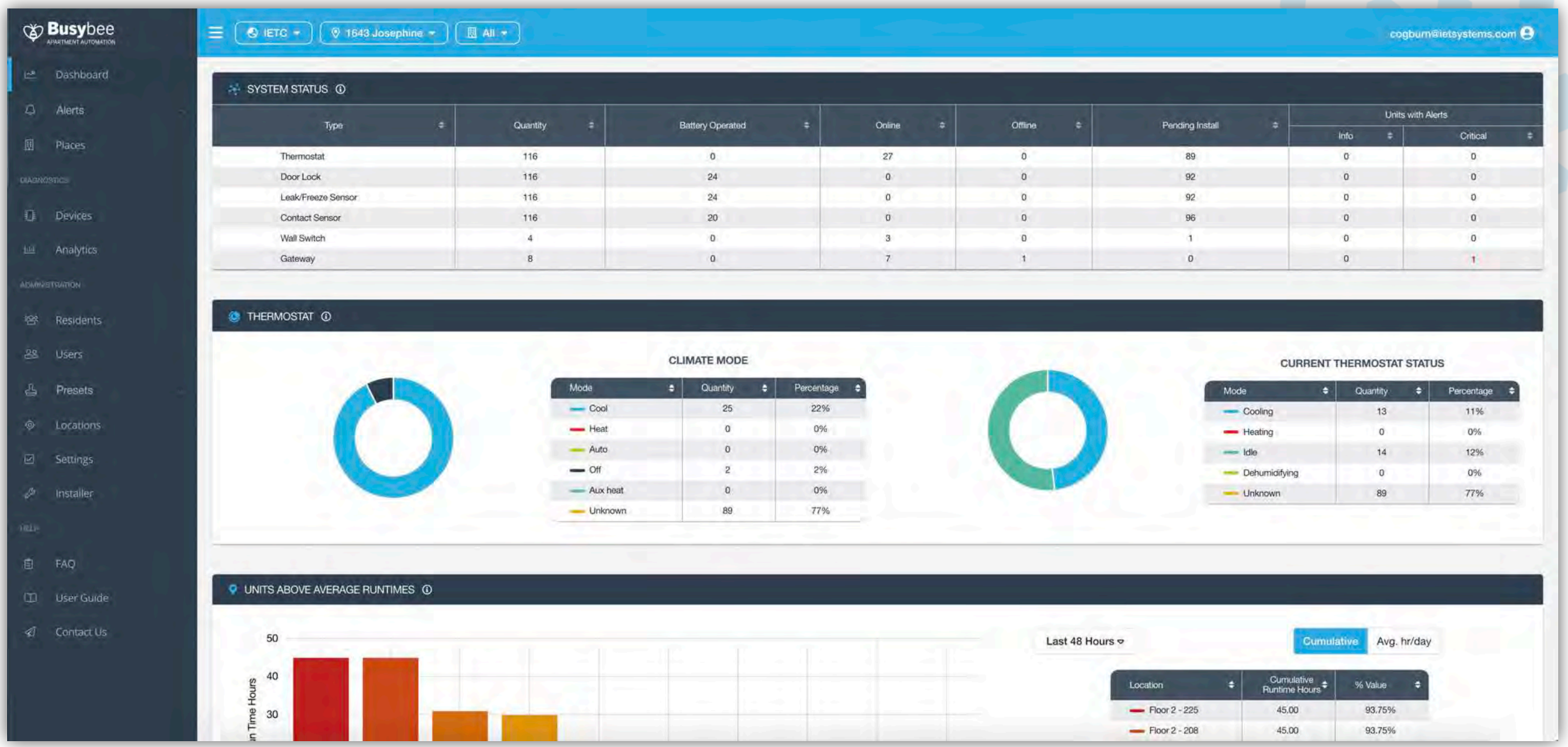
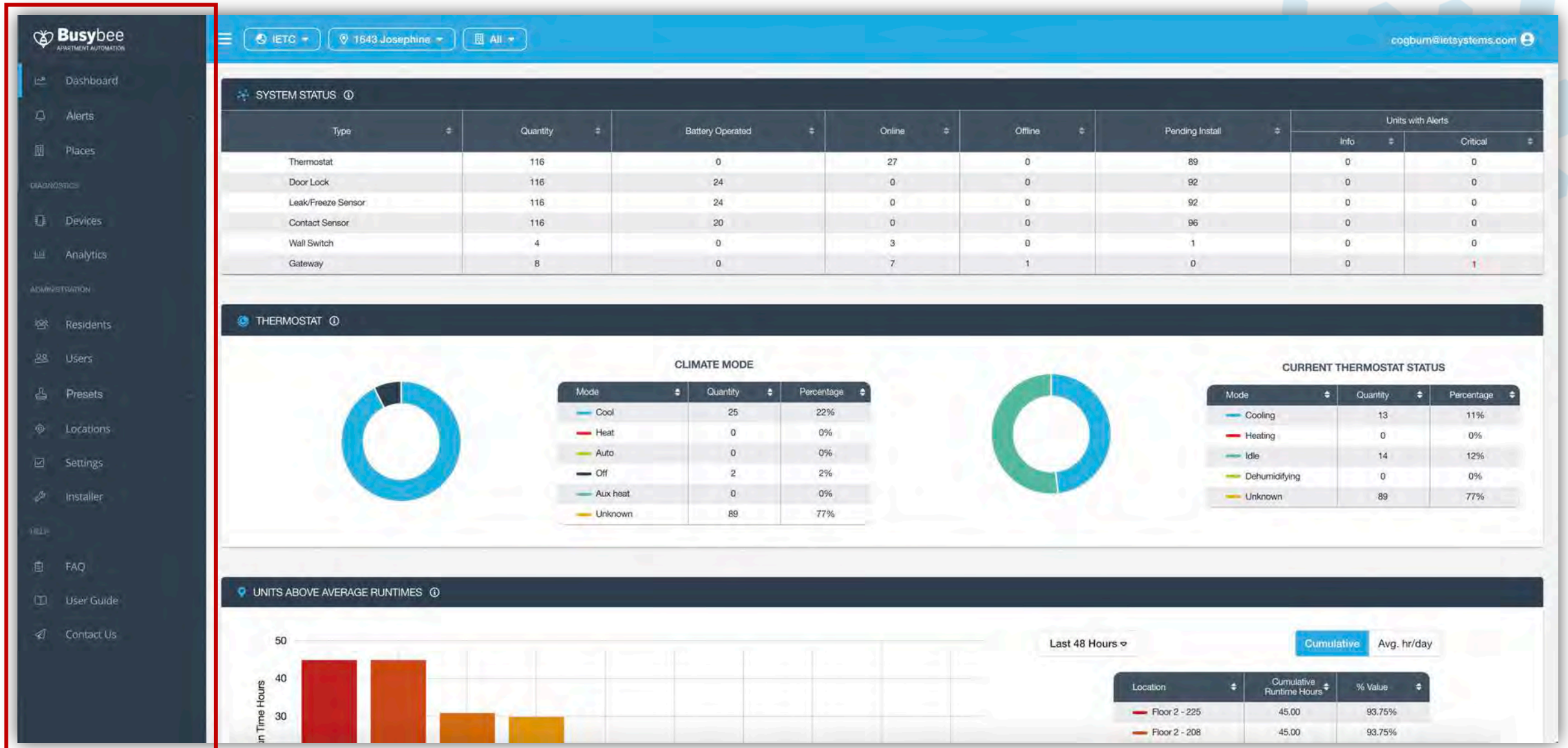
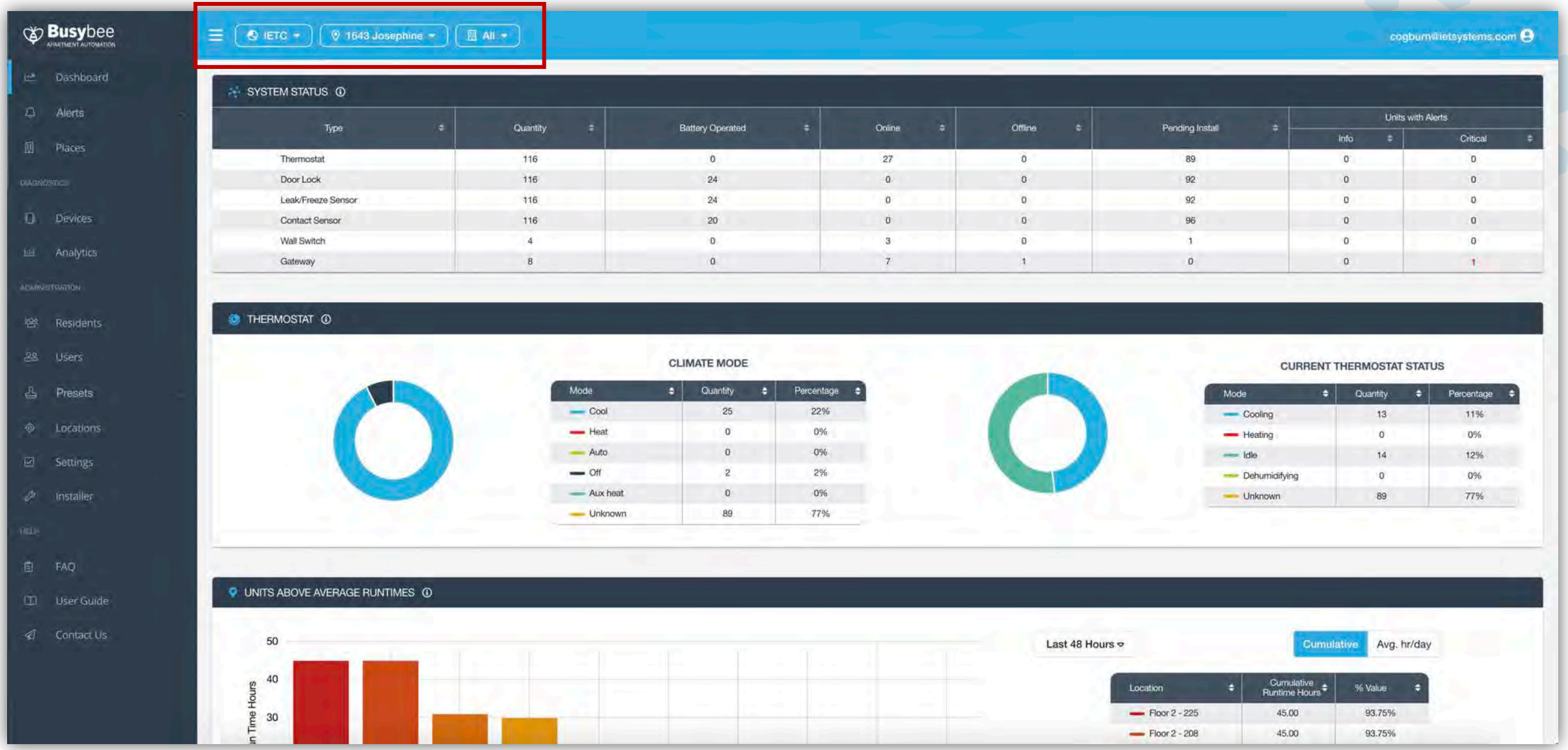
Once your login information is entered, you will see THE HIVE Summary Page.



To the left, you will see various **“Task Tabs”**



The top bar will indicate the Management Company, The Property, and specific Buildings/Floors



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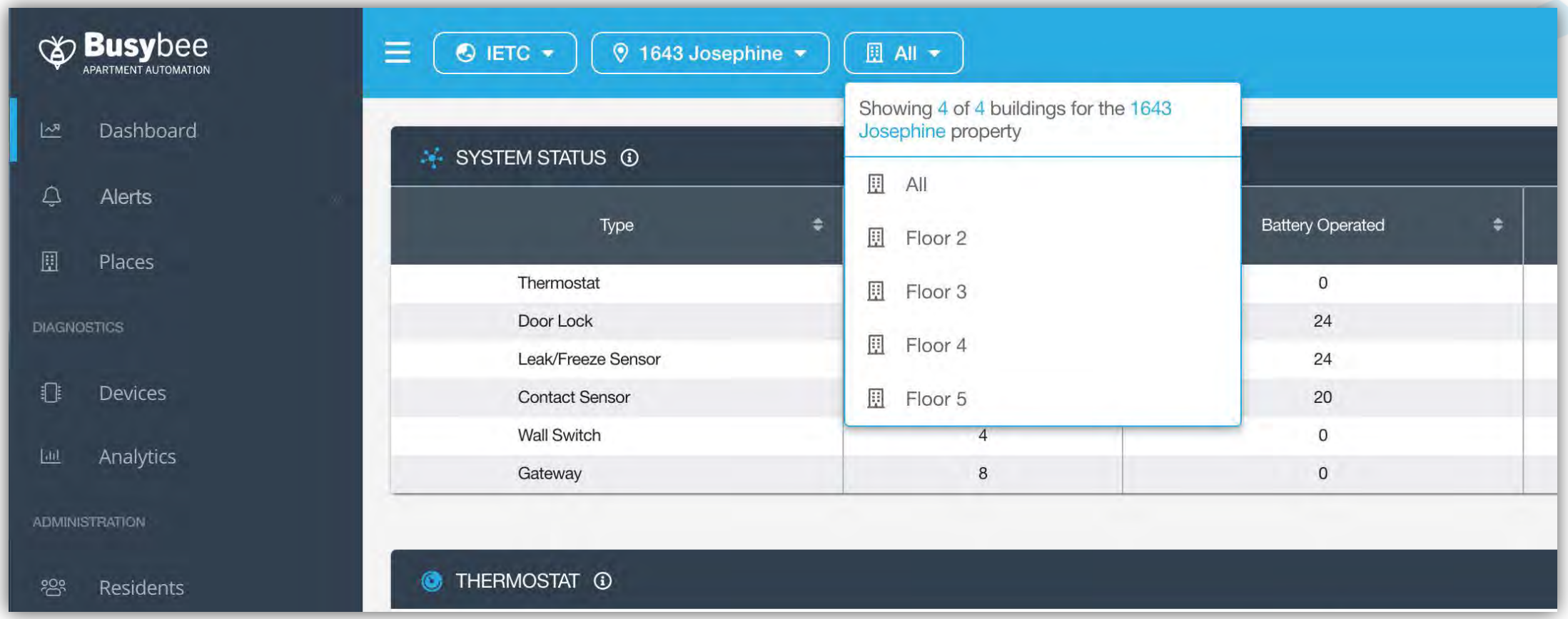
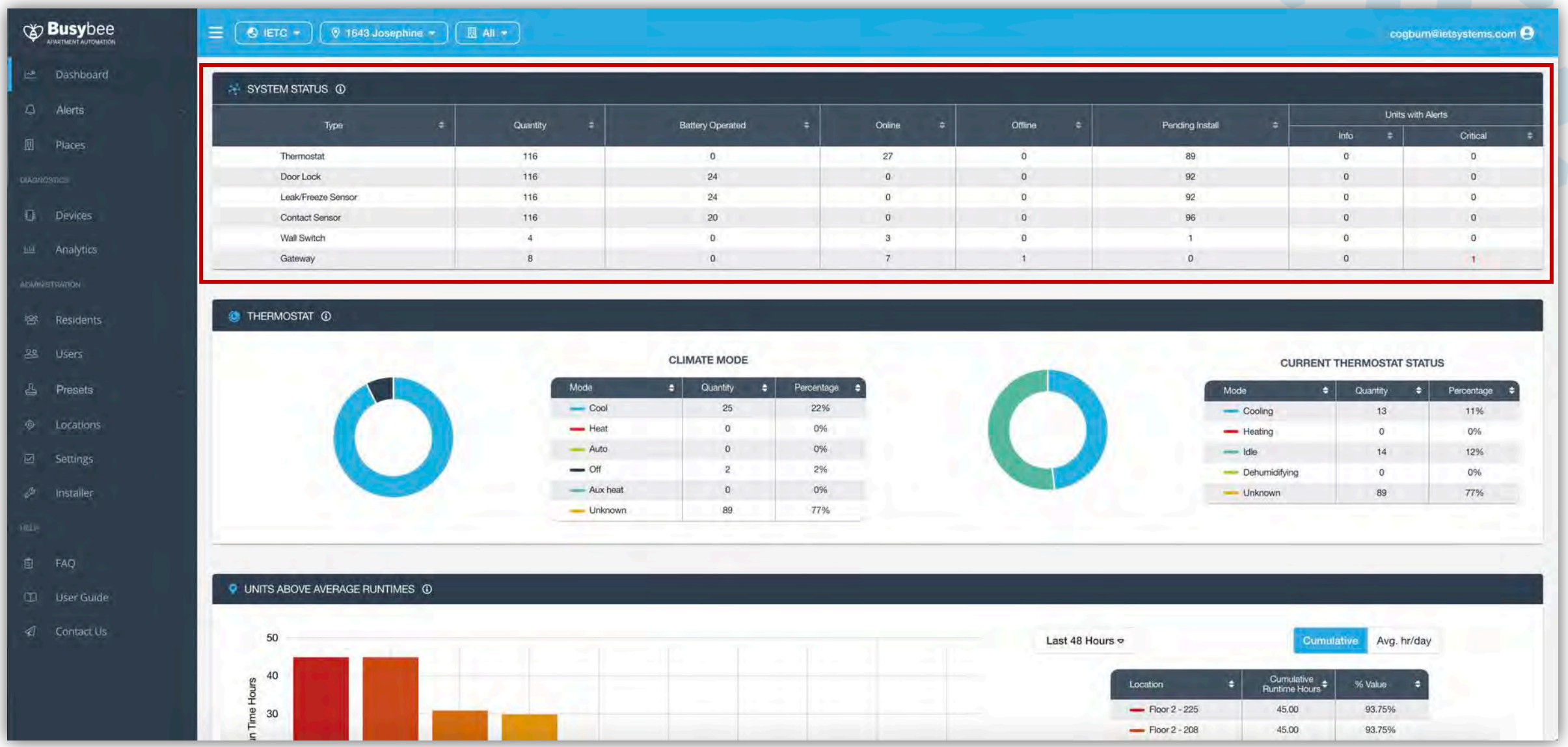


The first summary you will see is the **System Status Section**



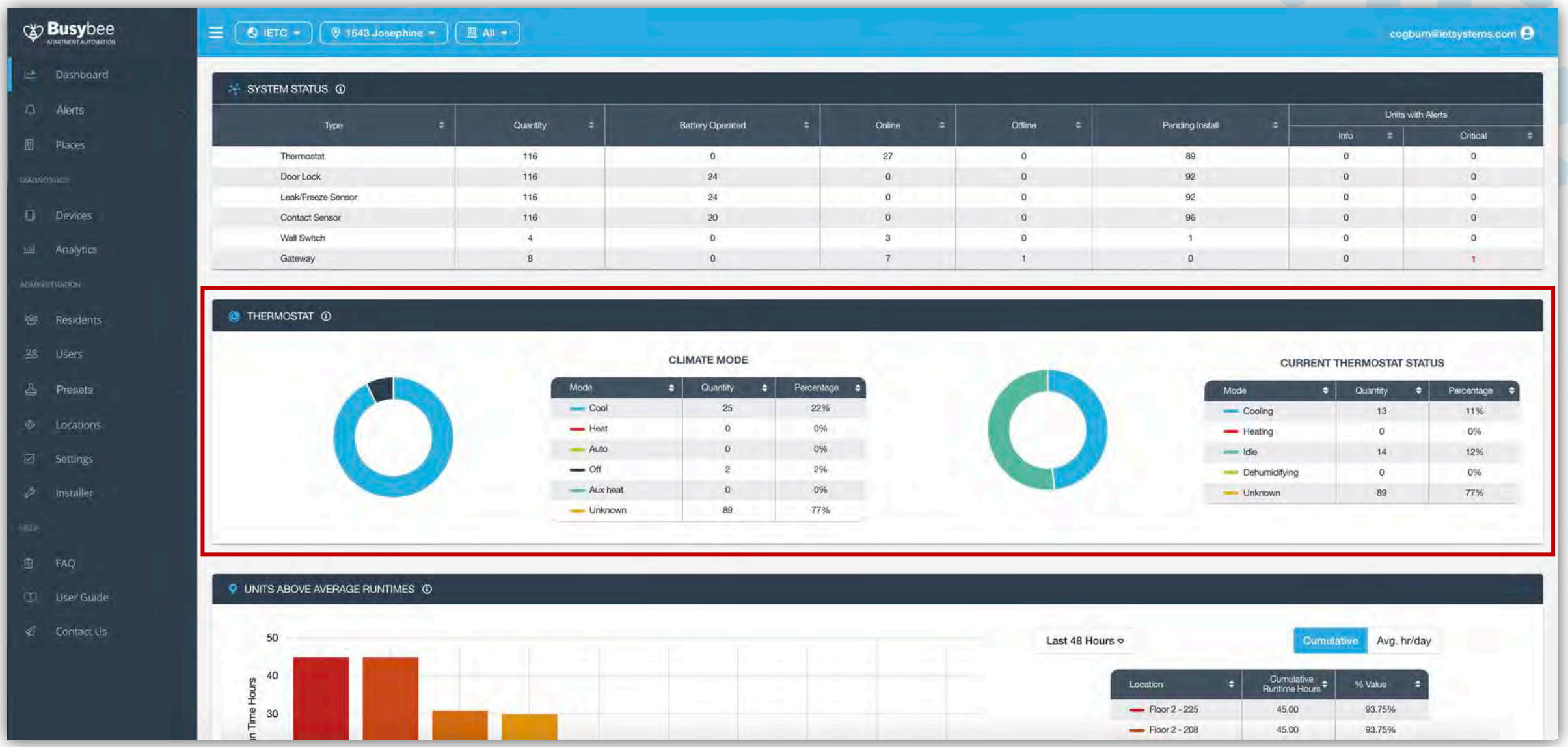
The first summary you will see is the **System Status Section**

SYSTEM STATUS

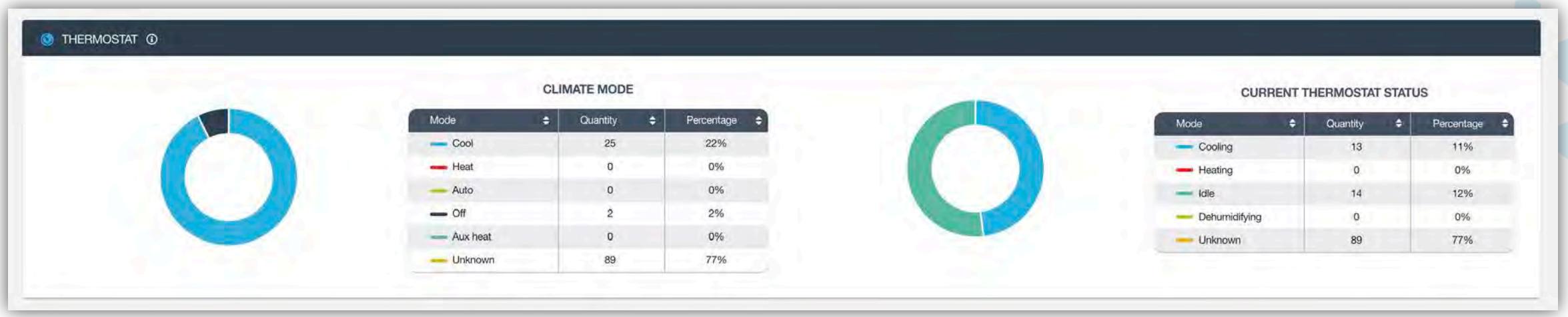
Type	Quantity	Battery Operated	Online	Offline	Pending Install	Units with Alerts	
						Info	Critical
Thermostat	116	0	27	0	89	0	0
Door Lock	116	24	0	0	92	0	0
Leak/Freeze Sensor	116	24	0	0	92	0	0
Contact Sensor	116	20	0	0	96	0	0
Wall Switch	4	0	3	0	1	0	0
Gateway	8	0	7	1	0	0	1

This is a real-time summary of devices configured for your property. You will be able to see connectivity status and active alerts for each device.

Next, directly below System Status, is the **Thermostat Section**



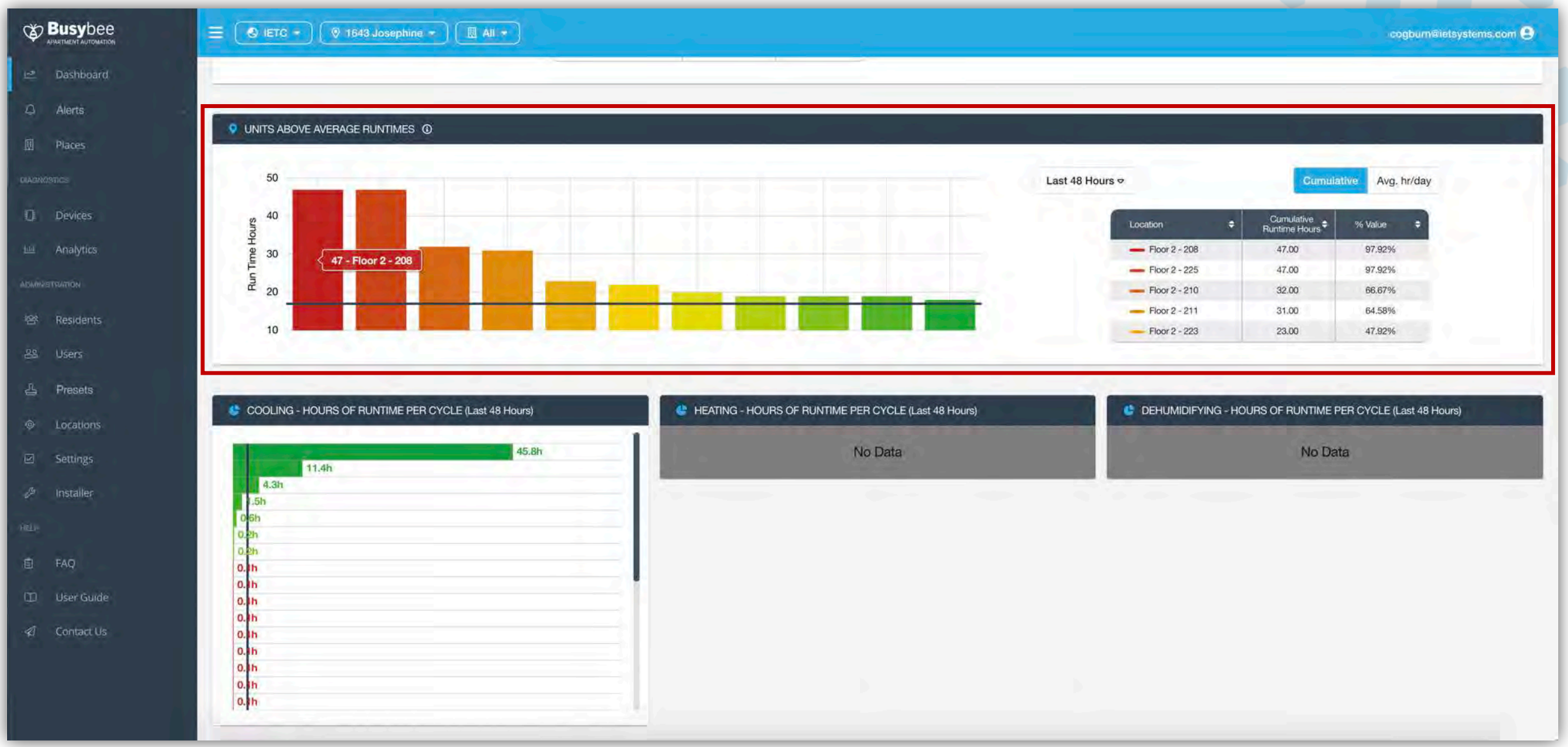
Next, directly below System Status, is the **Thermostat Section**



This section enables you to monitor all your thermostats in one convenient place.

- The **Climate Mode** pie chart shows you the number of units set to each specific climate mode.
- The **Current Thermostat Status** pie chart shows you the total number of units currently running with their specific status.

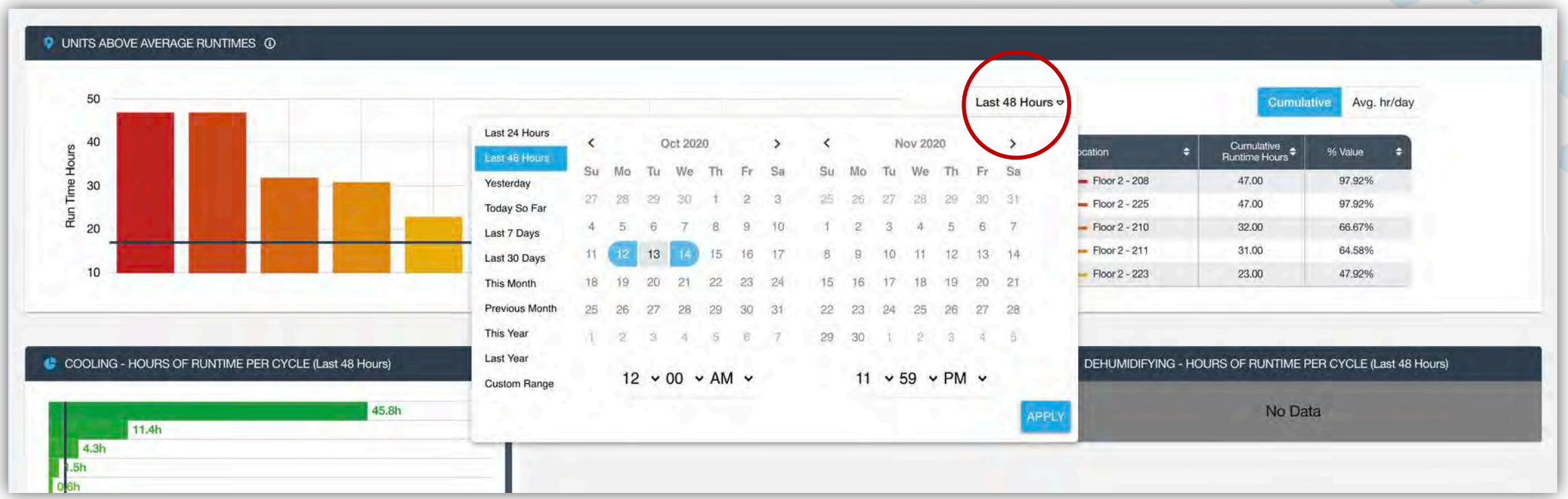
Next, directly below Thermostat Section, is the **Units Above Average Runtimes**



Units Above Average Runtimes

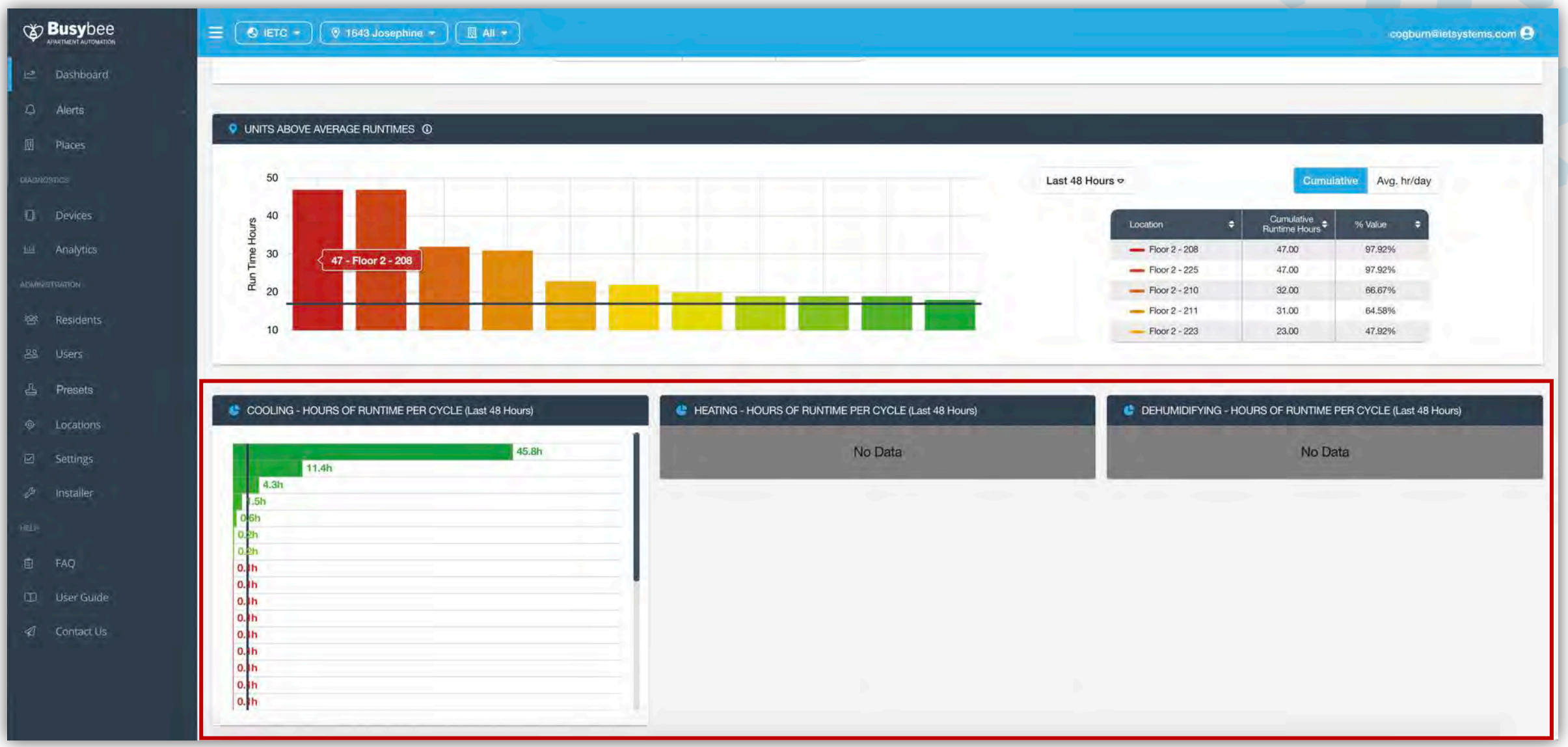
The Units Above Average Runtimes section indicates all units that exceed average runtime of the property. The Y-axis shows the runtime.

Units Above Average Runtimes



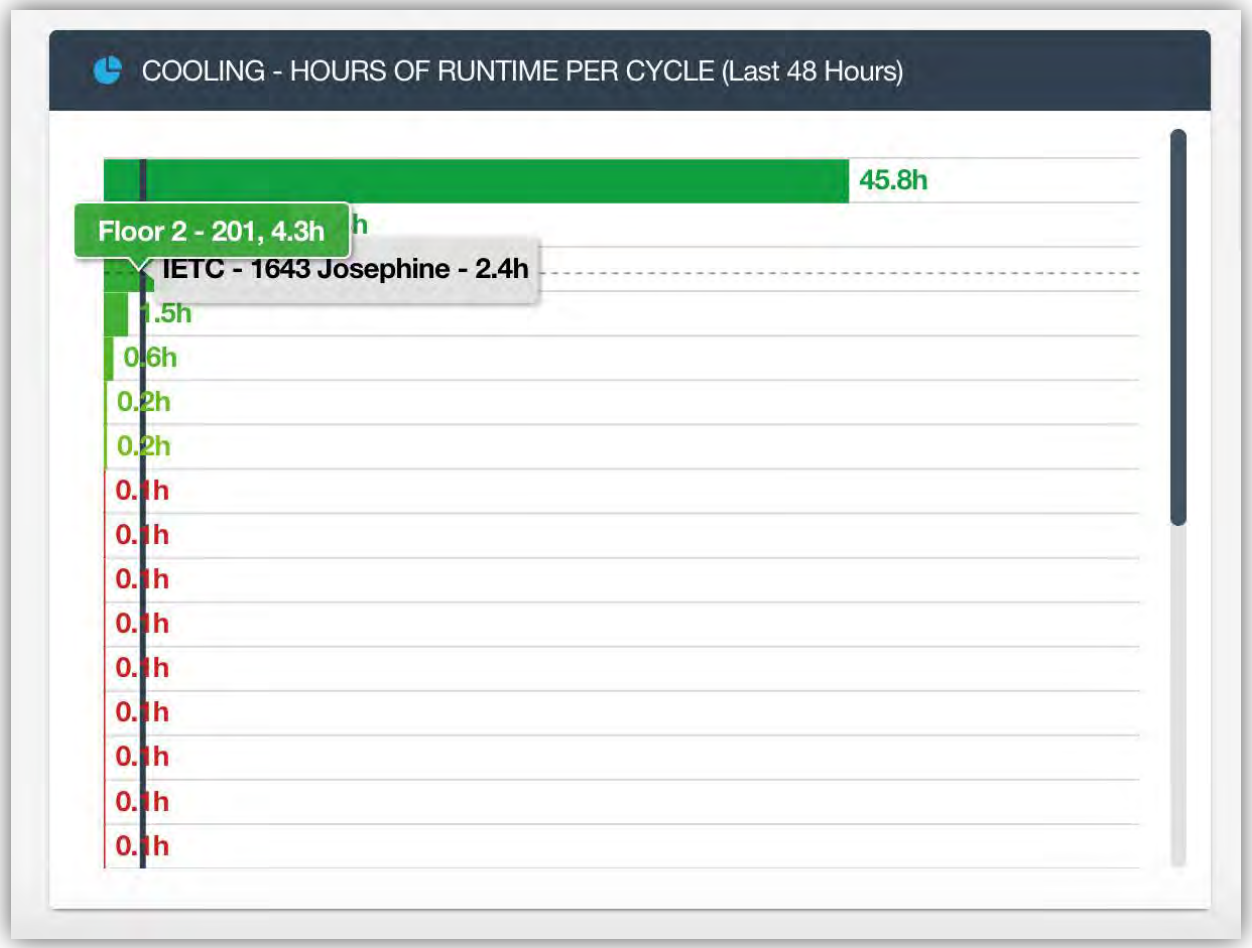
The scale can be adjusted to display total cumulative time or the average per hours per day according to the selected evaluation period.

Next, directly below Units Above Average Runtimes, is the **Hours Of Runtime Per Cycle**



Next, directly below Units Above Average Runtimes, is the **Hours Of Runtime Per Cycle**

In the Hours Of Runtime Per Cycle it is set to display the last 48 hours and is divided by set climate mode. You can hover over each line item to see the apartment number that corresponds with the specific data.



Archived Reports

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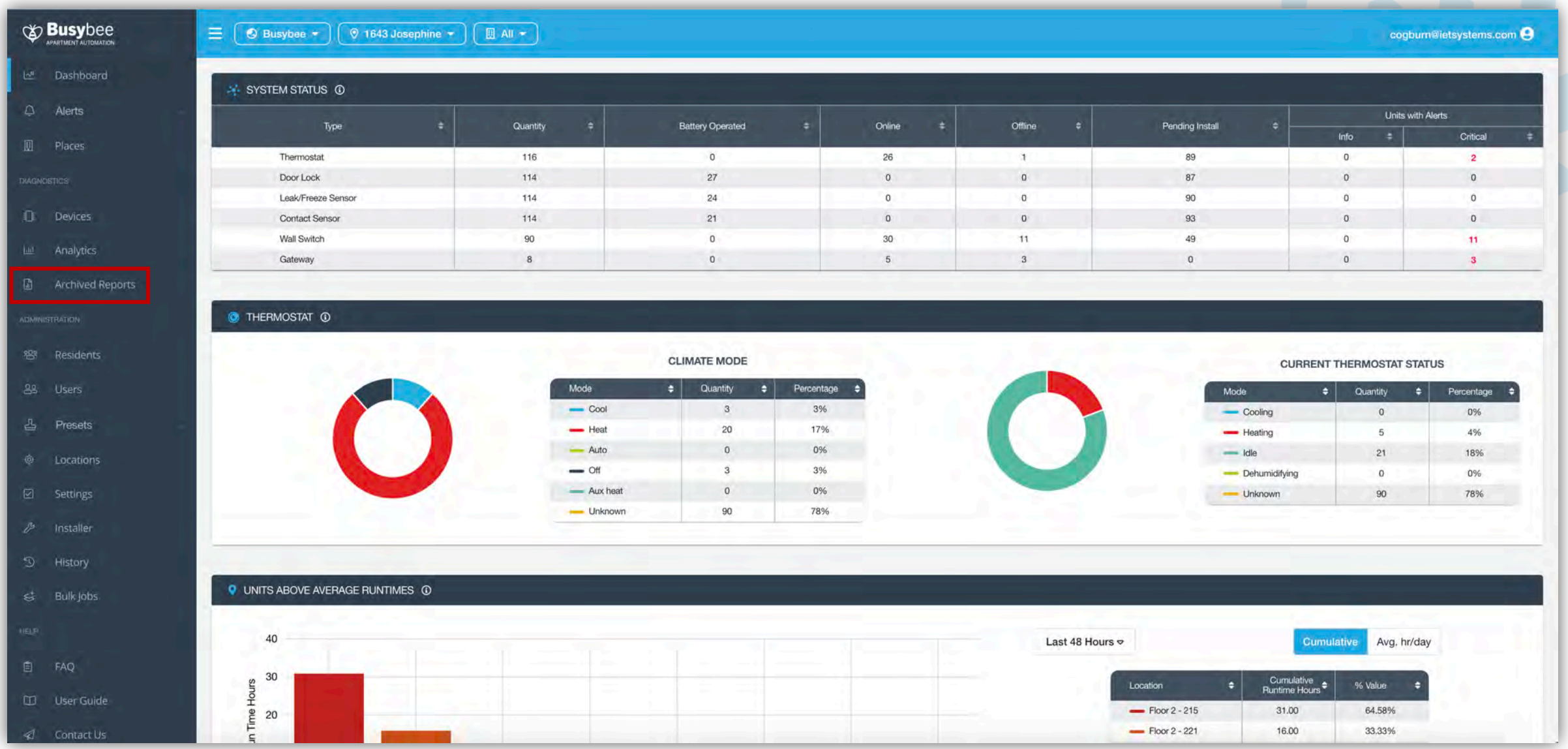
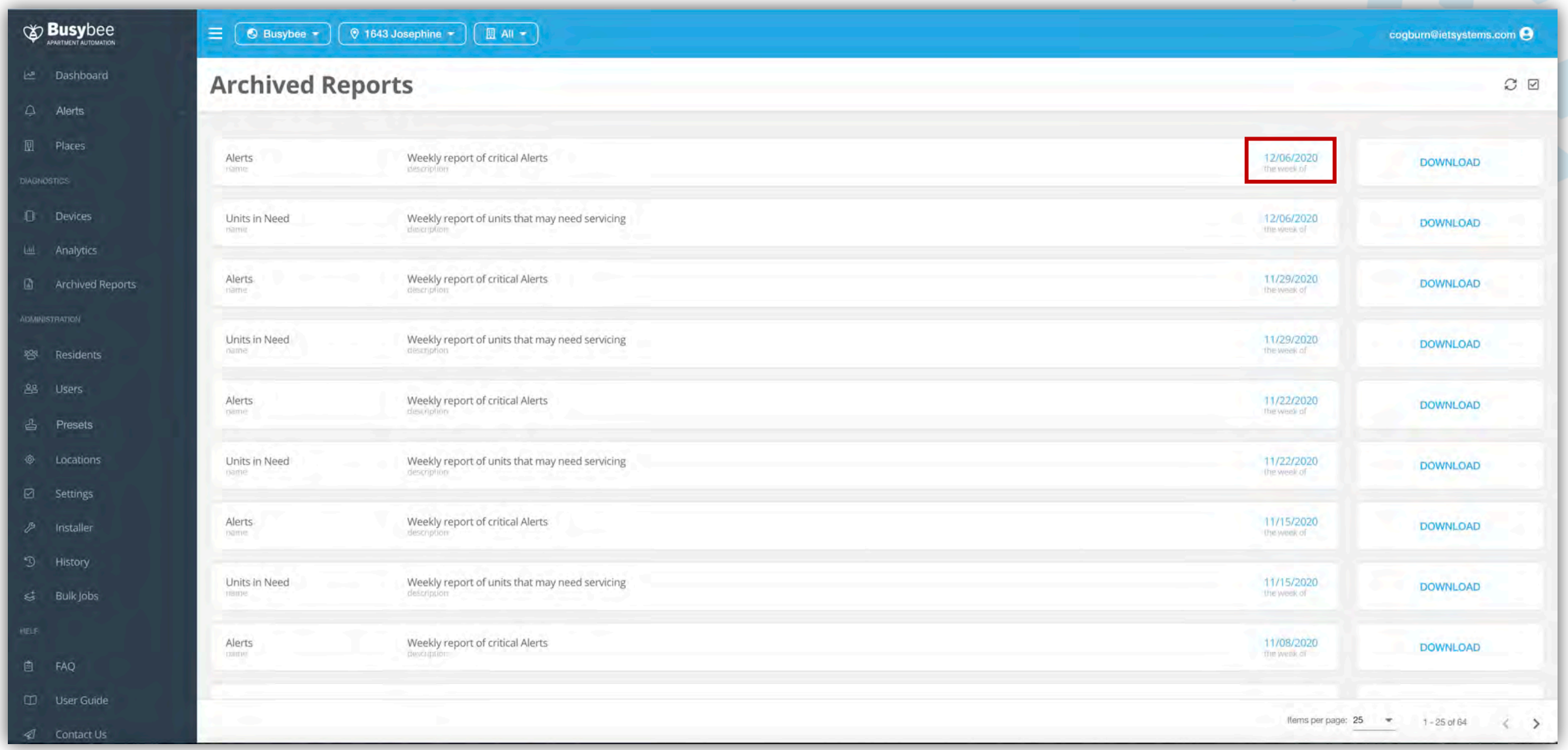
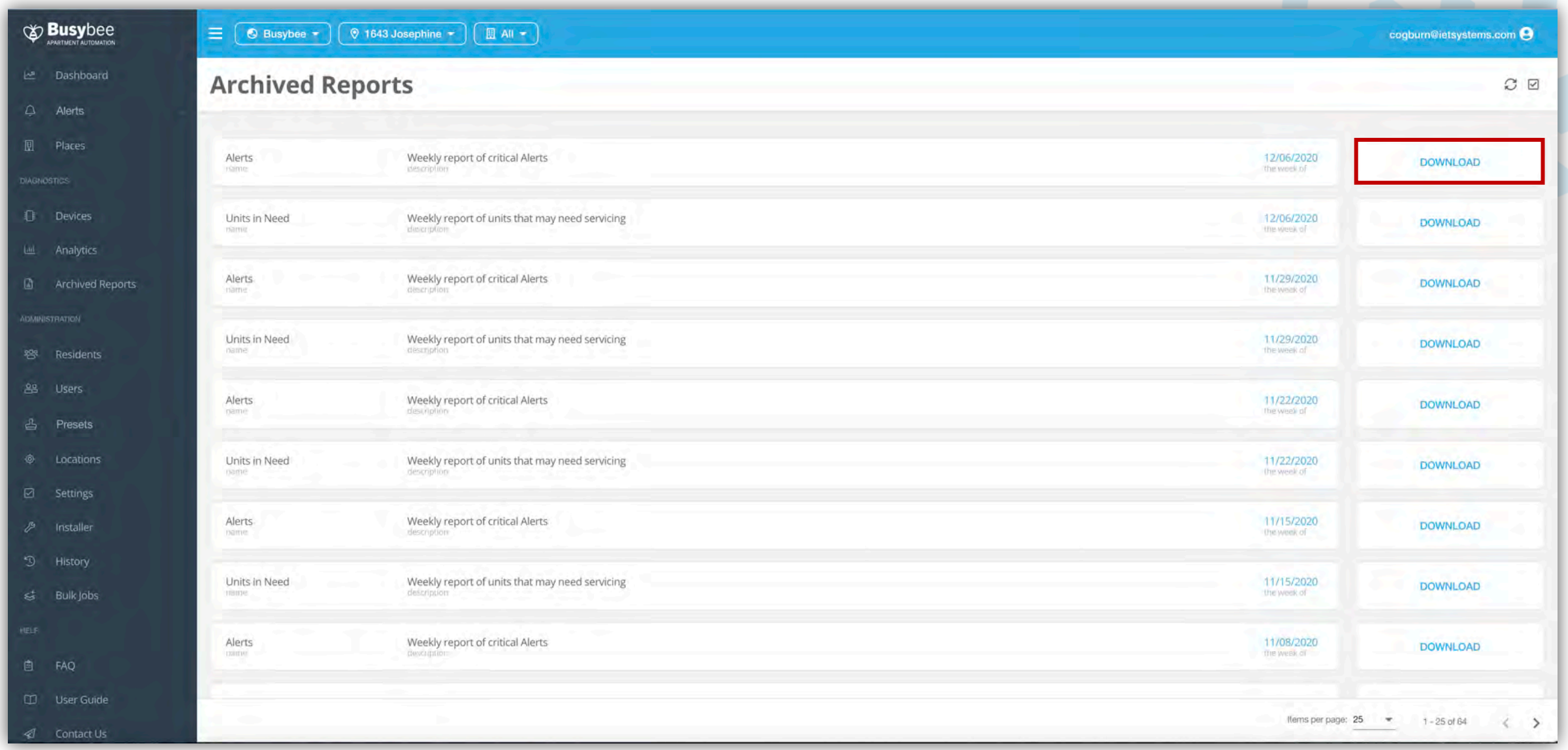
To access reports, select Archived Reports in the left Task Tab



This is the Archived Reports Page. All reports are generated on a weekly basis and can be identified by the date to the right of the report



To download a report, select the “Download” button to the right of each report



The downloaded report will appear in a new tab where you can save and print

1643 Josephine / Data collected over 7 days, 12/06/2020 00:00 through 12/12/2020 23:59

Open in Acrobat

ALERTS REPORT

Excessive Humidity:

Building	Unit	Highest Humidity Level	Current Humidity Level	Start date /time	Duration (until now)
Floor 2	219	77%	75%	12/11/2020 07:45	a day

Excessive Humidity – The excessive humidity alert indicates that the humidity level inside your unit has remained above 65% for 24h or more. Your HVAC is not removing moisture from the air effectively and that can make your unit feel warmer than it actually is.

High humidity for an extended period of time can be conducive to mold growth in the right circumstances. If a unit has humidity consistently over 65% and an ambient temperature at or above 80 °F, mold can begin to grow after 24h at these conditions. Excessive humidity alerts are usually triggered in warm weather climates and are sometimes indicative of a unit needing more insulation or a resident having left a door/window open.

Extreme Cold:

Nothing To See Here

No Extreme Cold alerts were found. Nice work!

Excessive Cold – To prevent damage due to freezing you can set an Extreme Cool Alert. This alert indicates that the internal temperature inside your unit stays below <THRESHOLD> °F and is abnormally cold. This can alert can be caused by a wiring issue between the HVAC and thermostat, a unit that has the thermostat turned off or disconnected during a cold day, or a unit with a window/door that was left open erroneously.

Extreme Heat:

Nothing To See Here

No Extreme Heat alerts were found. Nice work!

Excessive Heat – To prevent damage due to excessive heat you can set an Extreme Heat Alert. This alert indicates that the internal temperature inside your unit remains above <THRESHOLD> °F and is abnormally warm. This alert can be caused by a wiring issue between the HVAC and thermostat, a failing HVAC that is blowing hot air when cold air is called for, a unit that has the thermostat turned off or disconnected during a hot day, or a unit with a window/door that was left open erroneously.

Excessive Runtime:

Reporting Examples

There are three weekly reports that are generated

1

Unresolved Alerts Report

2

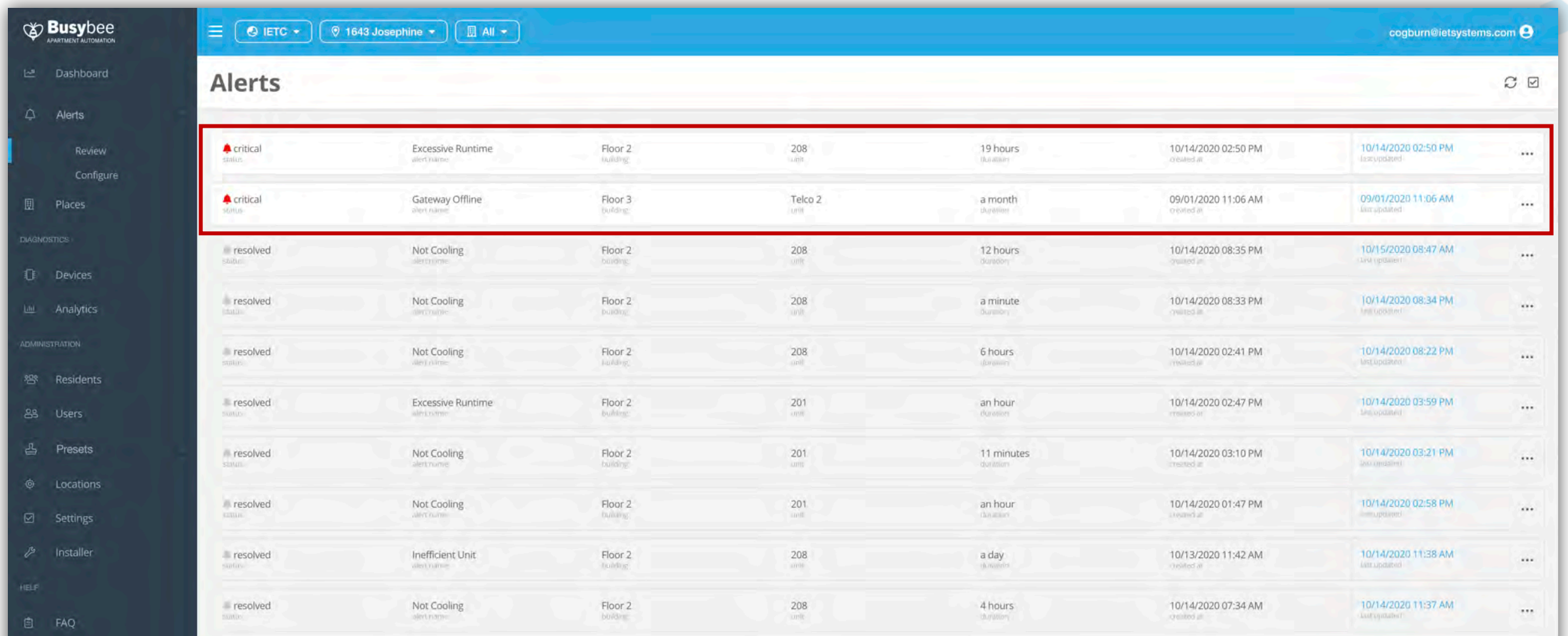
Critical Alerts Report

3

Units in Need Report

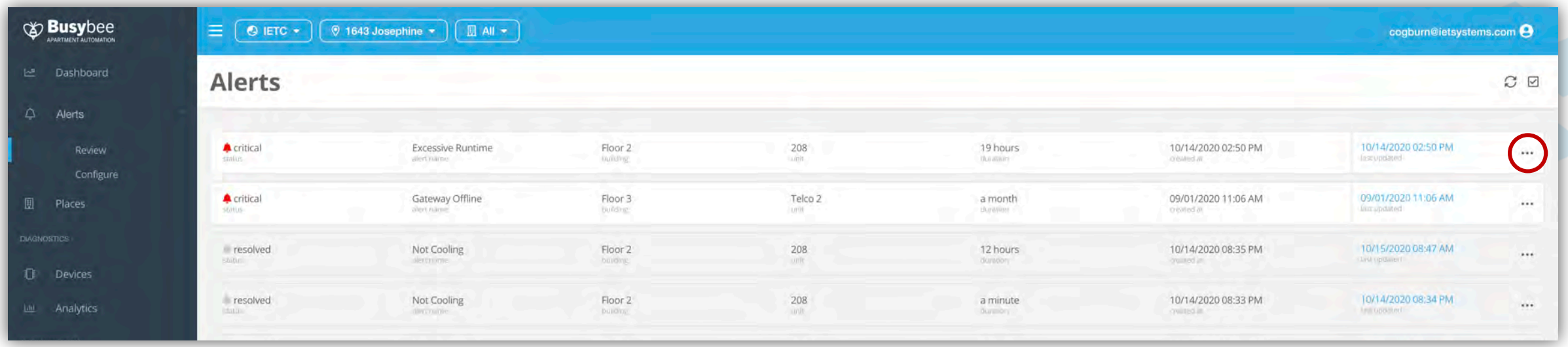
Reporting Examples: Unresolved Alerts Report

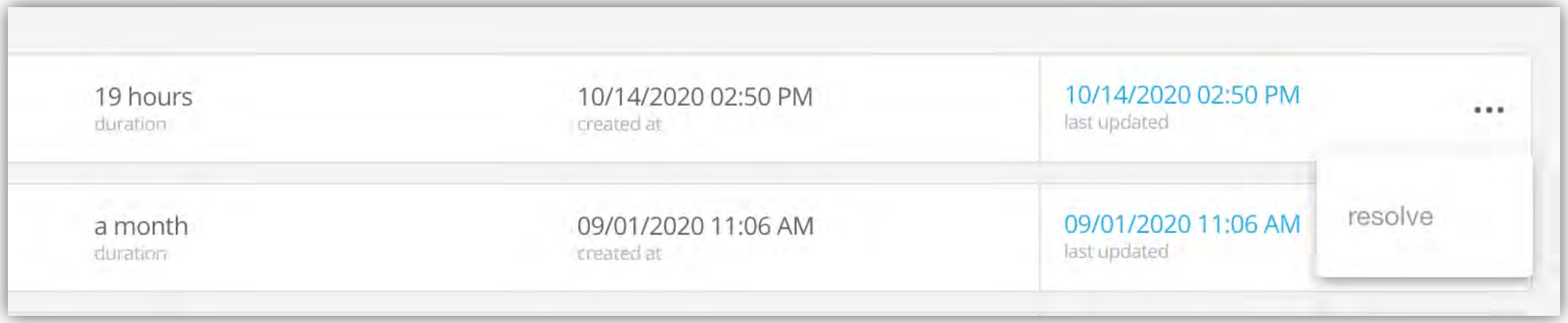
Alerts are triggered when events happen that are outside of set thresholds determined by Maintenance Operations. These alerts are delivered instantly to specified recipients and can be viewed directly from The Hive Management Dashboard.



Reporting Examples: Unresolved Alerts Report

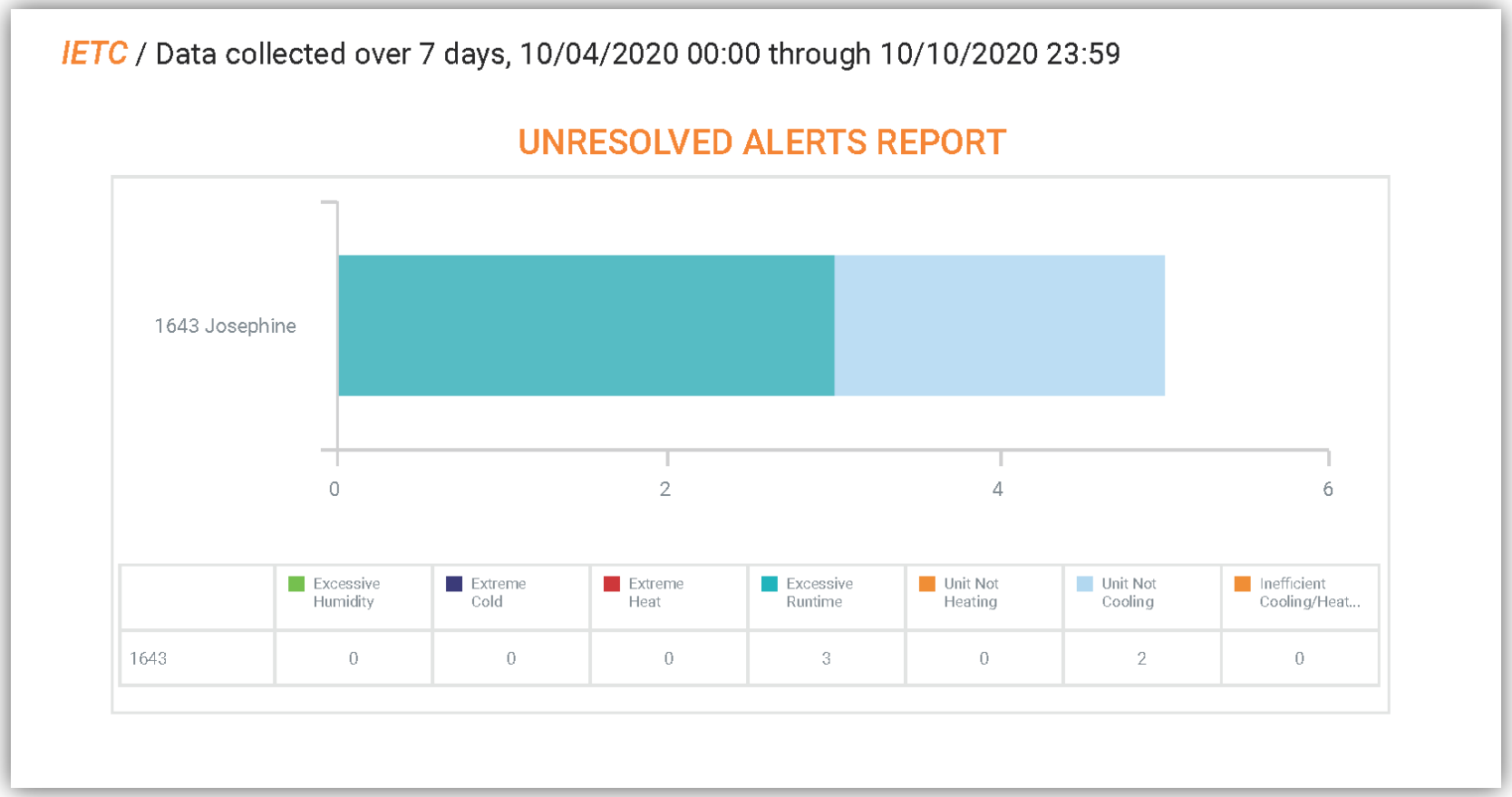
Once the appropriate action is taken, the alert can be selected as "resolved".





Reporting Examples: Unresolved Alerts Report

Any alerts that were not resolved and left outstanding for that week are reported on the weekly unresolved alerts report.



Reporting Examples: Critical Alerts Report

Critical Alerts are those that need immediate attention: Excessive Humidity, Extreme Cold, Extreme Heat, Excessive Runtime, Unit Not Heating, Unit Not Cooling, Inefficient Cooling/Heating

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Excessive Runtime:

Building	Unit	Runtime Threshold	Total alert counts*	Avg. Runtime per event
Floor 2	210	3 hours	1	4 days
Floor 2	208	3 hours	2	3 days
Floor 2	227	3 hours	2	3 days
Floor 2	217	3 hours	2	9 hours

Reporting Examples: Critical Alerts Report

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Unit Not Cooling:

Building	Unit	Setpoint/Ambient Temp	Start date /time	Duration (until now)
Floor 2	227	70°F / 74.3°F	01/19/1970 13:06	7 hours
Floor 2	208	63°F / 76.1°F	01/19/1970 13:05	11 hours
Floor 2	210	62°F / 77°F	01/19/1970 13:05	19 hours

Unit Not Cooling – Units where the setpoint is not reached after 2h+, or when the ambient temperature keeps rising even while cooling is engaged, trigger the Unit Not Cooling Alert. This may be causedby an issue with the HVAC (coil needs cleaning or filter needs replacement, etc.), or there may be an environmental issue in that unit (window/door open, window/door needs sealing or weather stripping) since the system is trying to cool and the set point is not being reached. The resident in the room may also be setting a set point that is unobtainable based on the environmental weather conditions in your area.

Reporting Examples: Critical Alerts Report

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Inefficient Cooling/Heating:

Building	Unit	Runtime During Period	Period	Start date /time
Floor 2	210	62°F / 77°F	a day	3 days
Floor 2	208	63°F / 76.1°F	a day	2 days
Floor 2	227	70°F / 74.3°F	a day	2 days

Inefficient Cooling/Heating – Except when the weather is extremely hot or cold, the average well-serviced HVAC will still run for close than half a day to maintain its setpoints. Units where the percentage of runtime during a certain duration exceed the set thresholds trigger the Inefficient Unit alert. By default, this alert will trigger any time the unit runs more than 65% of the time over any 24h period. This may be caused by an issue with the HVAC (coil needs cleaning or filter needs replacement, etc.), or there may be an environmental issue in that unit (window/door open, window/door needs sealing or weather stripping).. The resident in the room may also be setting a set point that is unobtainable based on the environmental weather conditions in your area.

Reporting Examples: Units in Need Report

This weekly report indicates units that may need to be serviced. This is based on: Greater than 12 hours of consecutive runtime, Units consistently not reaching set-point, Units with the most Cycles, Inefficient Cooling/Heating, Units with the longest Average Cycle Time, Units with the most Alerts triggered, Units with Auxiliary Heat

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Greater than 12 hours of consecutive runtime:

Building	Unit	Start date /time	Duration
Floor 2	210	10/07/2020 15:59	4 days
Floor 2	227	10/05/2020 18:07	3 days
Floor 2	208	10/05/2020 03:18	3 days
Floor 2	217	10/09/2020 19:26	17 hours

Excessive Runtime – The units listed above had sessions of extended consecutive runtime. These units are running less than optimally. You may need to service these units and apply preventative maintenance. A unit with excessive runtime can generate a high energy expenditure in addition to potential damages to the equipment. If you have a unit constantly triggering Excessive Runtime alerts it is likely the setpoint they are trying to achieve is unobtainable based on the environmental conditions, the HVAC may need some routine maintenance such as coil cleaning or a new filter, or the HVAC is undersized for the unit.

Reporting Examples: Units in Need Report

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Units consistently not reaching set-point:

Building	Unit	Unit not Heating Alert Total	Unit not Cooling Alert Total	Start date /time
Floor 2	227	-	22	10/04/2020 00:31
Floor 2	210	-	22	10/07/2020 15:59
Floor 2	208	-	21	10/05/2020 03:18
Floor 2	225	-	18	10/04/2020 03:39
Floor 2	217	-	3	10/09/2020 19:26

Set-point Unreachable – Units where the setpoint is not reached after 2h+, or when the ambient temperature keeps going in the opposite direction of the climate mode, trigger the Unit Not Heating/Cooling Alert. This may be caused by an issue with the HVAC (coil needs cleaning or filter needs replacement, etc.), or there may be an environmental issue in that unit (window/door open, window/door needs sealing or weather stripping) since the set point is not being reached. The resident in the room may also be setting a set point that is unobtainable based on the environmental weather conditions in your area.

Reporting Examples: Units in Need Report

Data collected at 1643 Josephine over 7 days, 10/04/2020 through 10/10/2020 indicated:

Building	Unit	Amount of Cycles	Average Cycle Time
Floor 2	211	13	0.1 h
Floor 2	218	9	0.1 h
Floor 2	215	7	0.0 h
Floor 2	221	7	0.0 h
Floor 2	224	7	0.0 h
Floor 2	203	6	0.0 h
Floor 2	209	6	0.0 h
Floor 2	219	6	0.0 h
Floor 2	220	6	0.0 h
Floor 2	228	5	0.0 h

Units with the most Cycles

Units with the most Alerts triggered:

Building	Unit	Amount of Alerts	Average Resolution Time
Floor 2	227	24	9 hours
Floor 2	208	23	11 hours
Floor 2	210	22	2 hours
Floor 2	225	18	8 hours
Floor 2	217	5	7 hours
Floor 2	206	2	2 hours
Floor 2	222	1	2 days
Floor 2	219	1	20 hours
Floor 2	207	1	3 hours
Floor 2	221	1	6 minutes

Analytics

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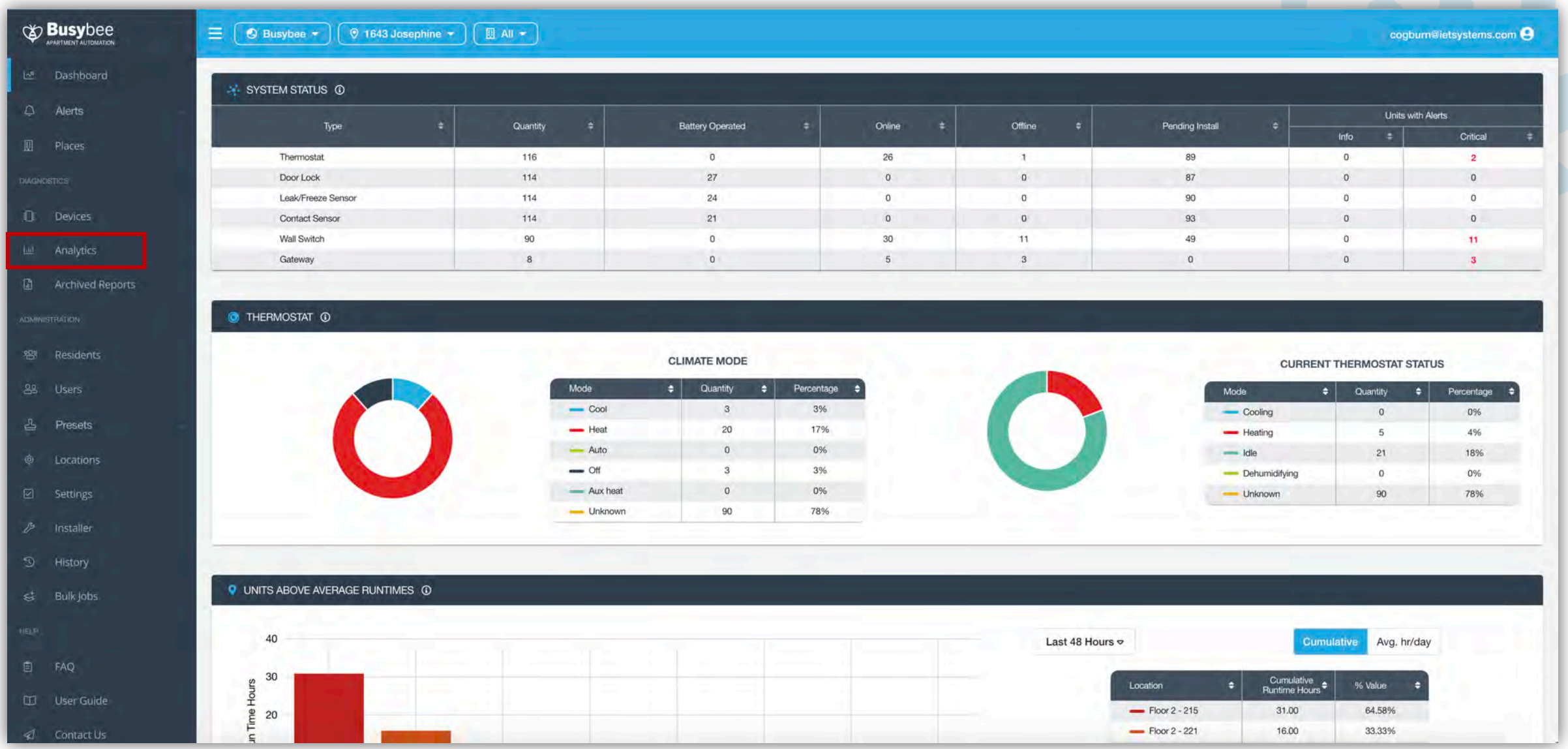
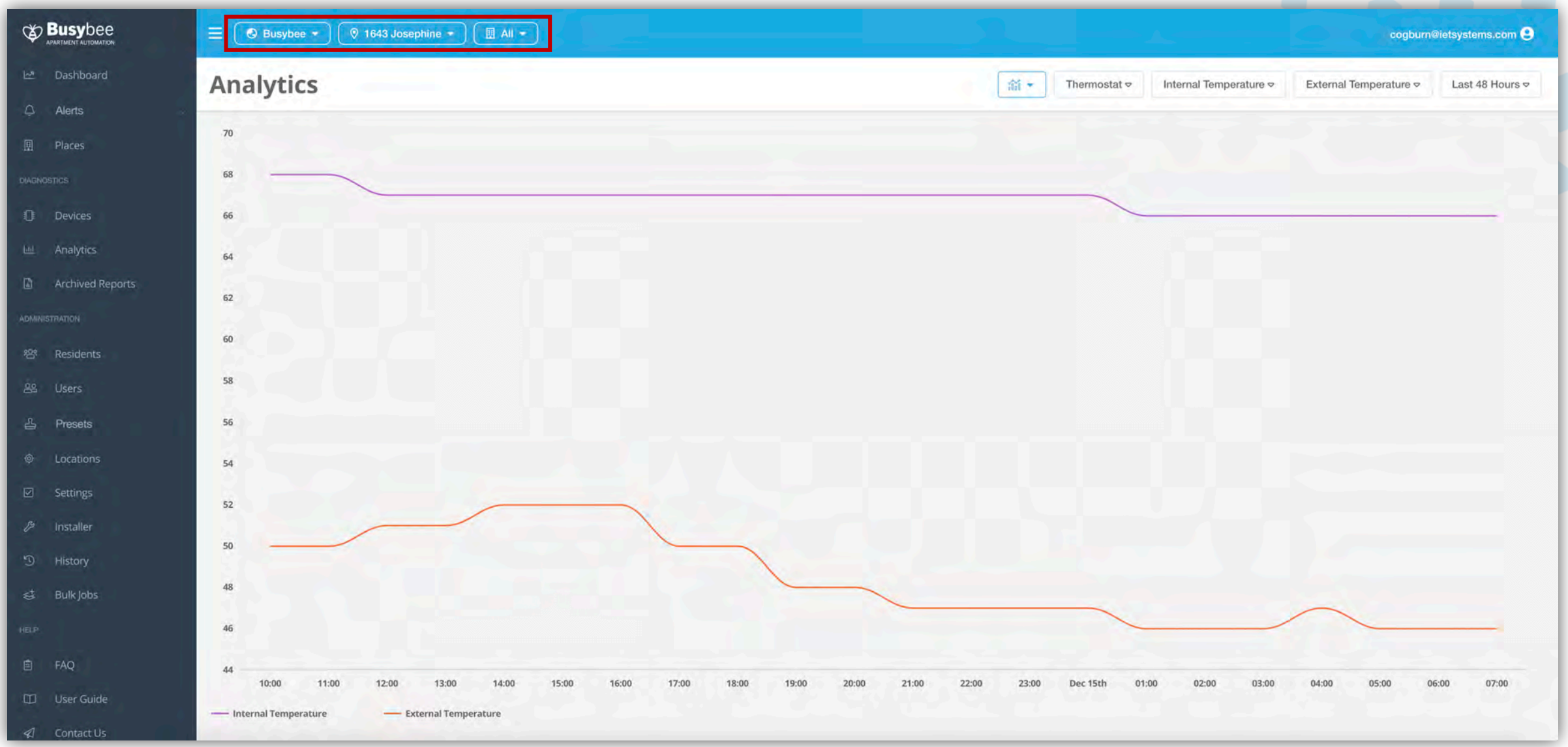
Select ”Analytics” in the left Task Tab

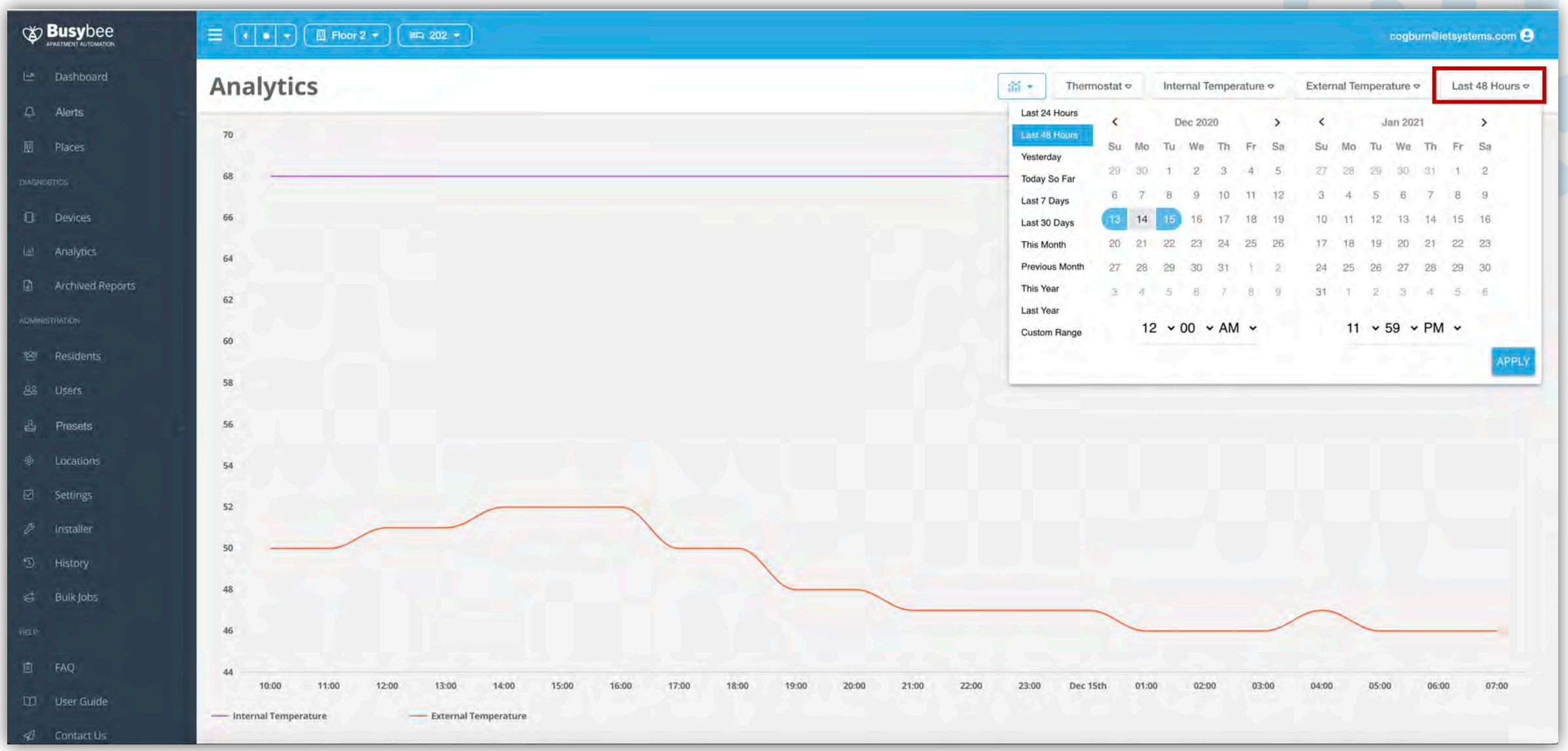


Use the top bar to narrow down the unit/units you would like to analysis

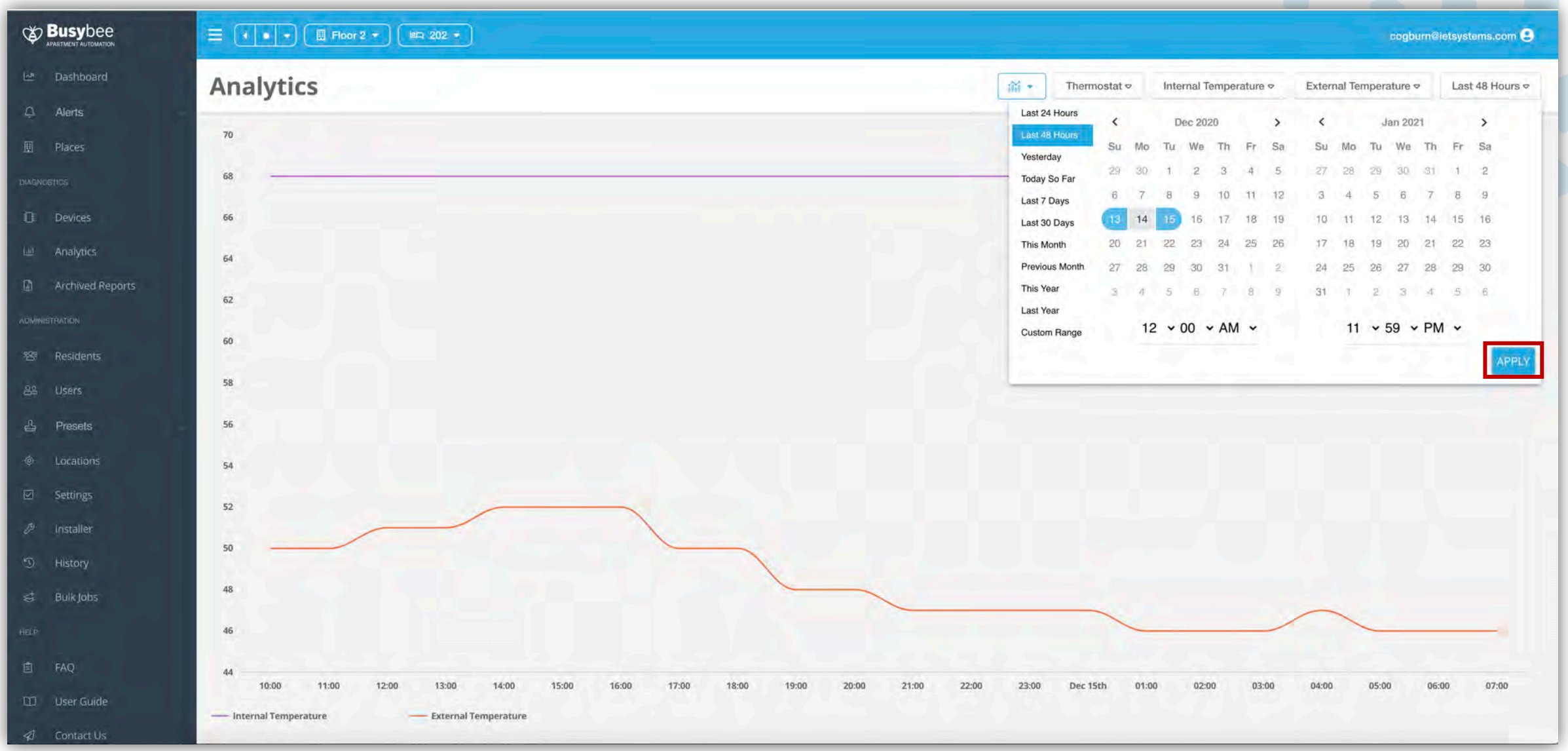


Use the drop-down menus to change the variables you would like to compare

Then select the time frame to include in the analysis



Once you have selected the time frame, select apply



How To Lock/Unlock Doors Using The HIVE Dashboard

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Differences between ”Has Access” and other User Types

The differences between “Has Access” Users and all other User Types such has “Super Administrator”, or “Maintenance Supervisor” are where to login and how to lock/unlock doors using the dashboard.

In this demonstration we will show both methods.

Lock/Unlock Doors Using The Has Access Dashboard

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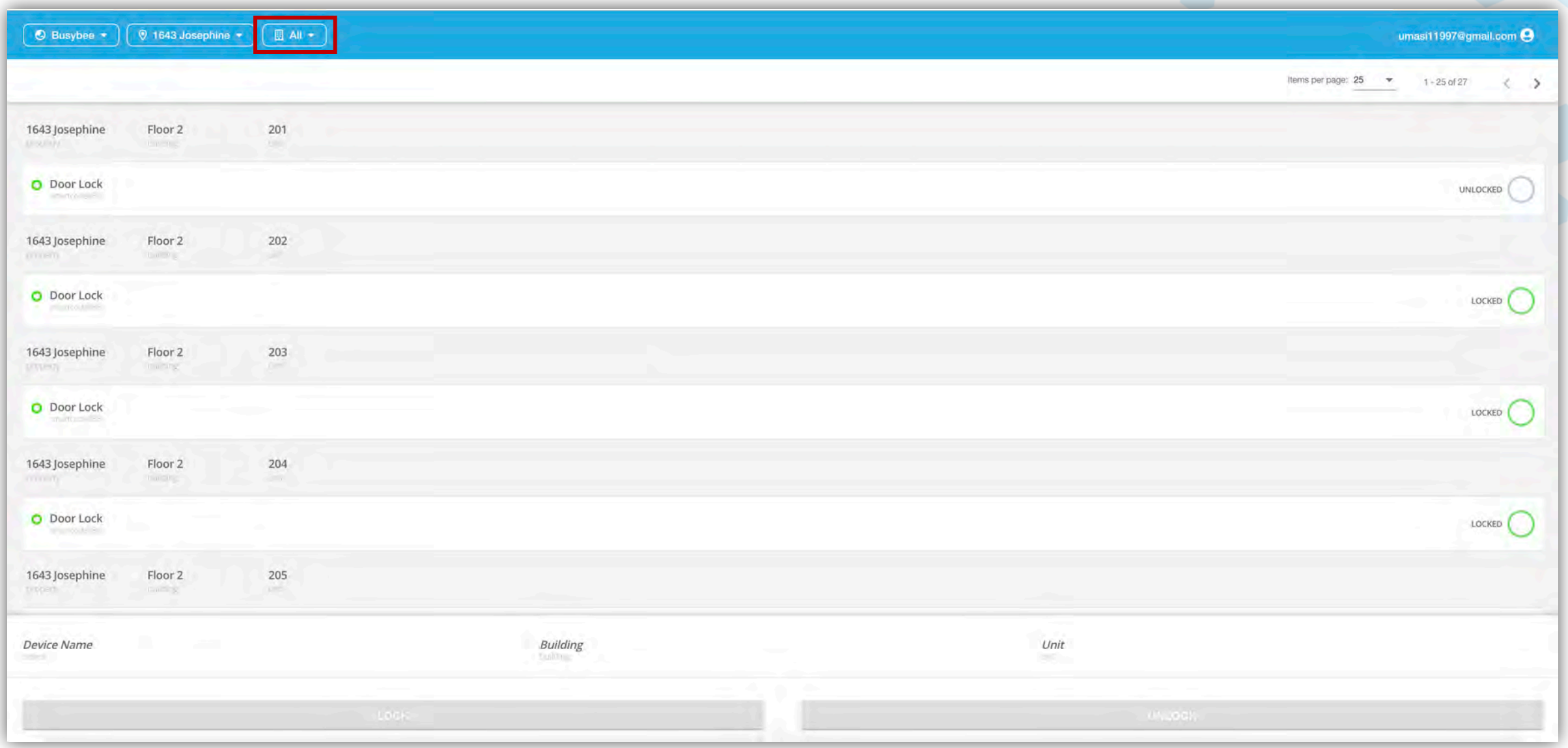
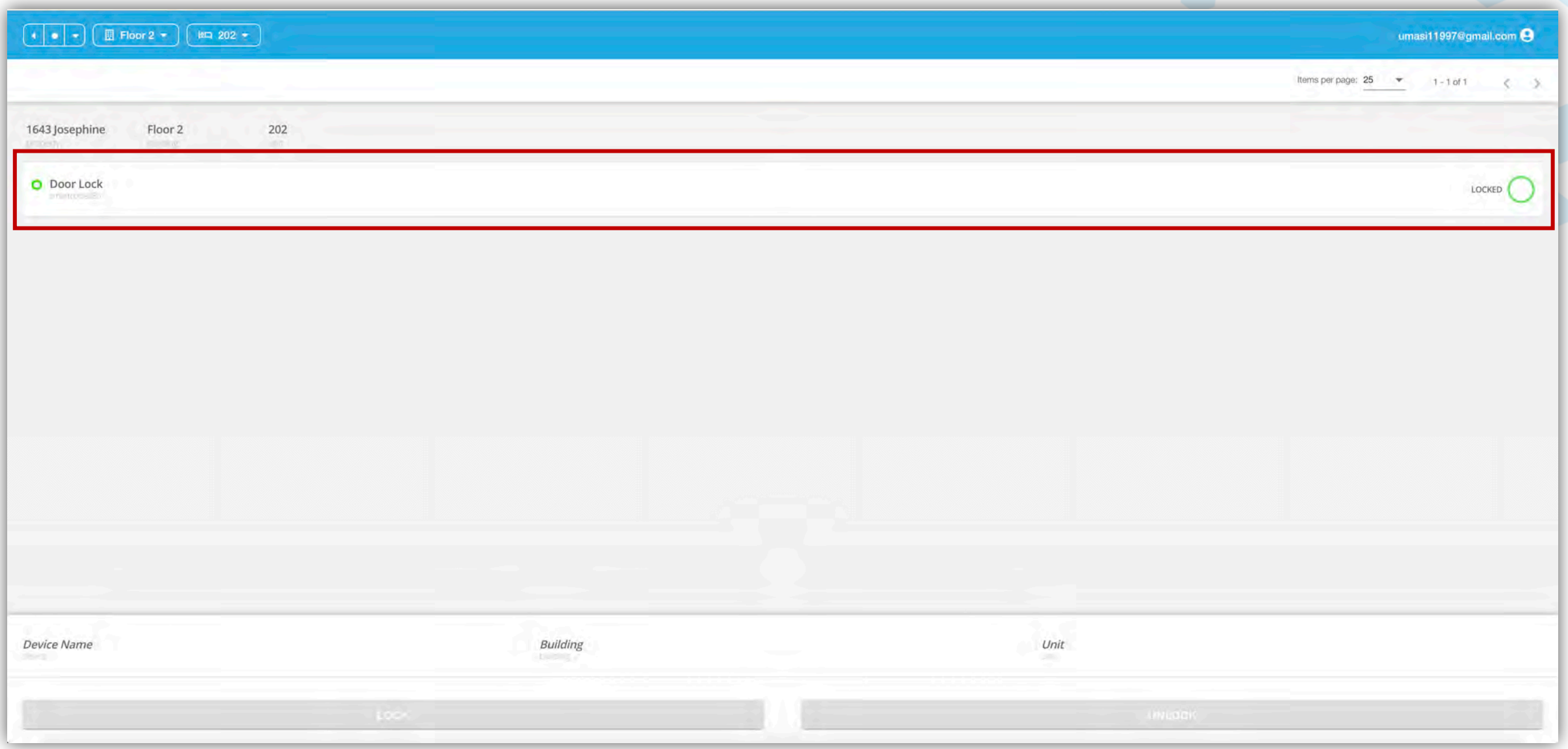
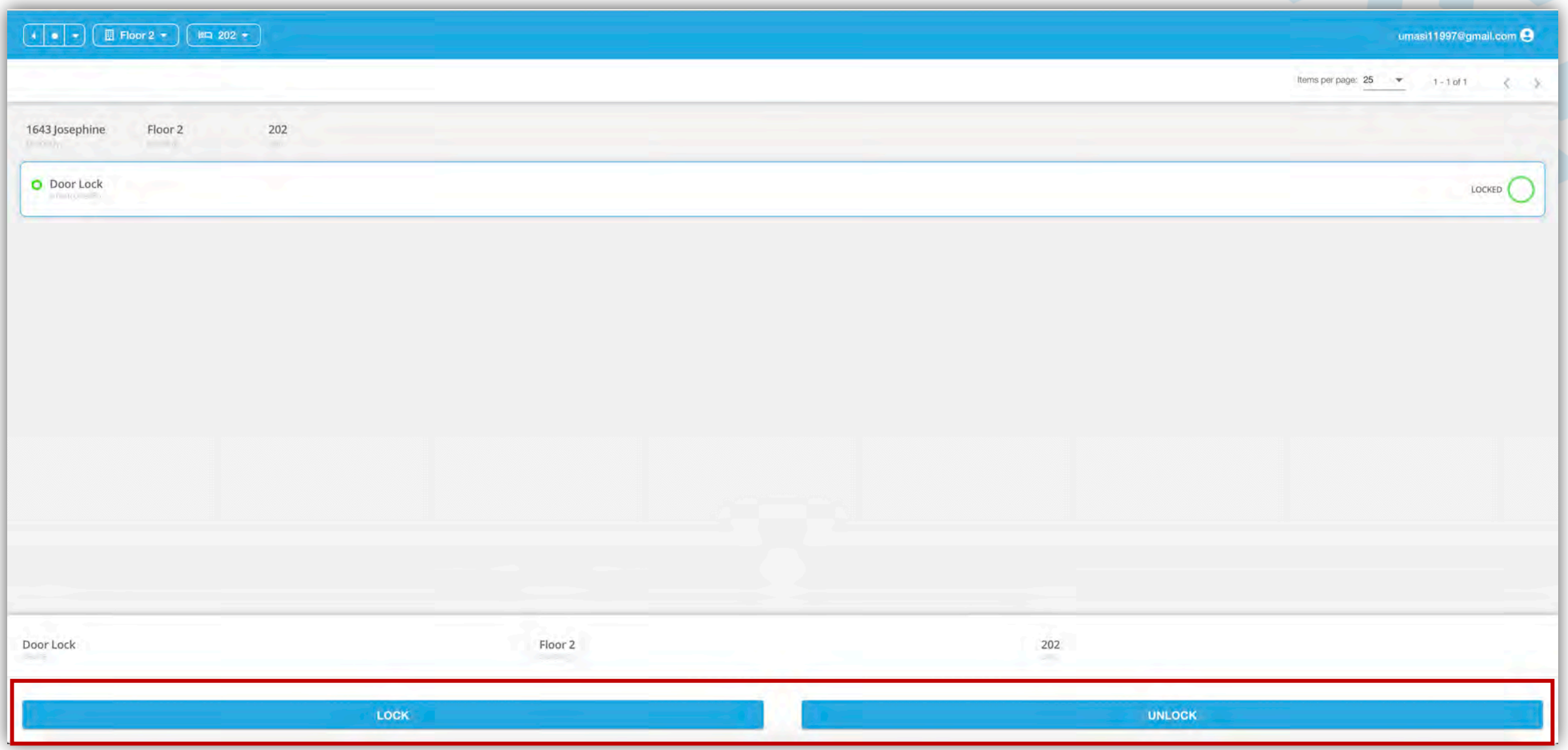
Step 1. Select the floor and unit you would like the access



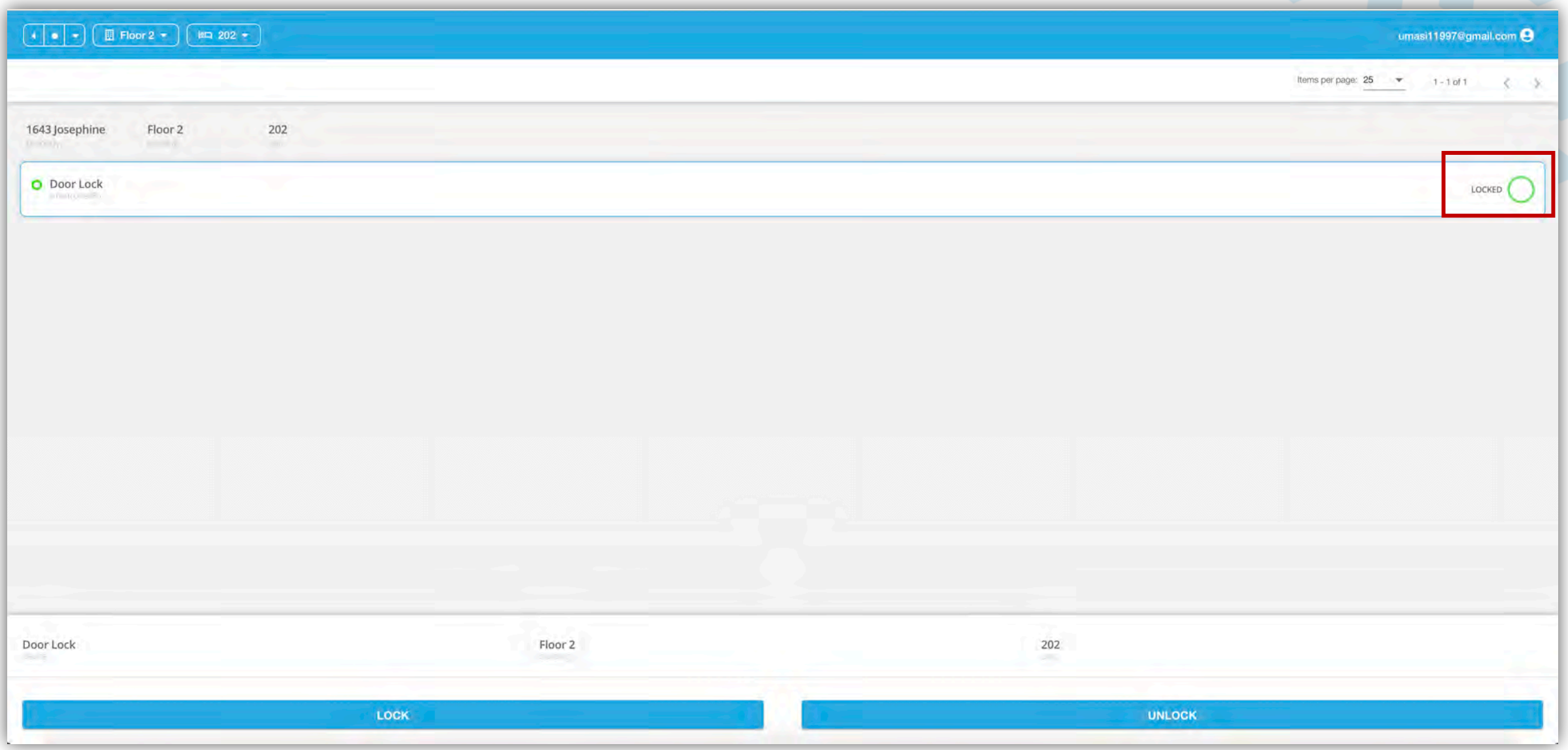
Step 2. Select the door lock



Step 3. Once the door lock is selected the lock/unlock buttons will become clickable. Select the action you would like to occur.



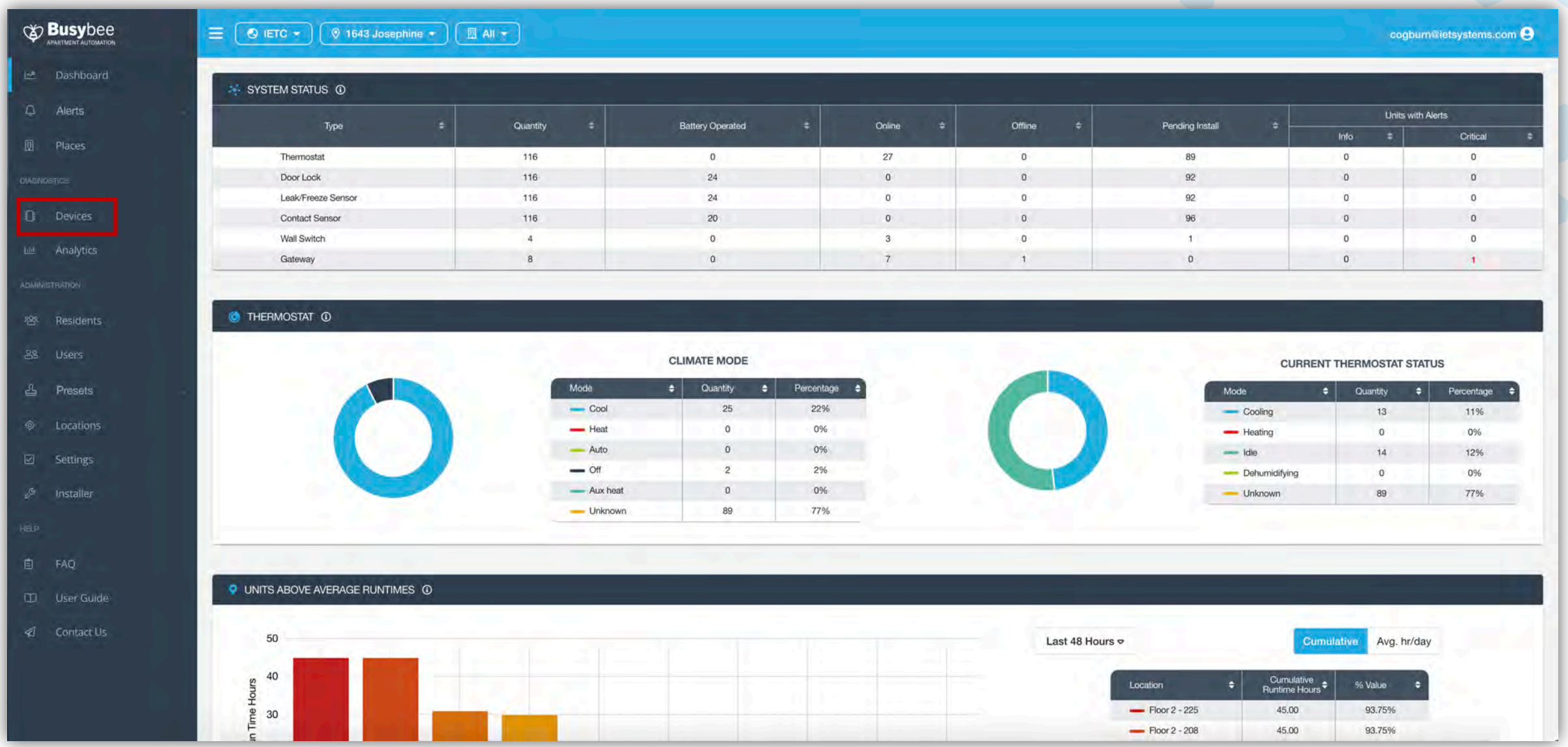
The door lock will initiate and the status on the right of the device bar will update.



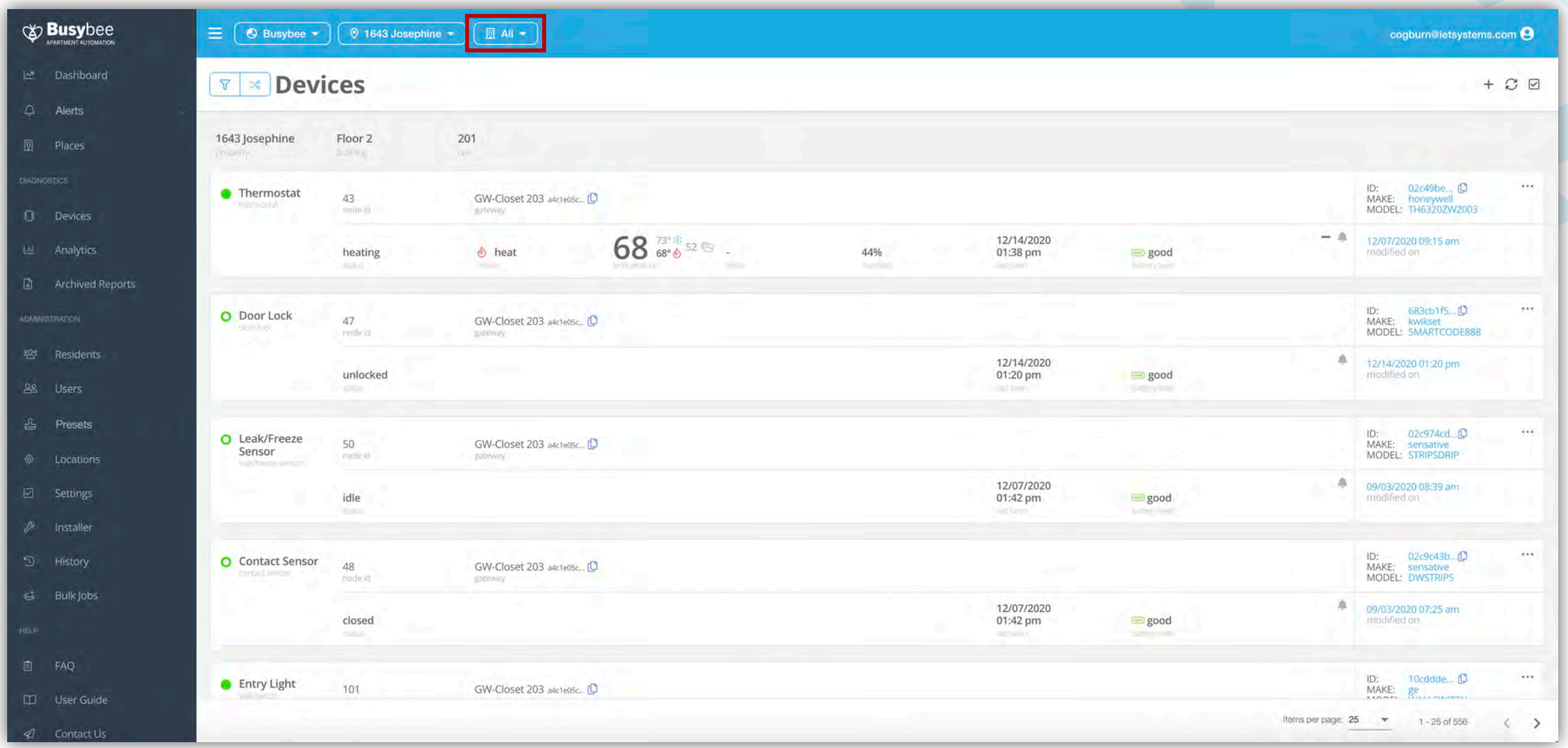
Lock/Unlock Doors Using The HIVE Dashboard

BACK TO TOP

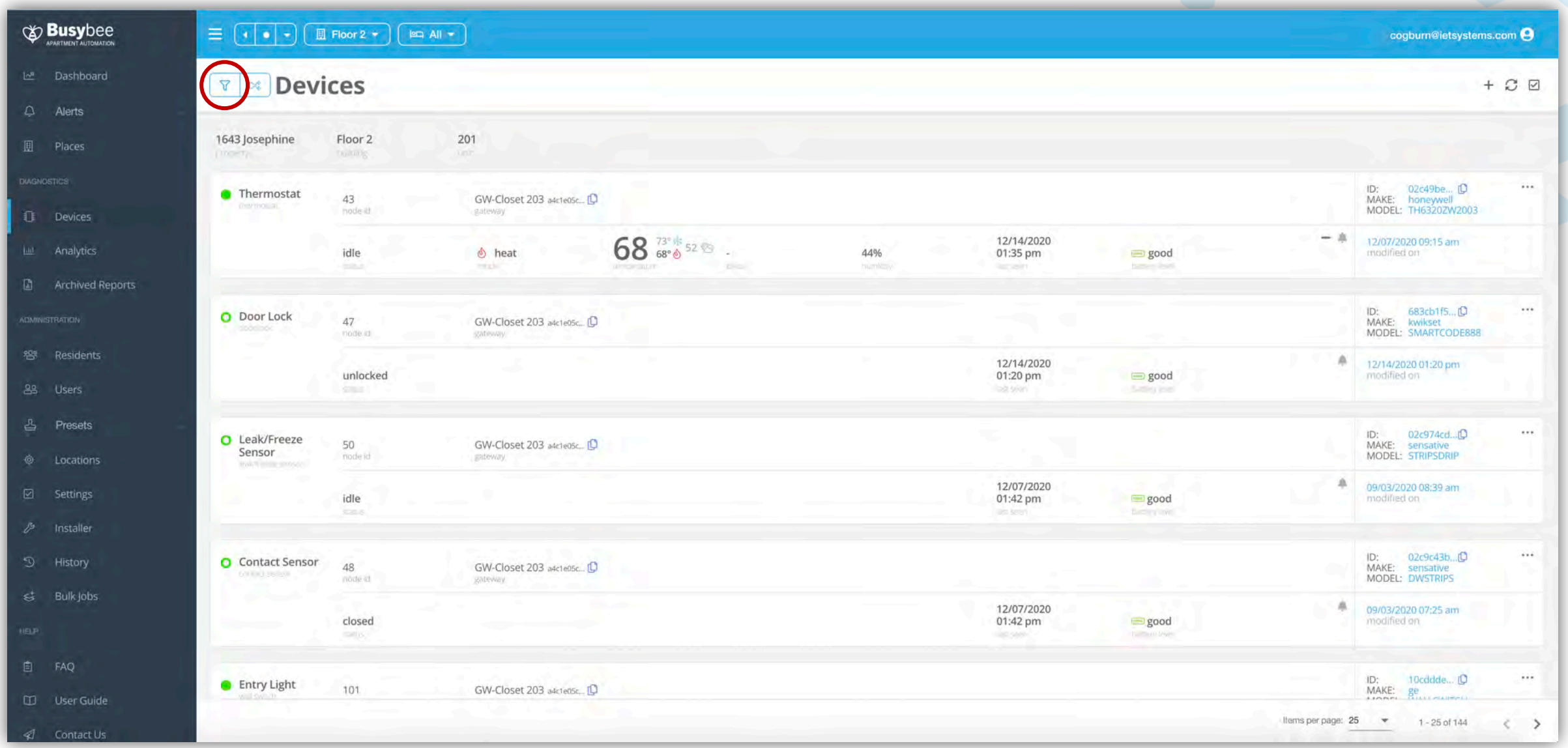
Step 1. Select “Devices” from the left side task tab



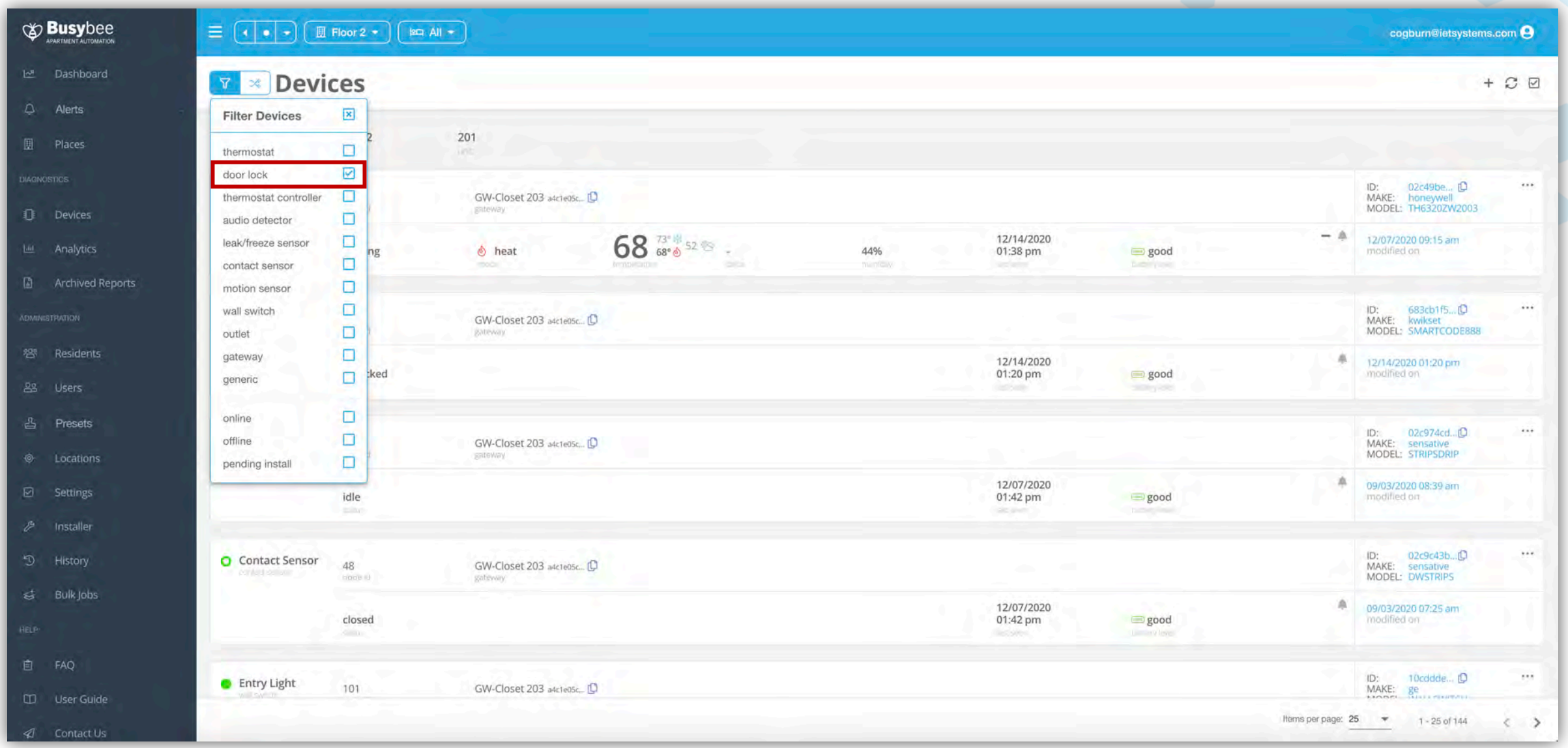
Step 2. Select the floor of the unit in the tab above.



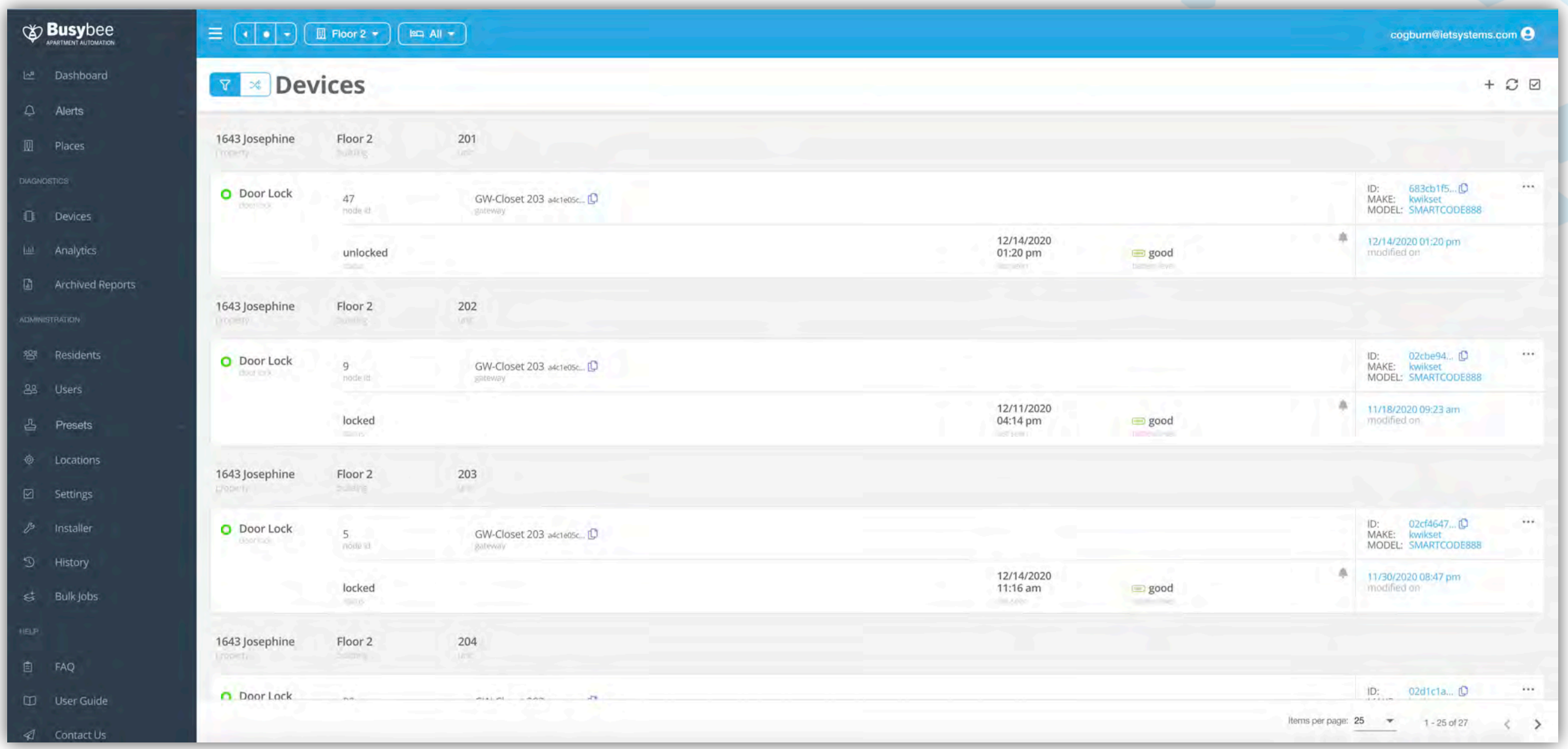
Step 3. Select the filter drop down



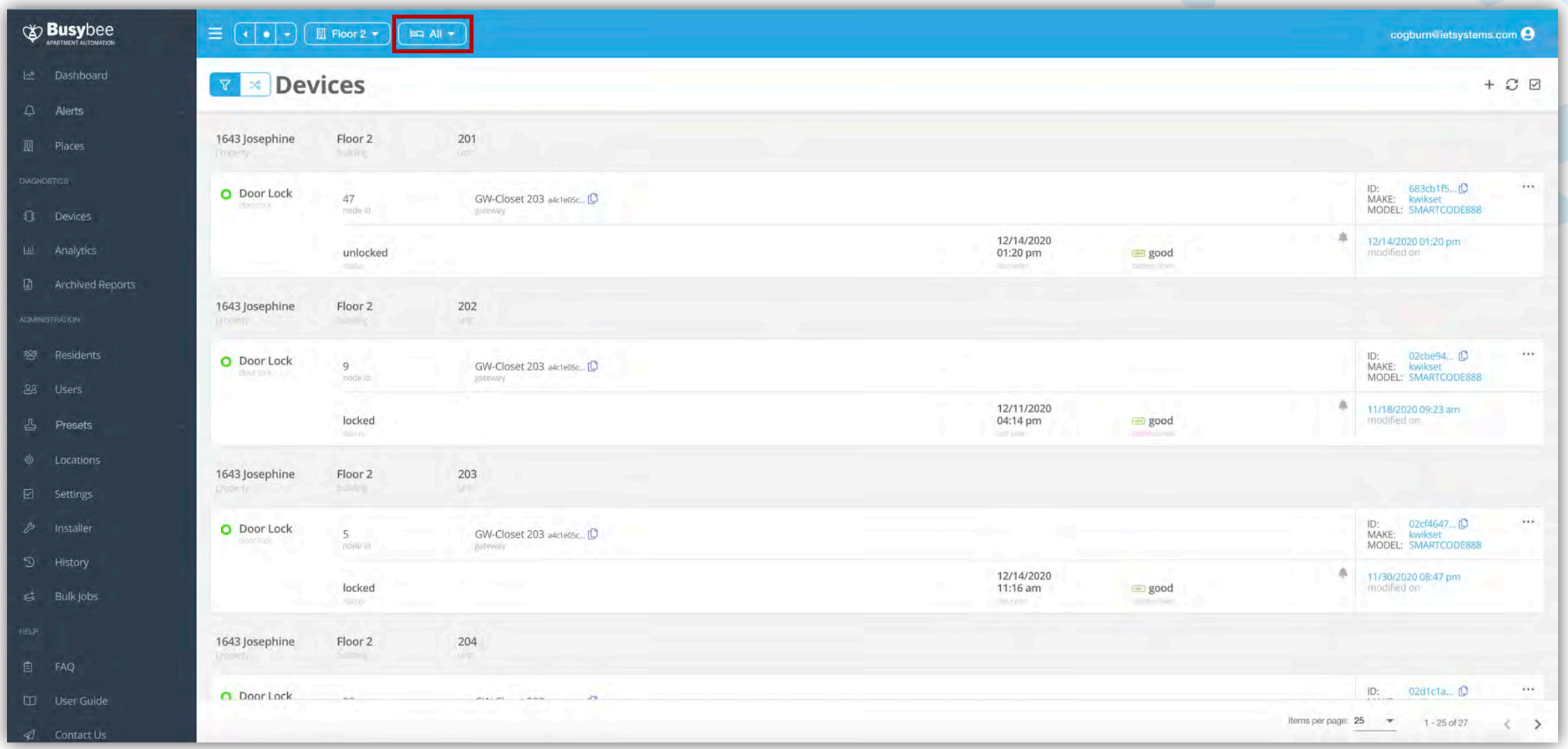
Step 4. Check “Door Lock”



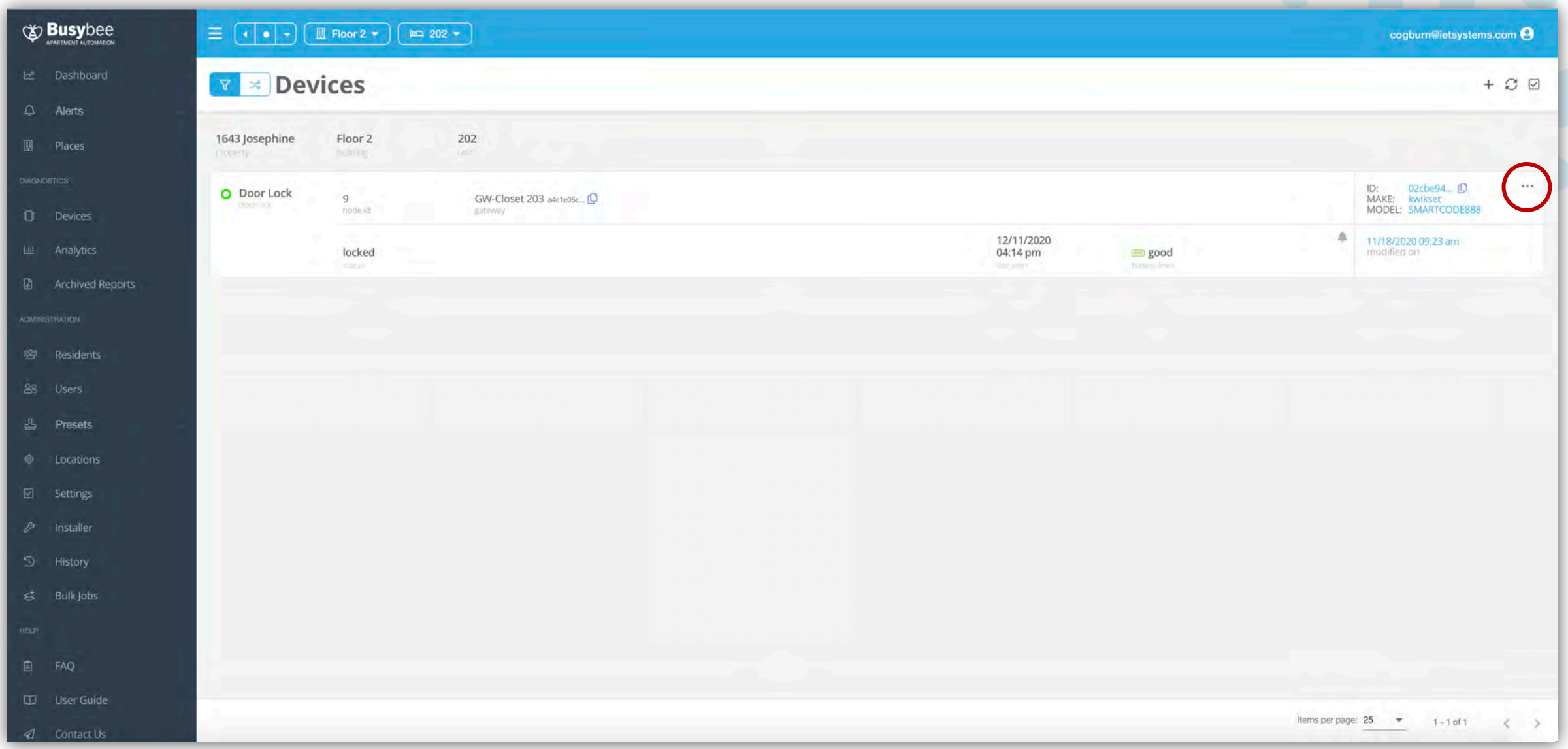
This view is a good view option if you need access to several units



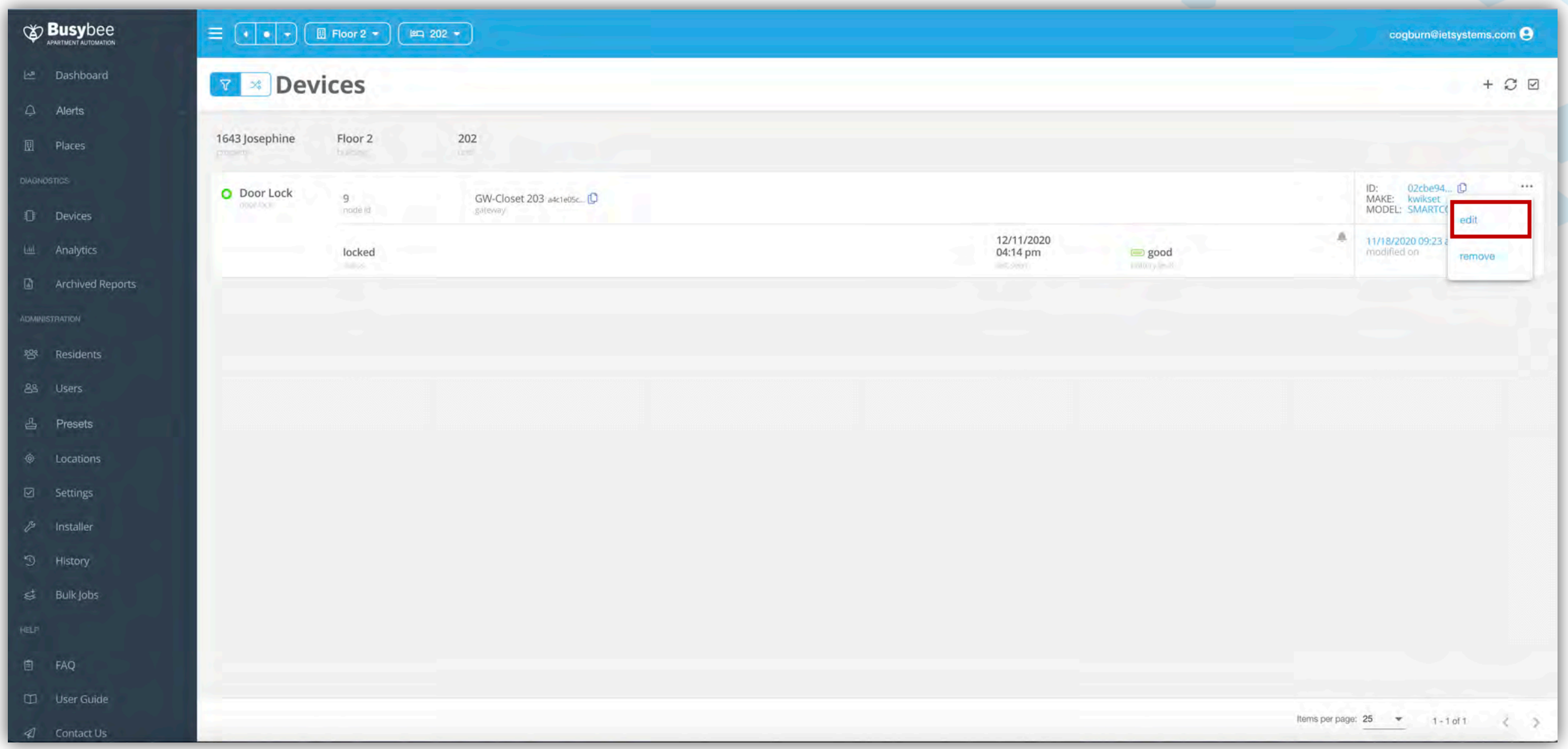
If you only need access to one unit then select the unit on the top tab



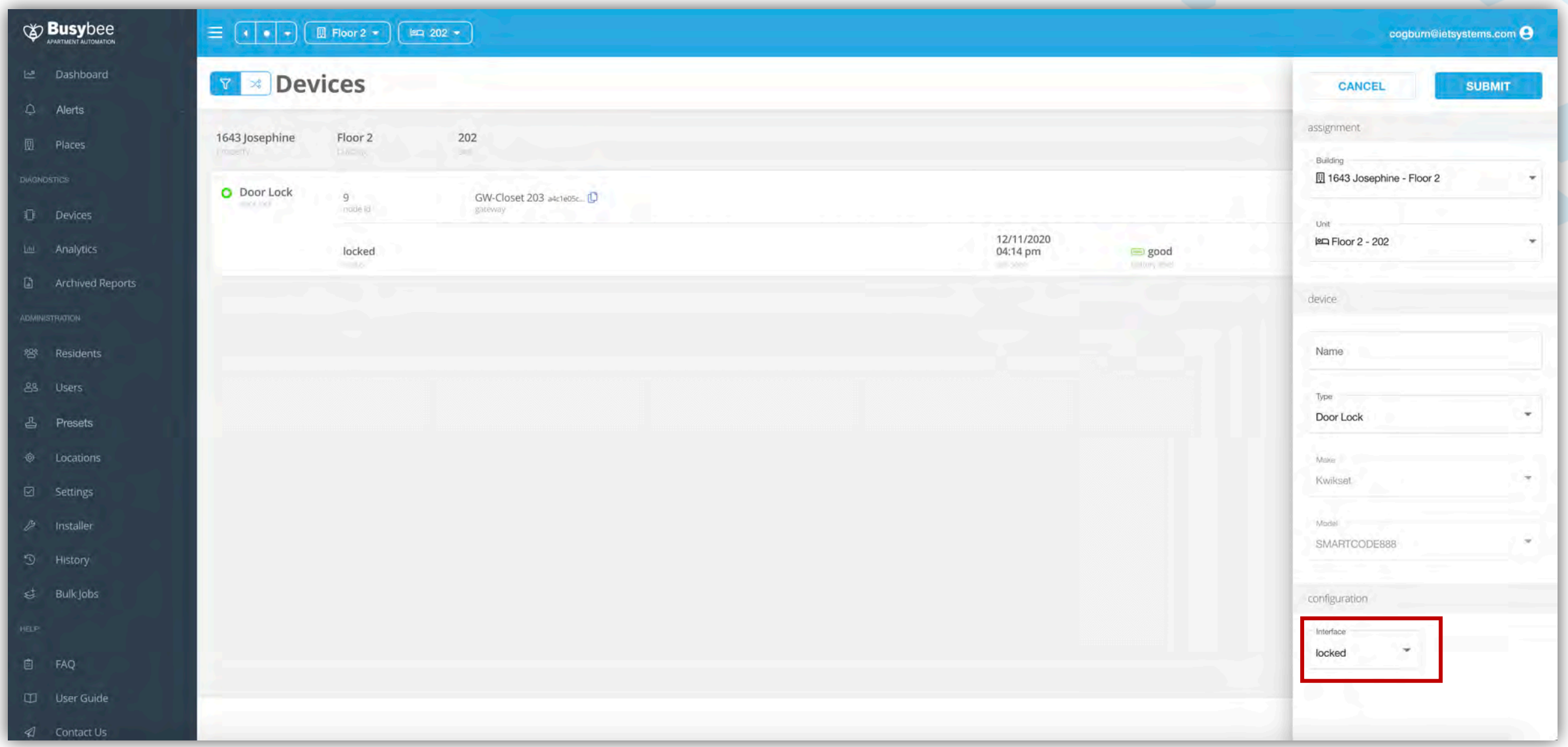
Step 5. Select the three dots to the right of the door lock device you would like to lock/unlock



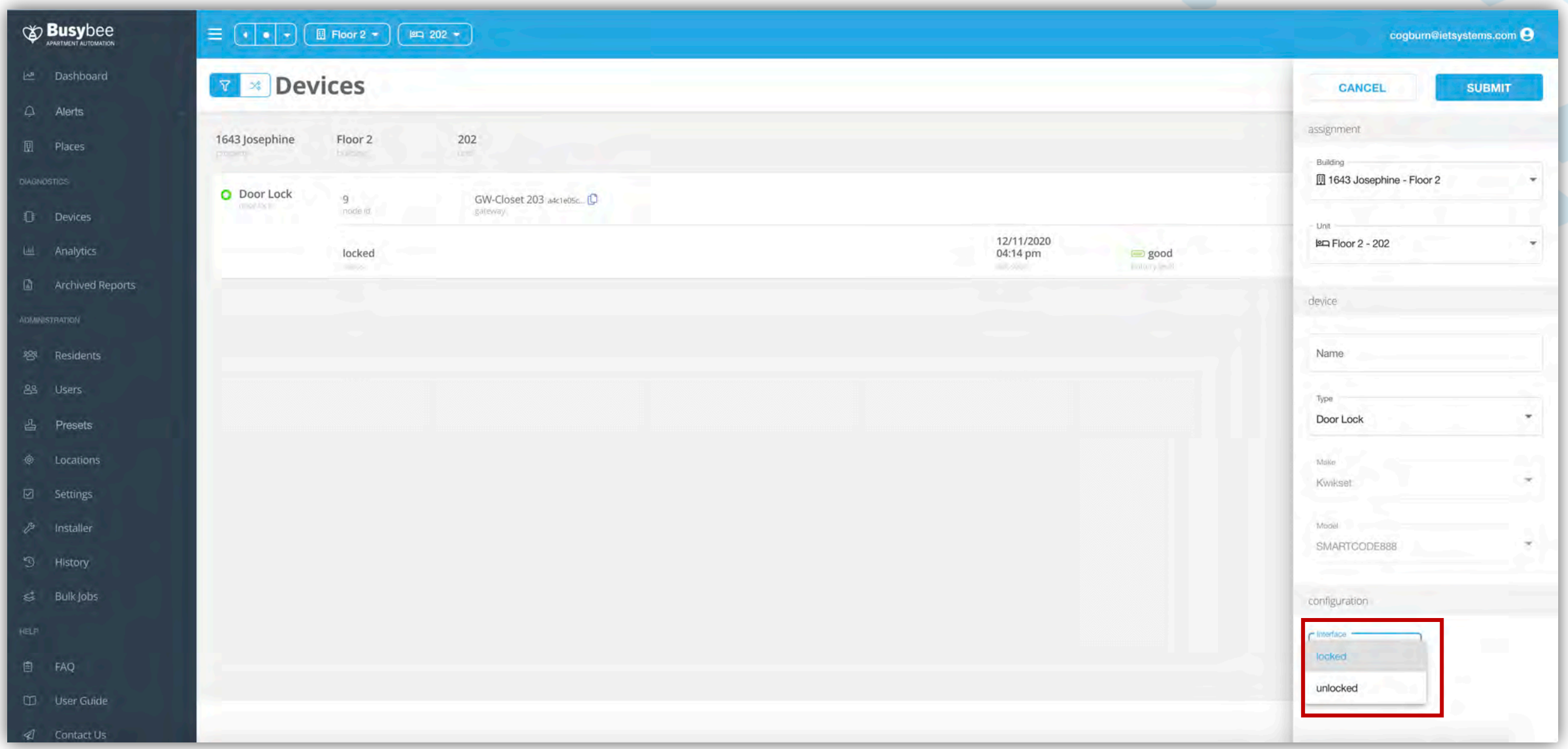
Step 6. Select “edit”



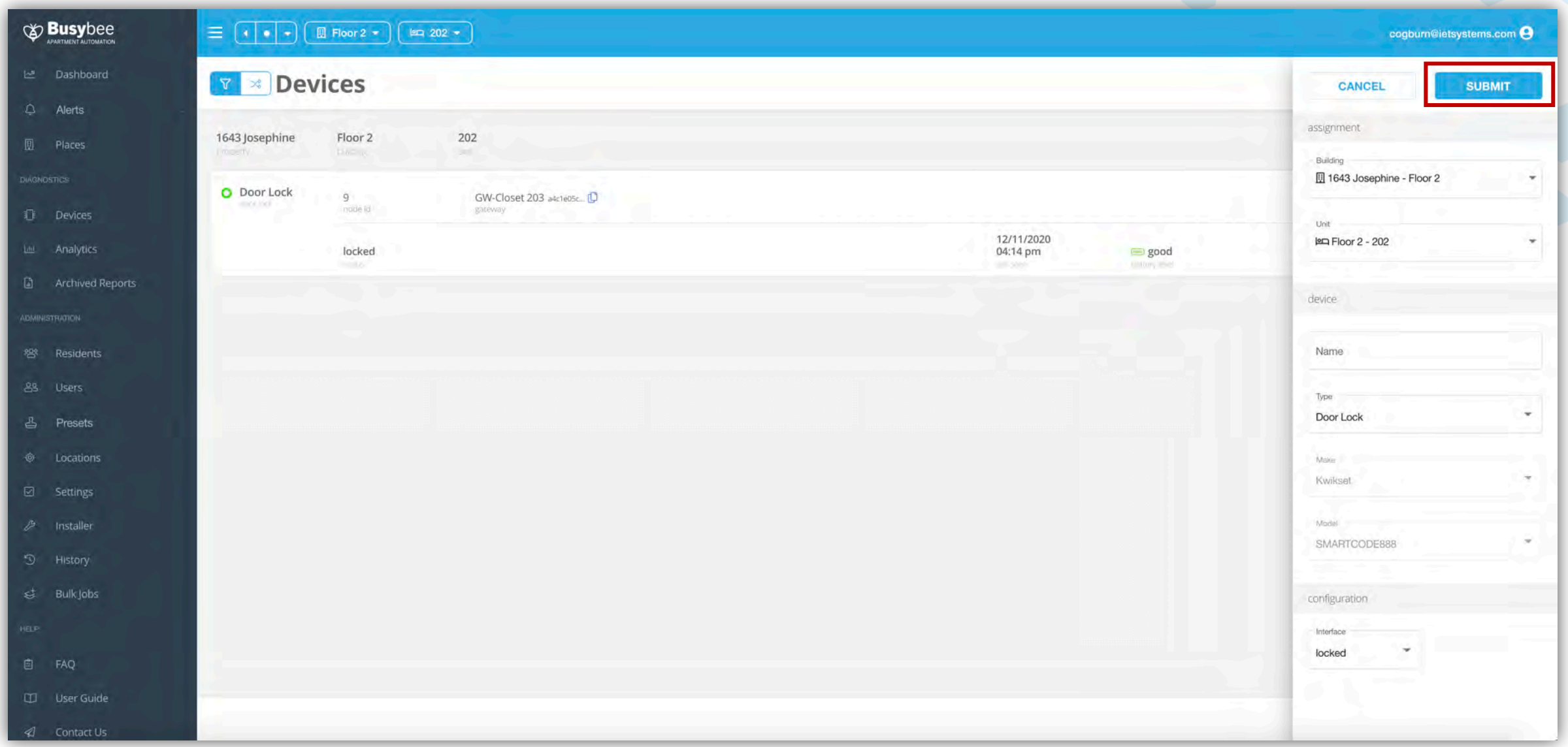
Locate the interface mode at the bottom of the menu



Step 7. Select locked/unlocked



Step 8. Select submit to initiate the door lock action



How To Create and Implement Presets

BACK TO TOP

Busybee
APARTMENT AUTOMATION

Fluctuations in external temperatures or humidity, require internal environmental conditions to adapt. This can be a daunting task, to send maintenance personnel to every apartment each time the thermostat needs to be changed.

Streamline the efficiency of your workflow by using your Busybee Hive Management Dashboard to create presets and then apply the preset to the individual apartments.

How It Works

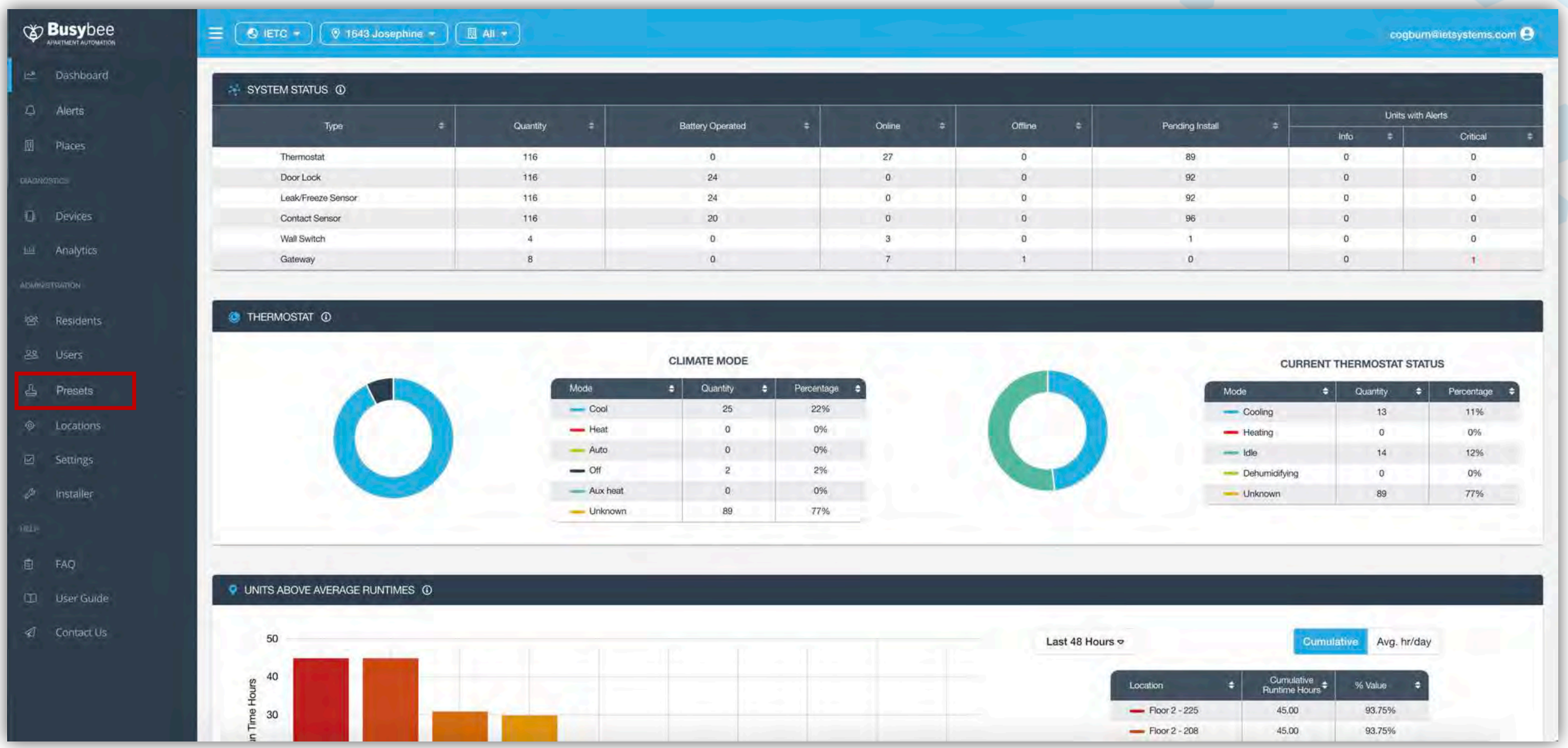
With a few clicks, you can use presets to make changes to an apartment's temperature or humidity setting, allowing you to maximize efficiency and reduce energy usage.

Each preset enables you to choose the proper thermostat mode, heating and cooling set points (min. and max), and humidity set points. Once the presets are created or built, it is simply to apply them to the smart thermostat in each apartment home.

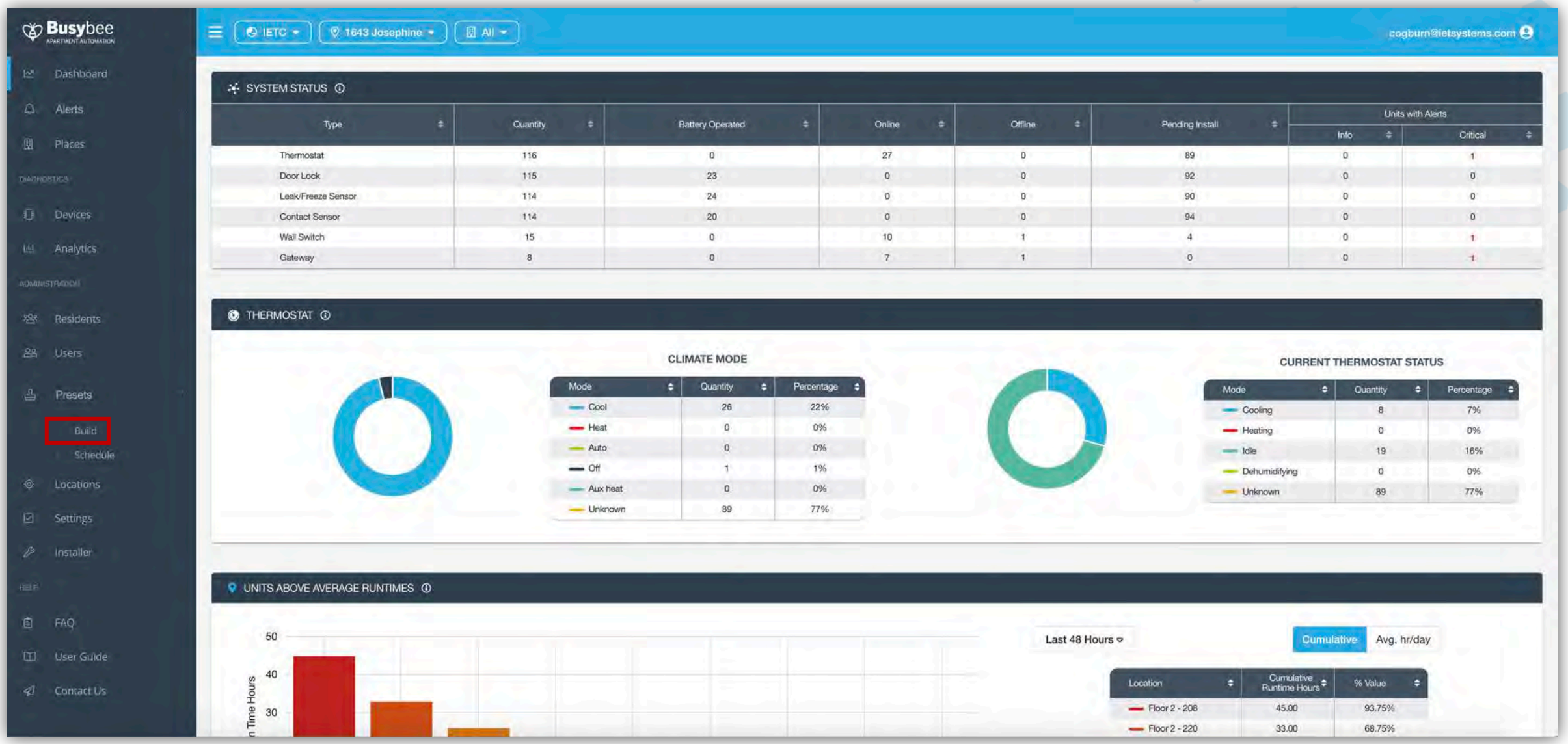
How To Create A Preset

BACK TO TOP

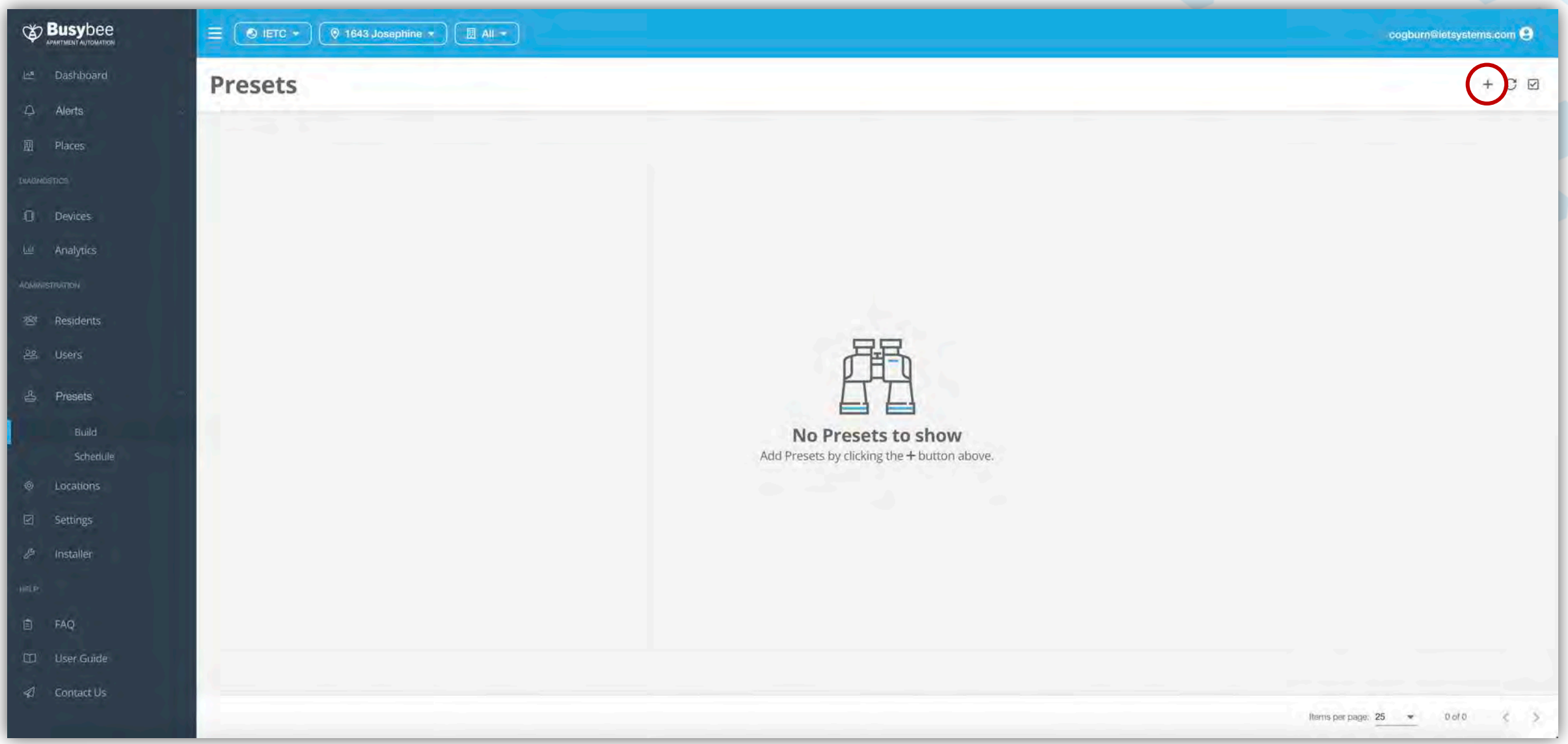
Step 1. Select “Preset” from the left-hand side task tab



Step 2. Select “Build” from directly below Presets

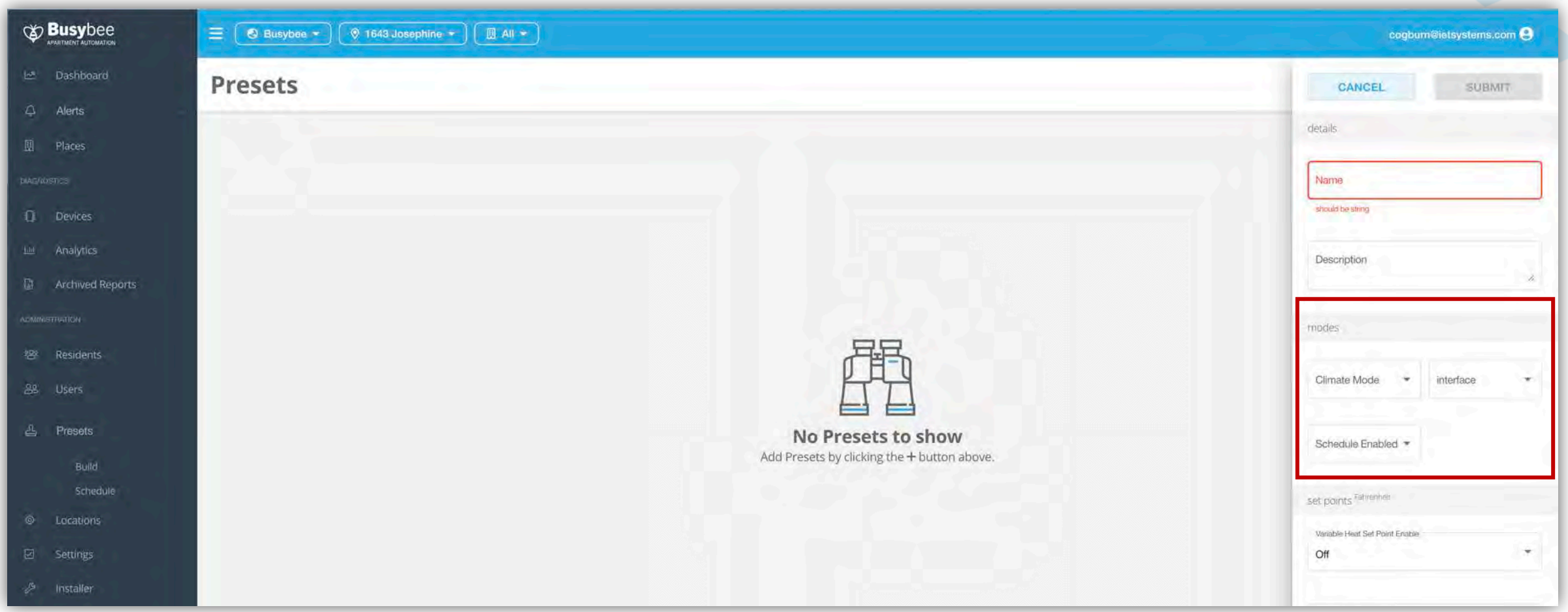


Step 3. Click on the “+” sign on the top right-hand corner.

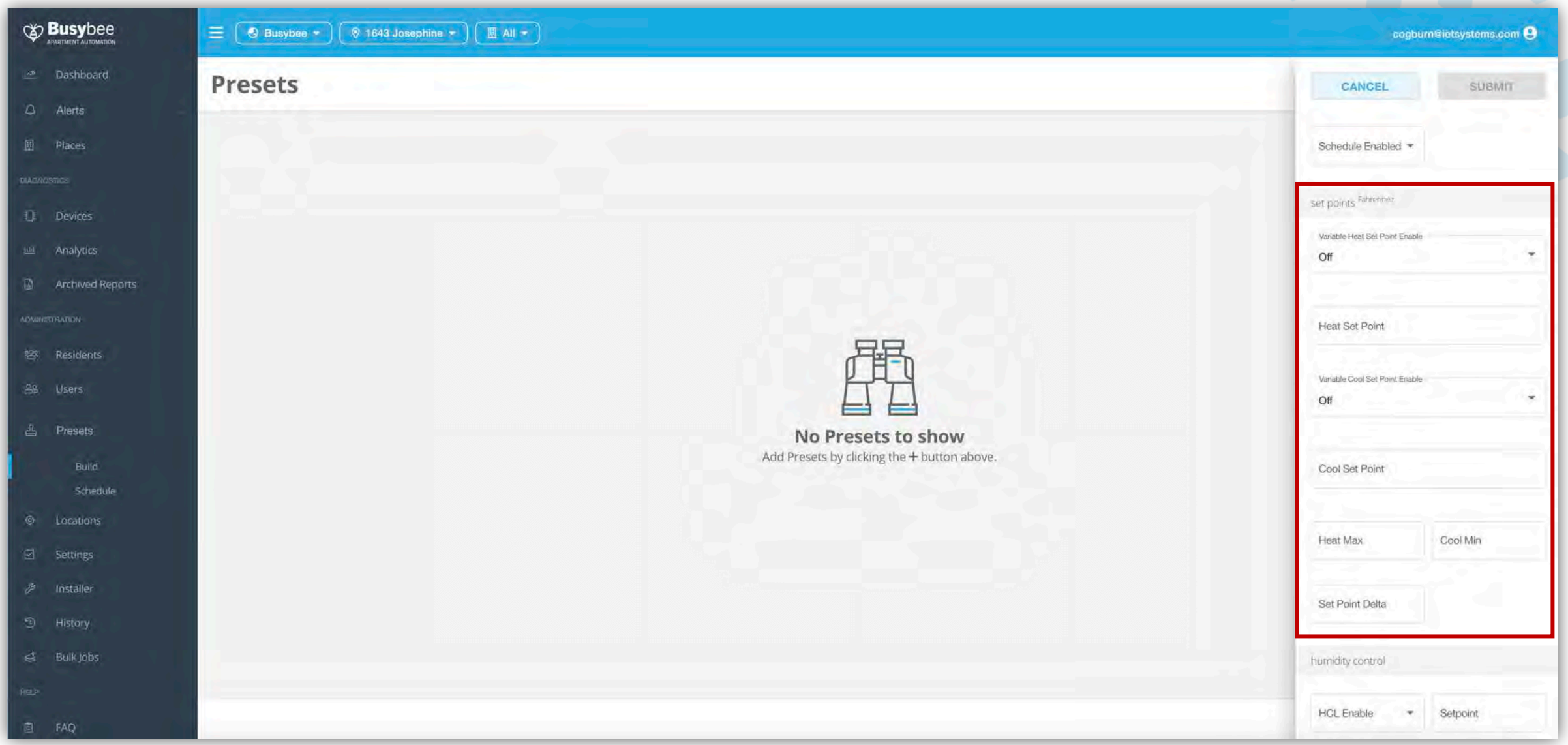


Step 4. Name the preset in a way that will help you easily identify the preset purpose. Example would be vacant apartments, gym, contractor working inside, etc. The description field enables you to add more identifying information.

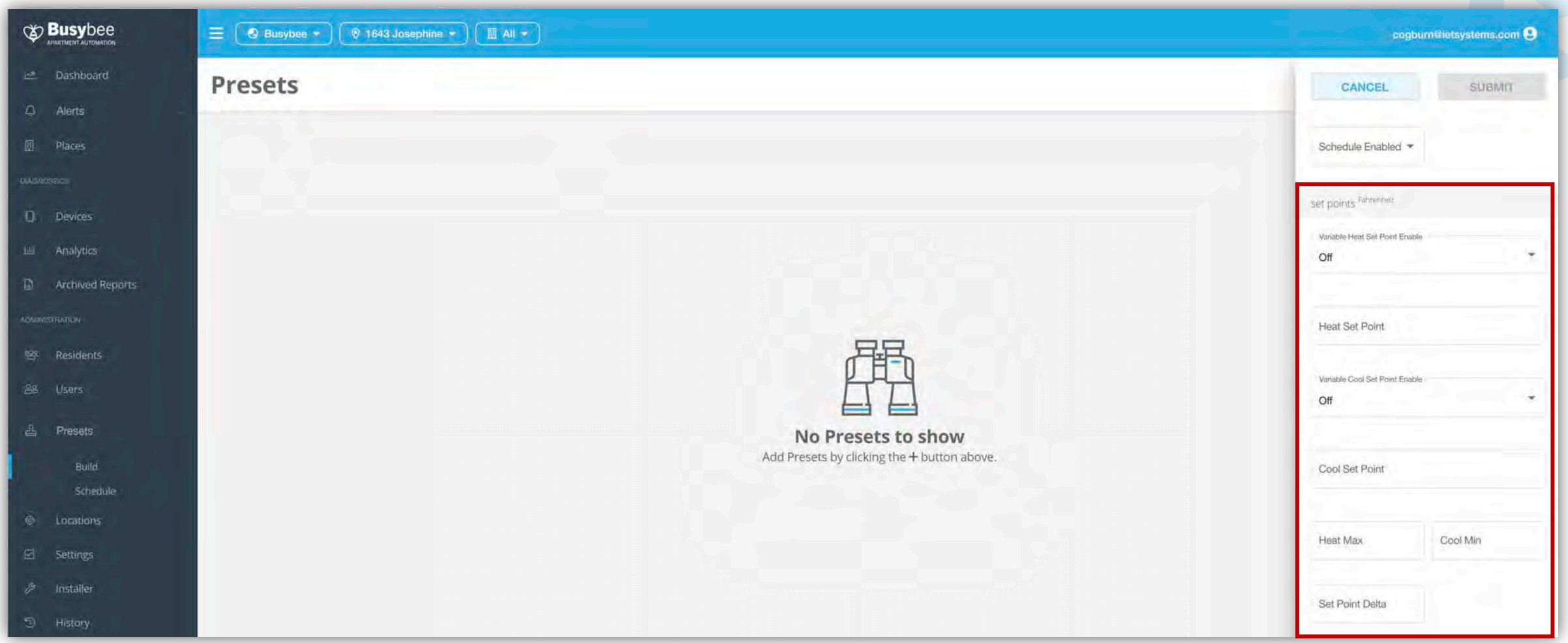
Step 5. The next section is where you select the mode preferred for the preset you are creating. You can choose to lock or unlock the interface. This setting is helpful if you do not want the resident or contractor to adjust the thermostat manually. In such case, you would select “Locked”.



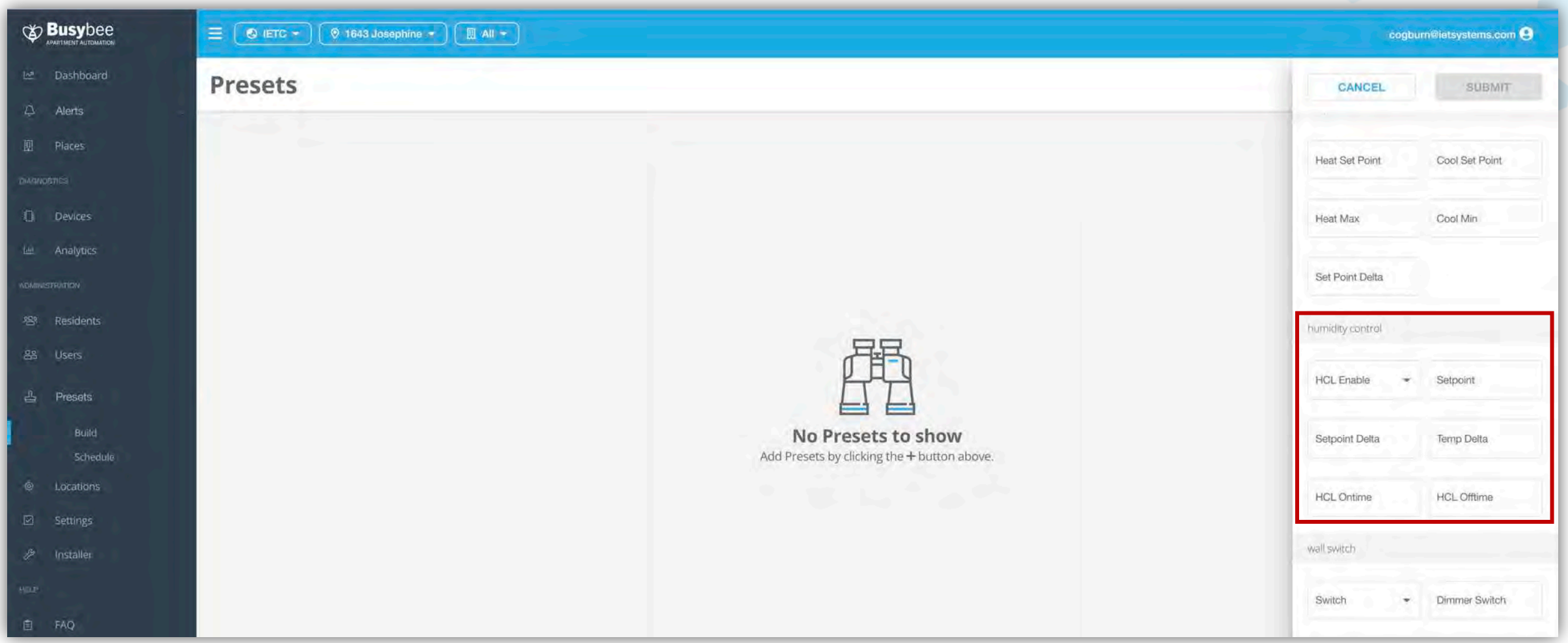
Step 6. Immediately following is the set point section. You will notice “Variable Heat Set Point Enable and Variable Cool Set Point Enable”, keep this set to “OFF”.



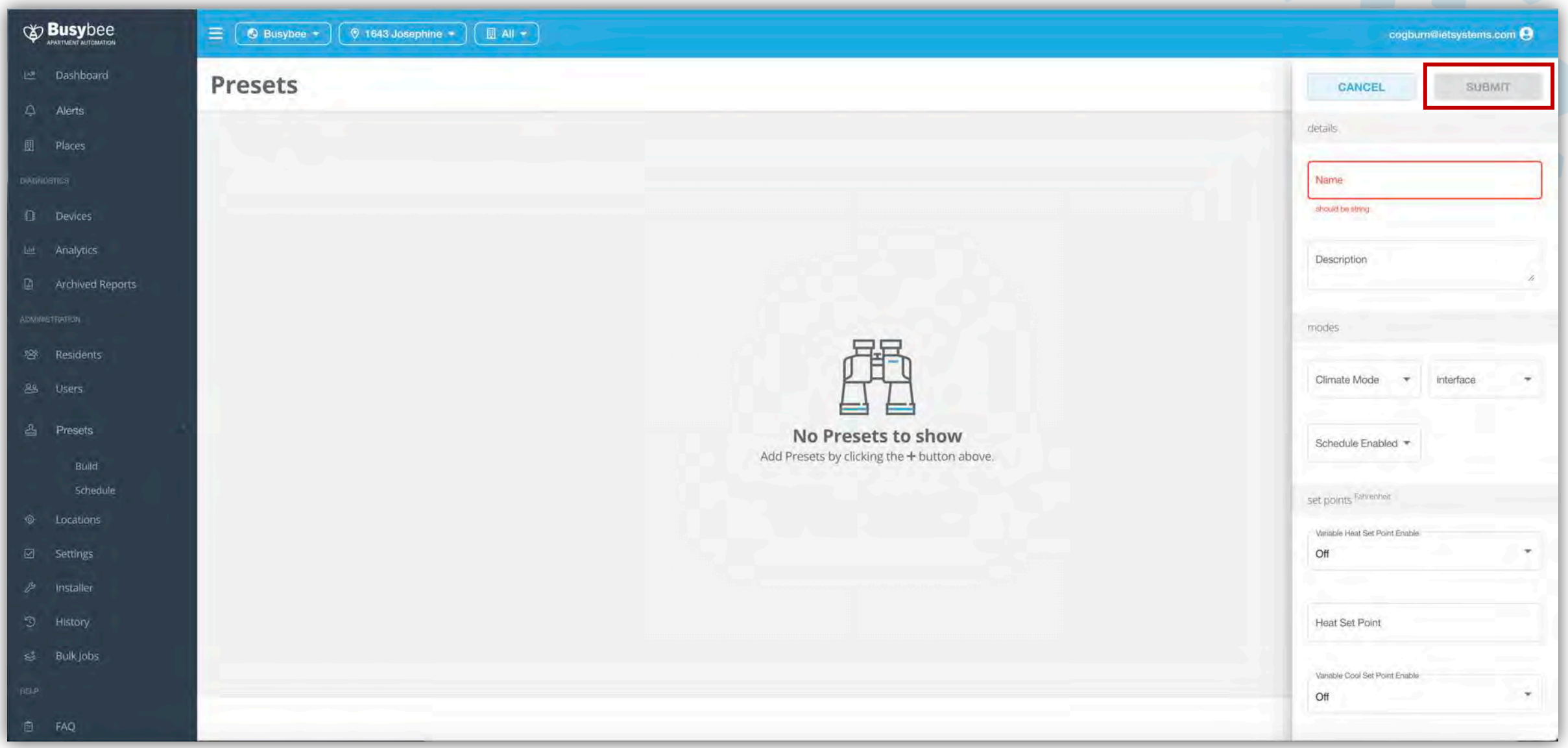
Scroll down to Heat Max and Cool Min, input your desired heat max temperature and cool min temperature. Directly underneath, chose the variance acceptable by indicating a “set point delta”, which means the degree point difference allowed from your min and max set temperatures.



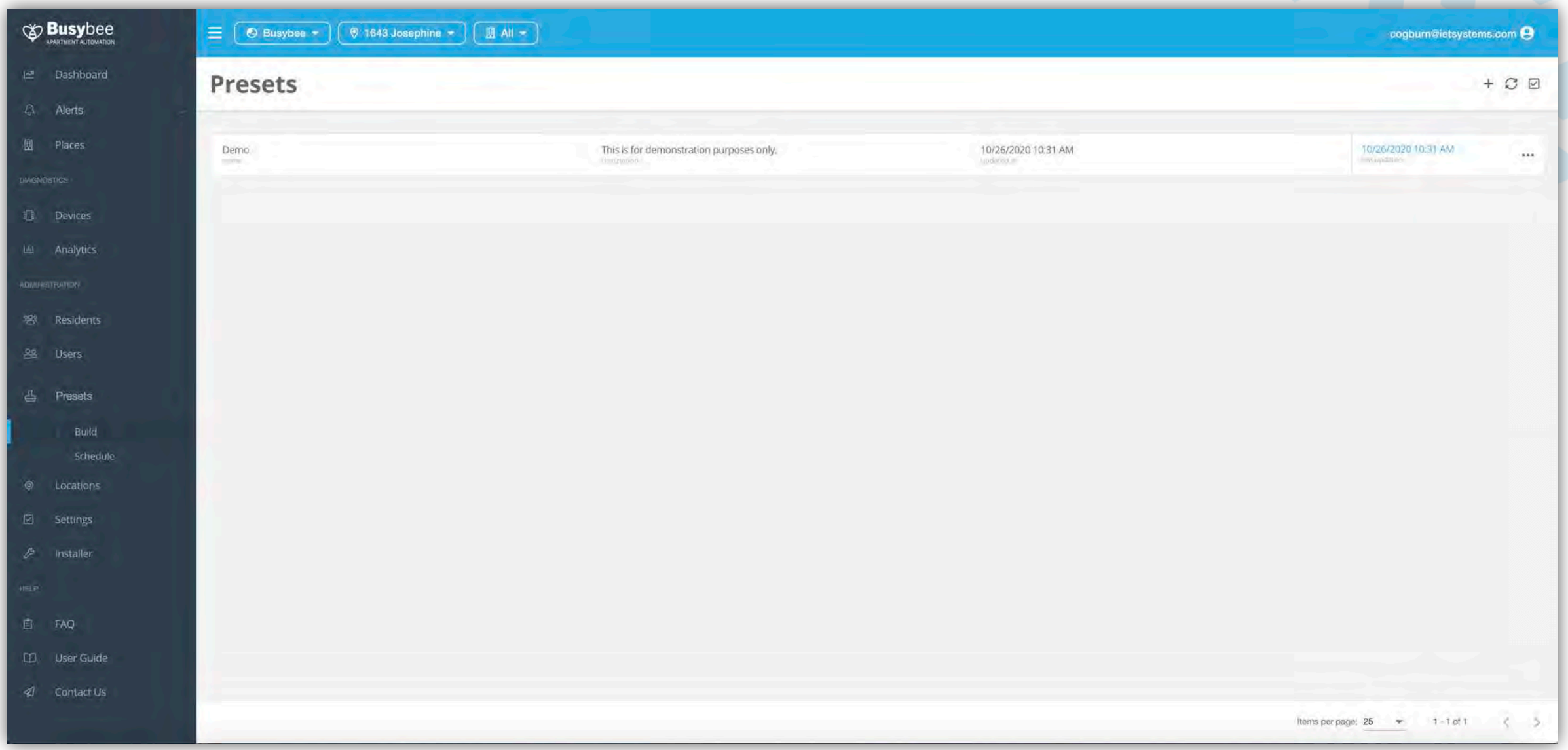
Step 7. Humidity Control section is next. You can adjust the settings to enable or disable the HCL (Humidity Control Level), indicate the desired set point, and delta setpoint and delta temperature.



Step 8. Once your preferences are set for this preset, click submit.



Once submitted, the preset will appear in the build presents window.



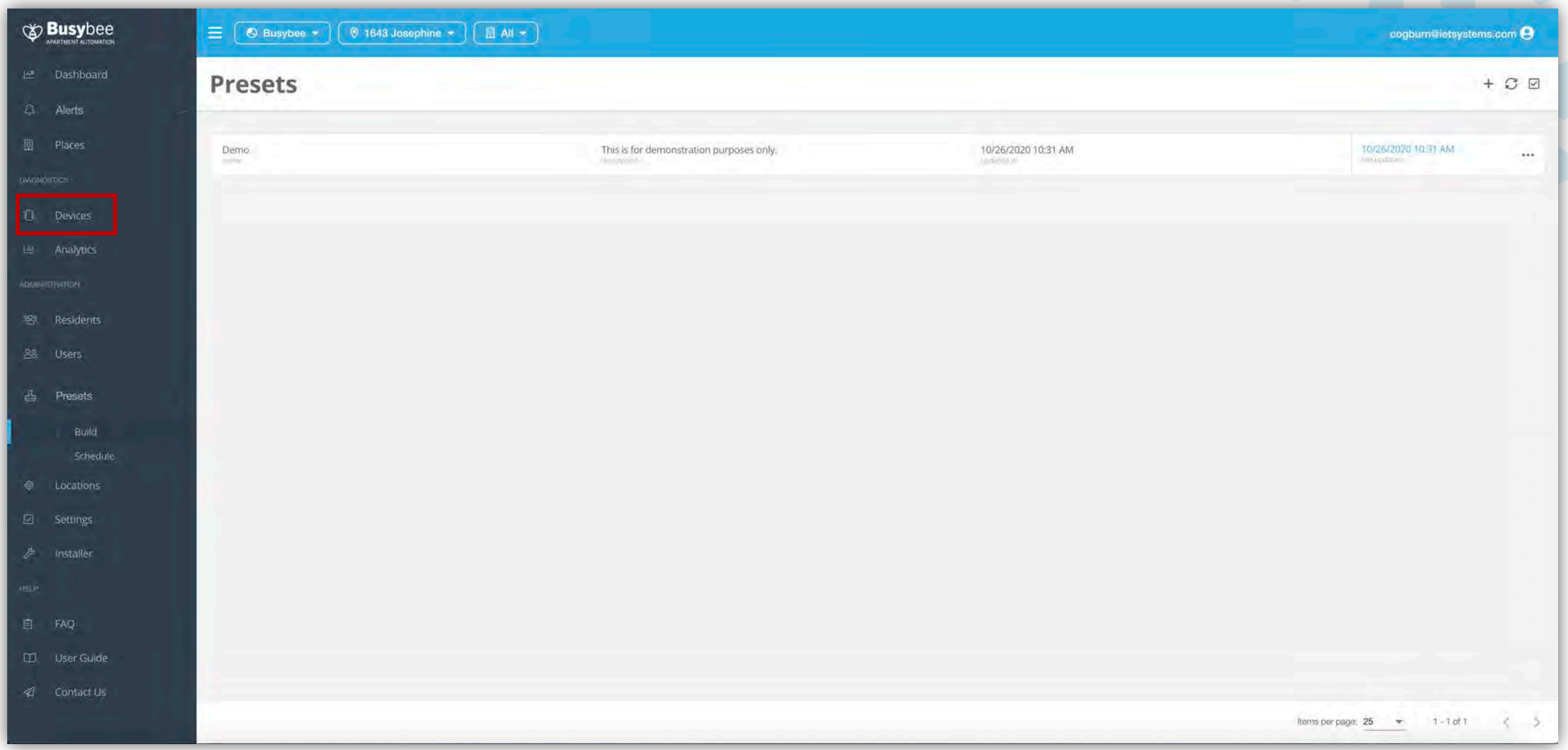
How to Apply a Preset to an Apartment Home

There are multiple paths you can take to display the thermostats for each apartment home. The most efficient path will depend on preference, and if you are applying the preset to multiple apartments or just one individual apartment home.

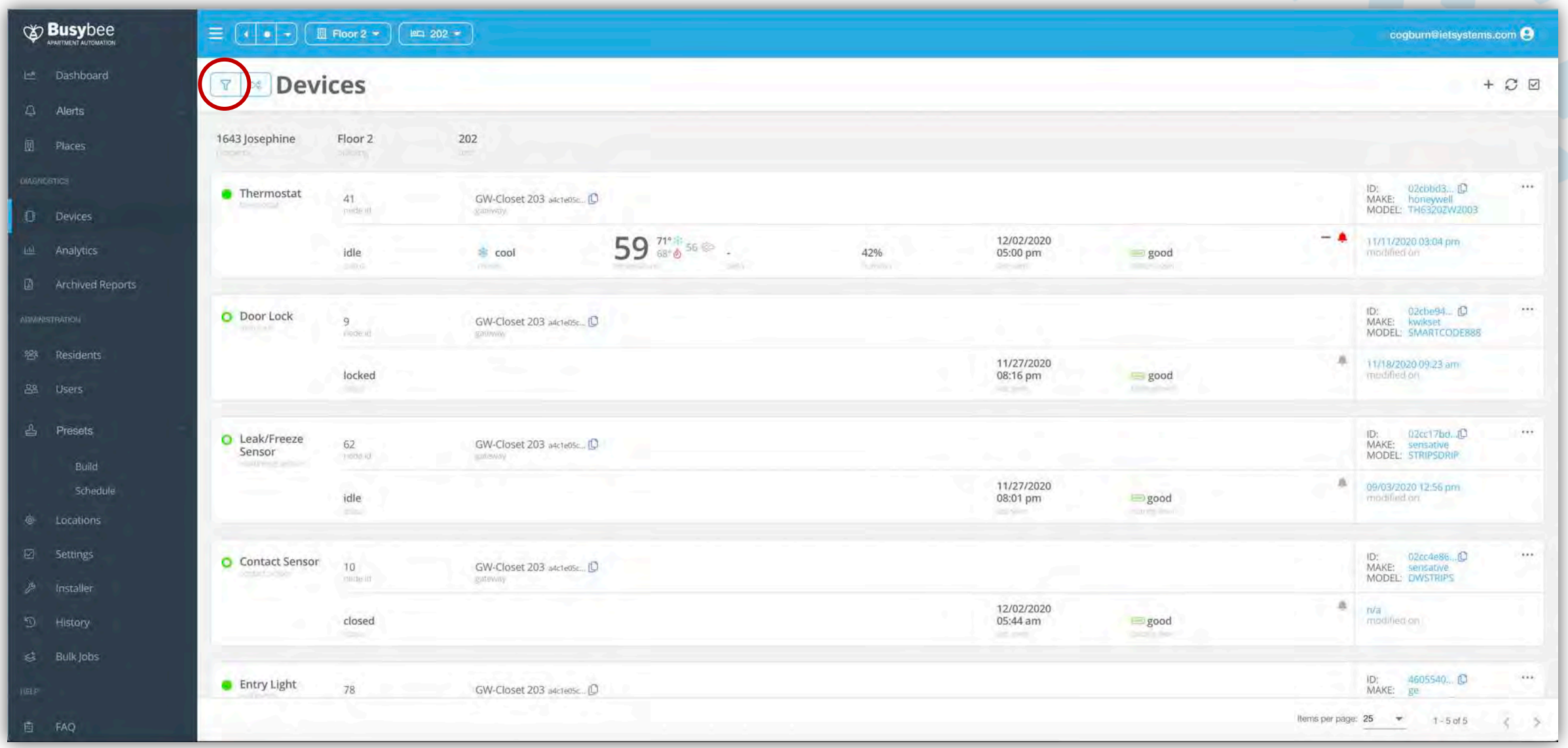
Applying to Multiple Apartments

BACK TO TOP

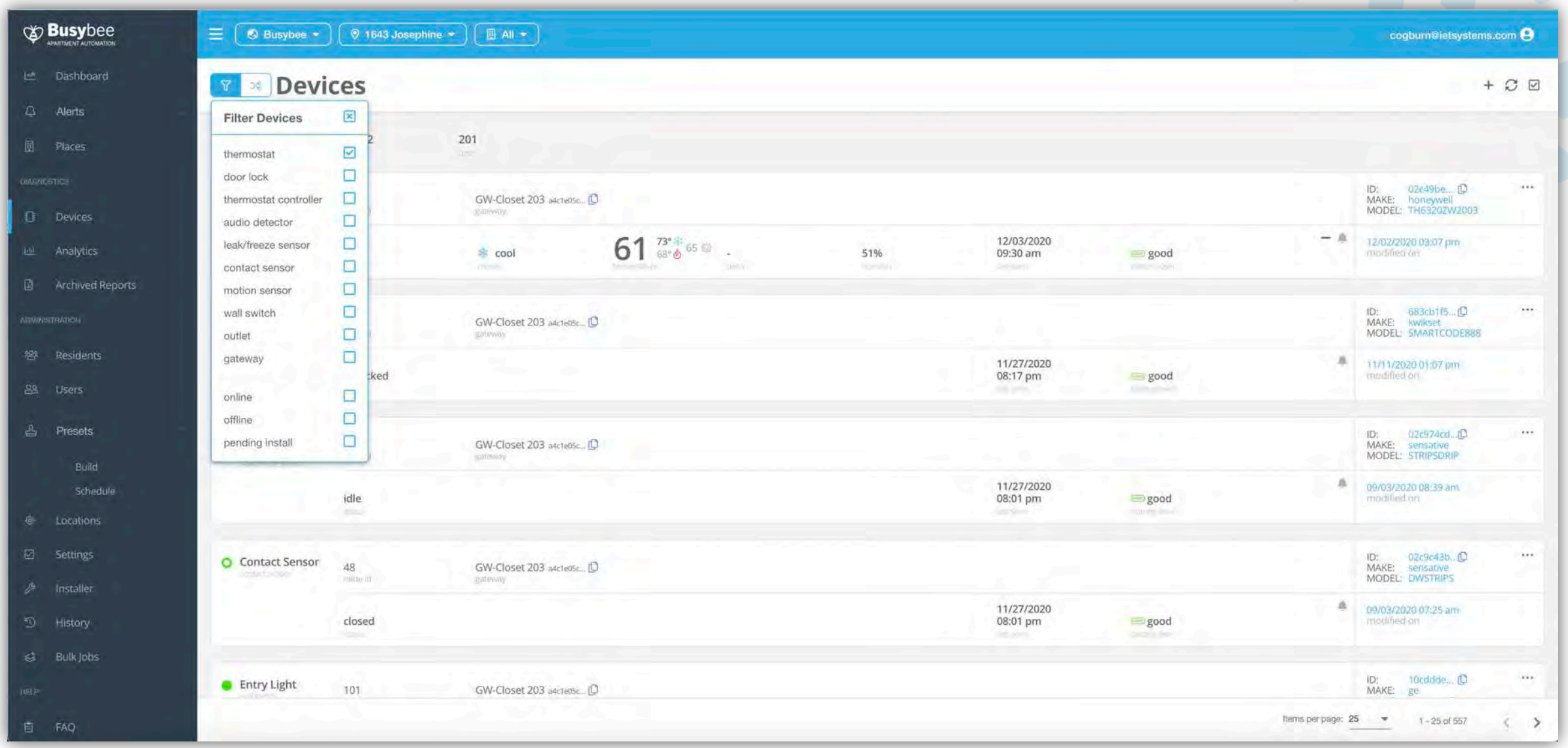
Step 1. Select “Device” from the left-hand side task tab



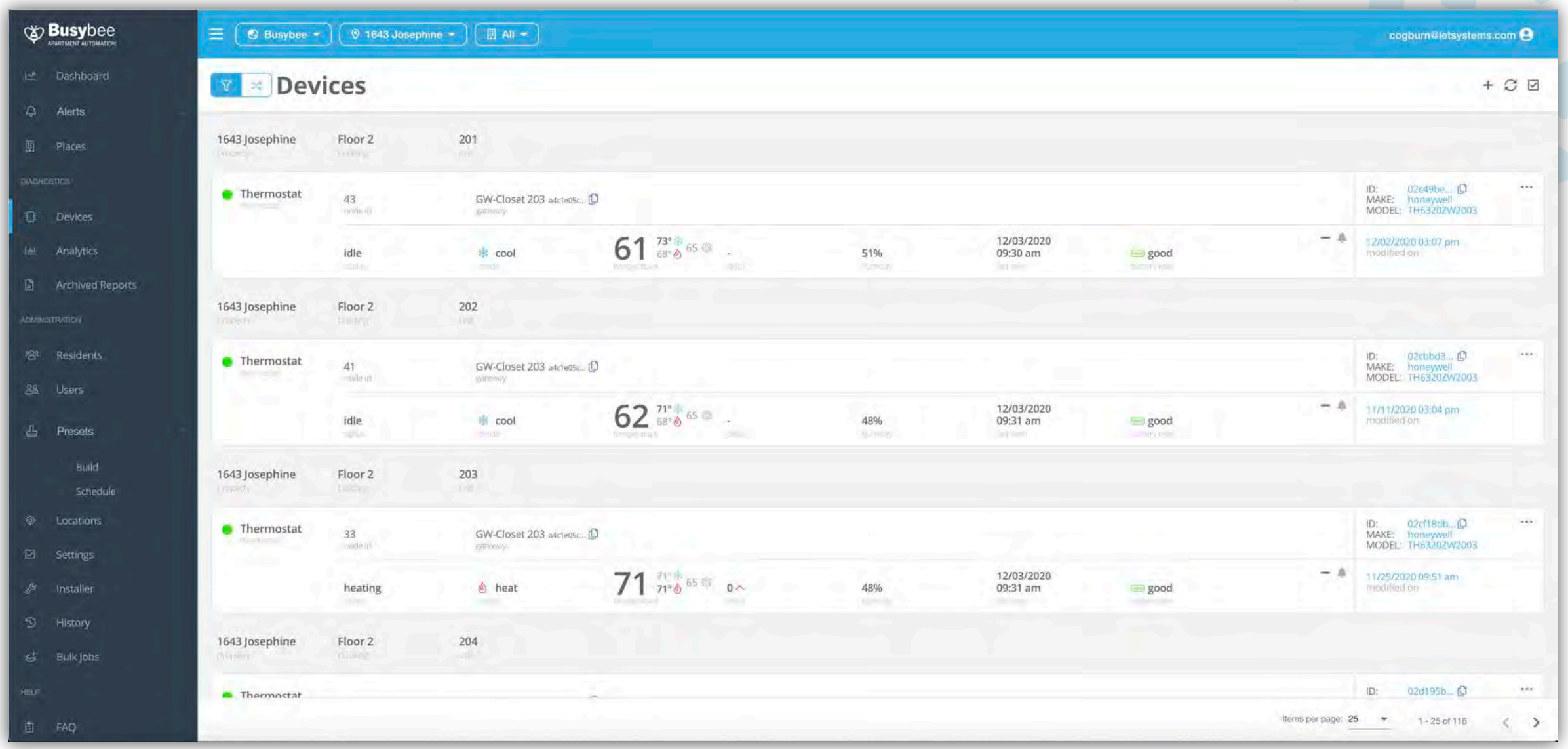
Step 2. Filter your device view by clicking on the funnel icon, check the device that you want to view. In this case, check thermostat



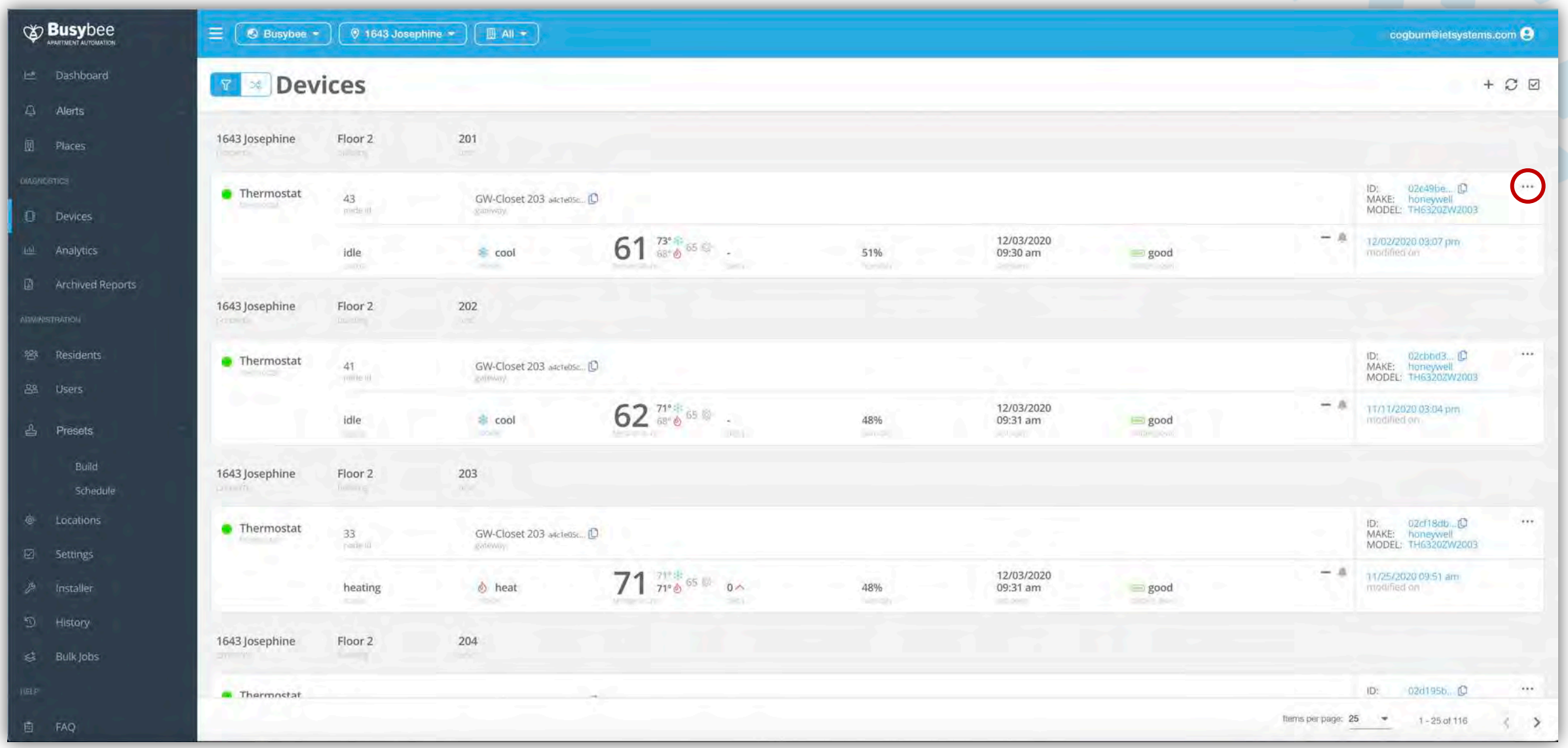
Step 2. Filter your device view by clicking on the funnel icon, check the device that you want to view. In this case, check thermostat



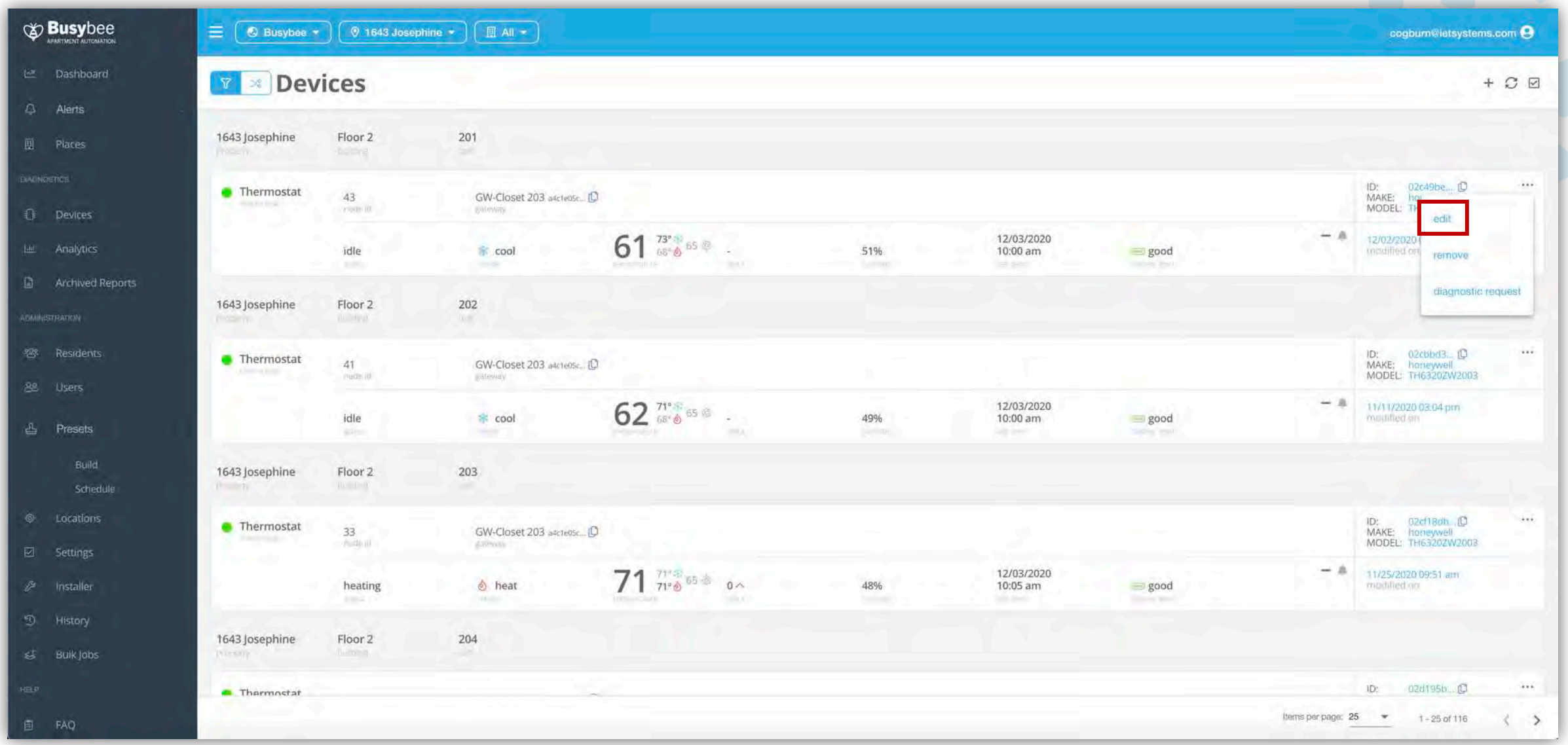
Step 3. Click on the screen and you will only see thermostats



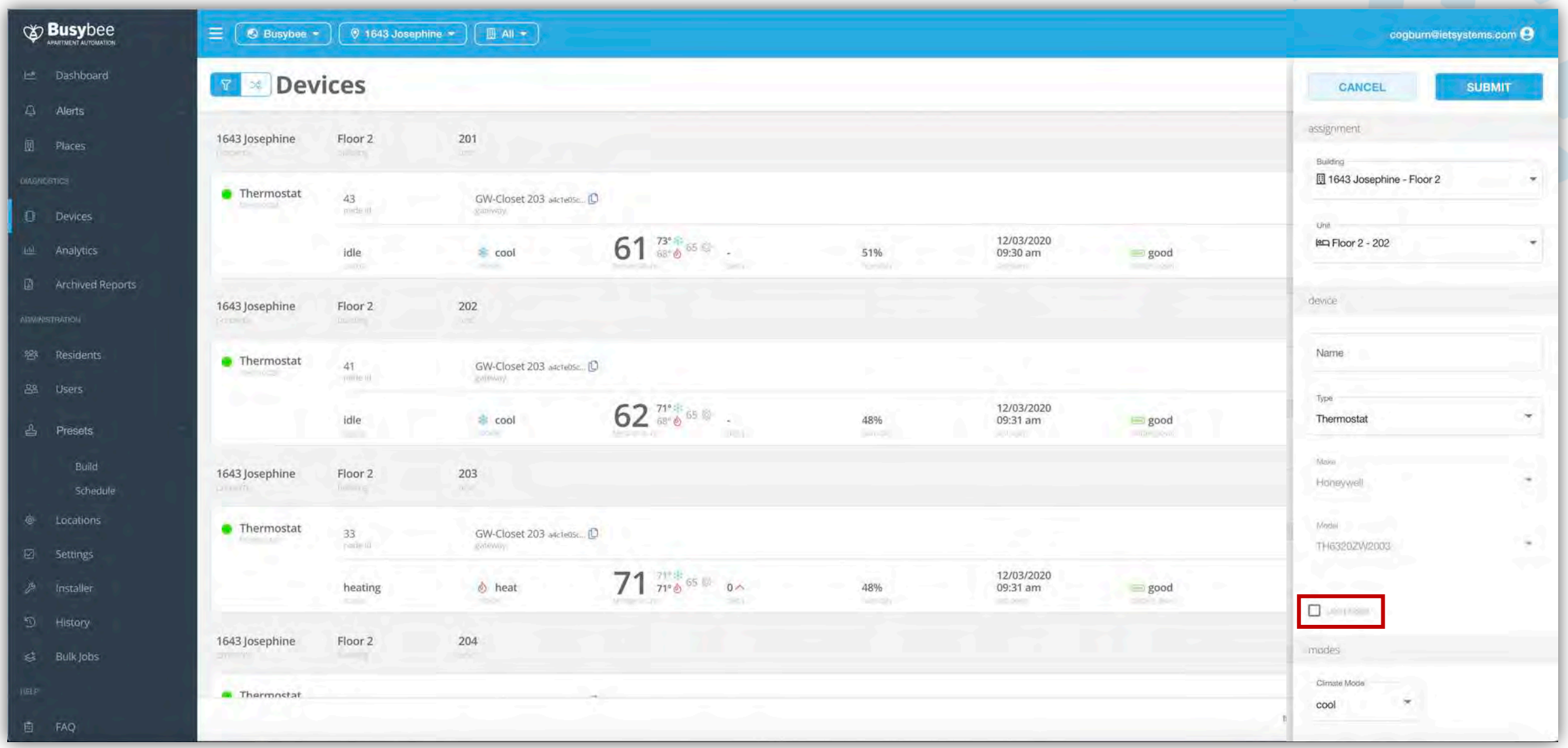
Step 4. Click on the three dots to the right of the apartment home where you would like to apply the preset



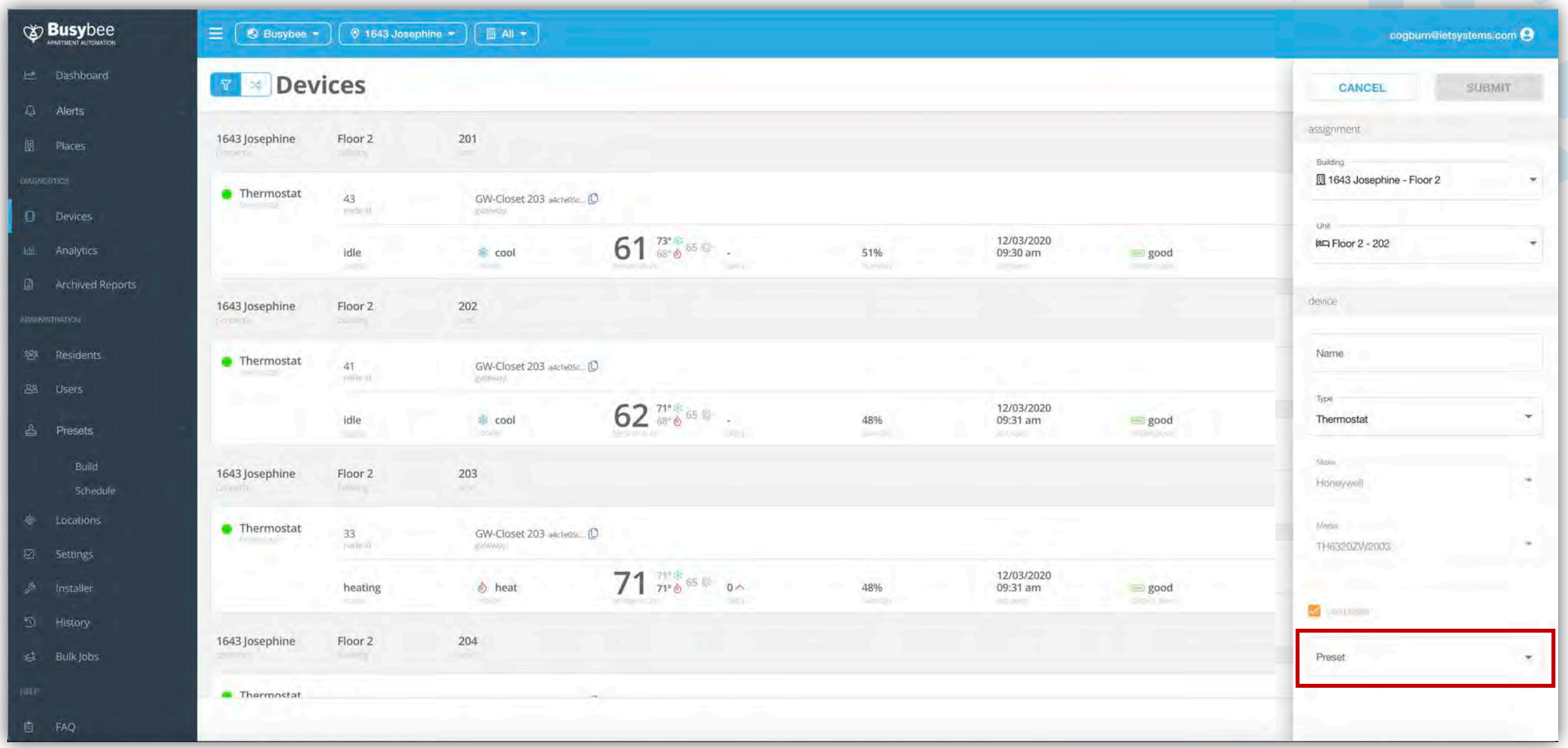
Step 5. Select “Edit”



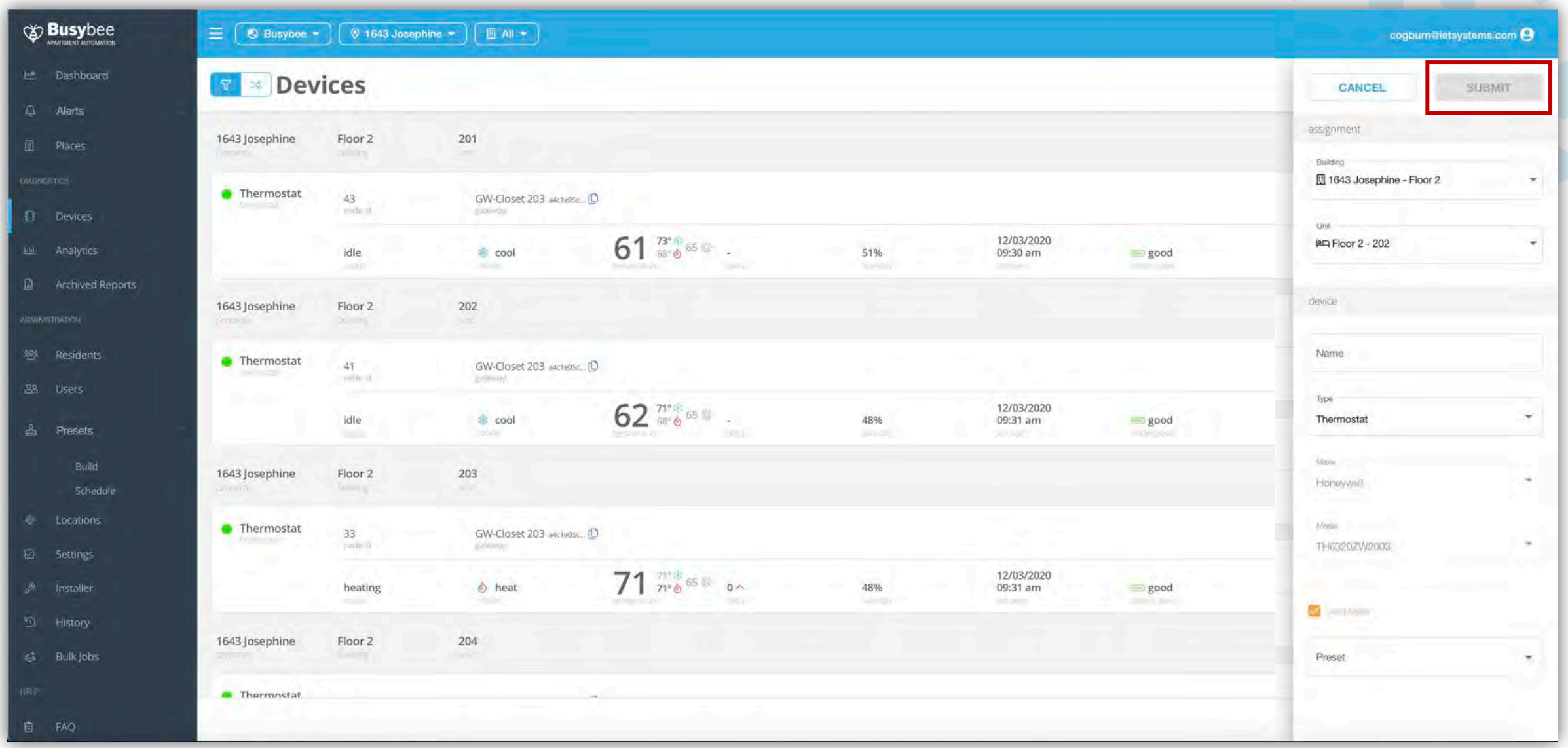
Step 6. Halfway down the page, check the “use preset” box



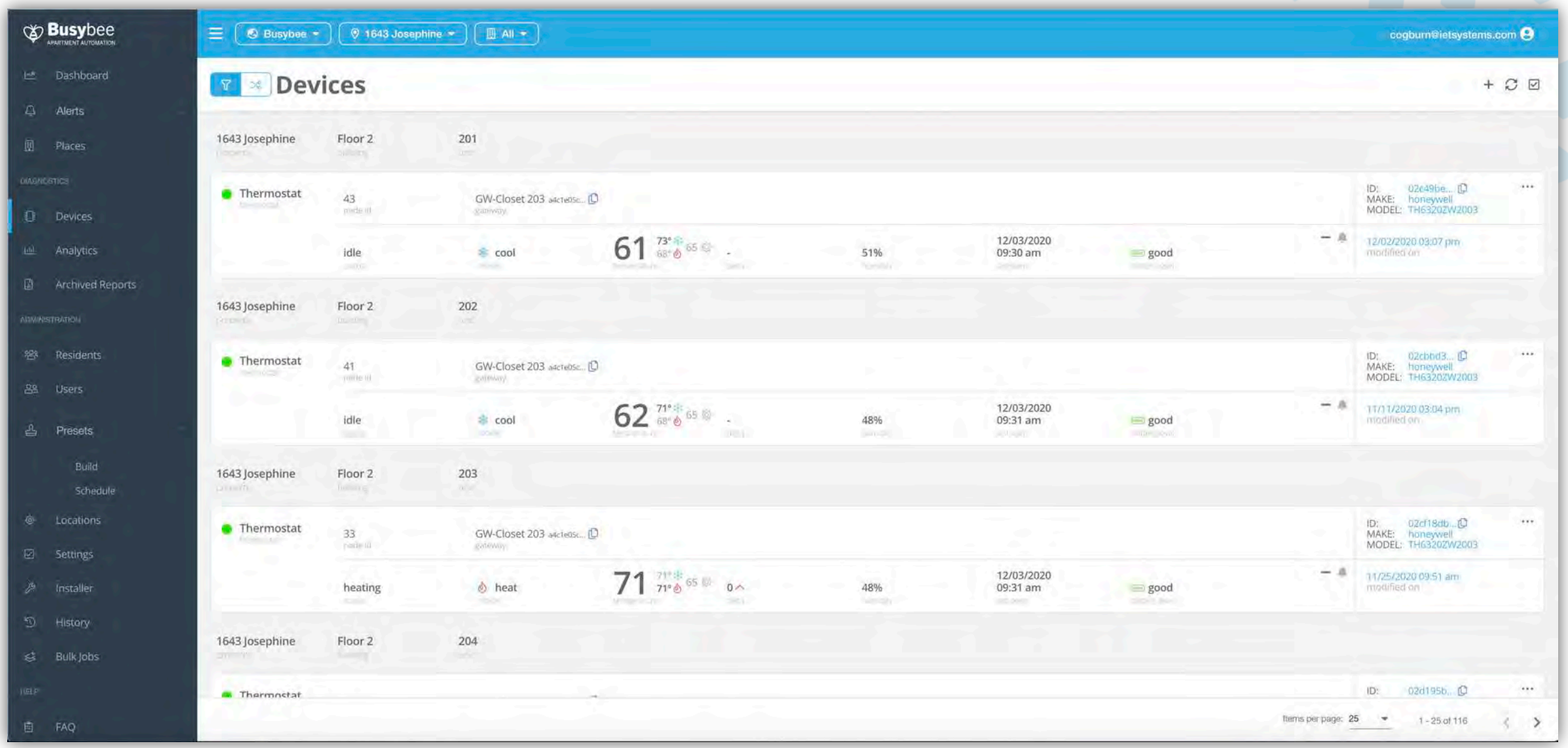
Step 7. A drop-down menu will be displayed with all the previously created presets, select the preset you would like to apply



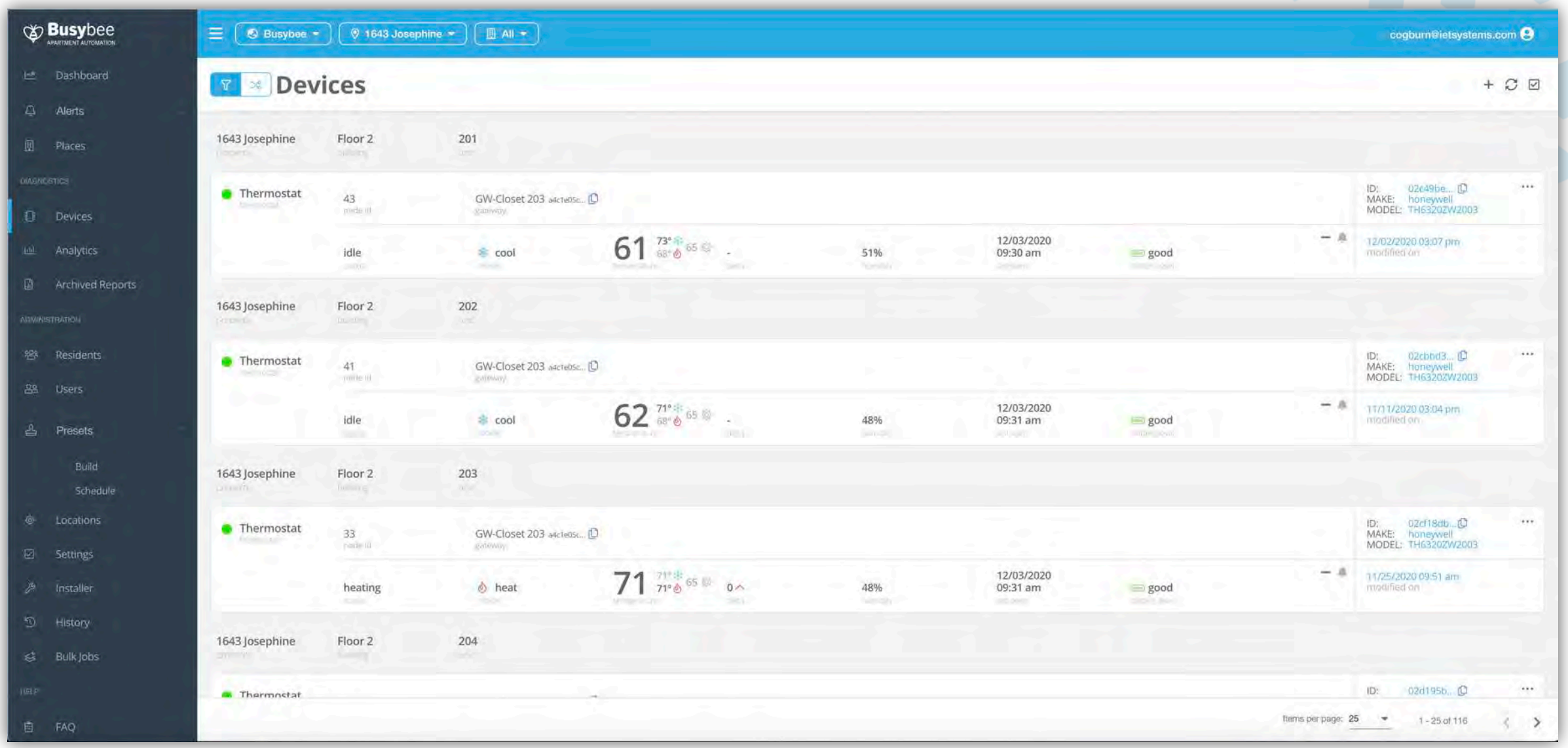
Step 8. Click “submit”



You have now applied the preset to that apartment home



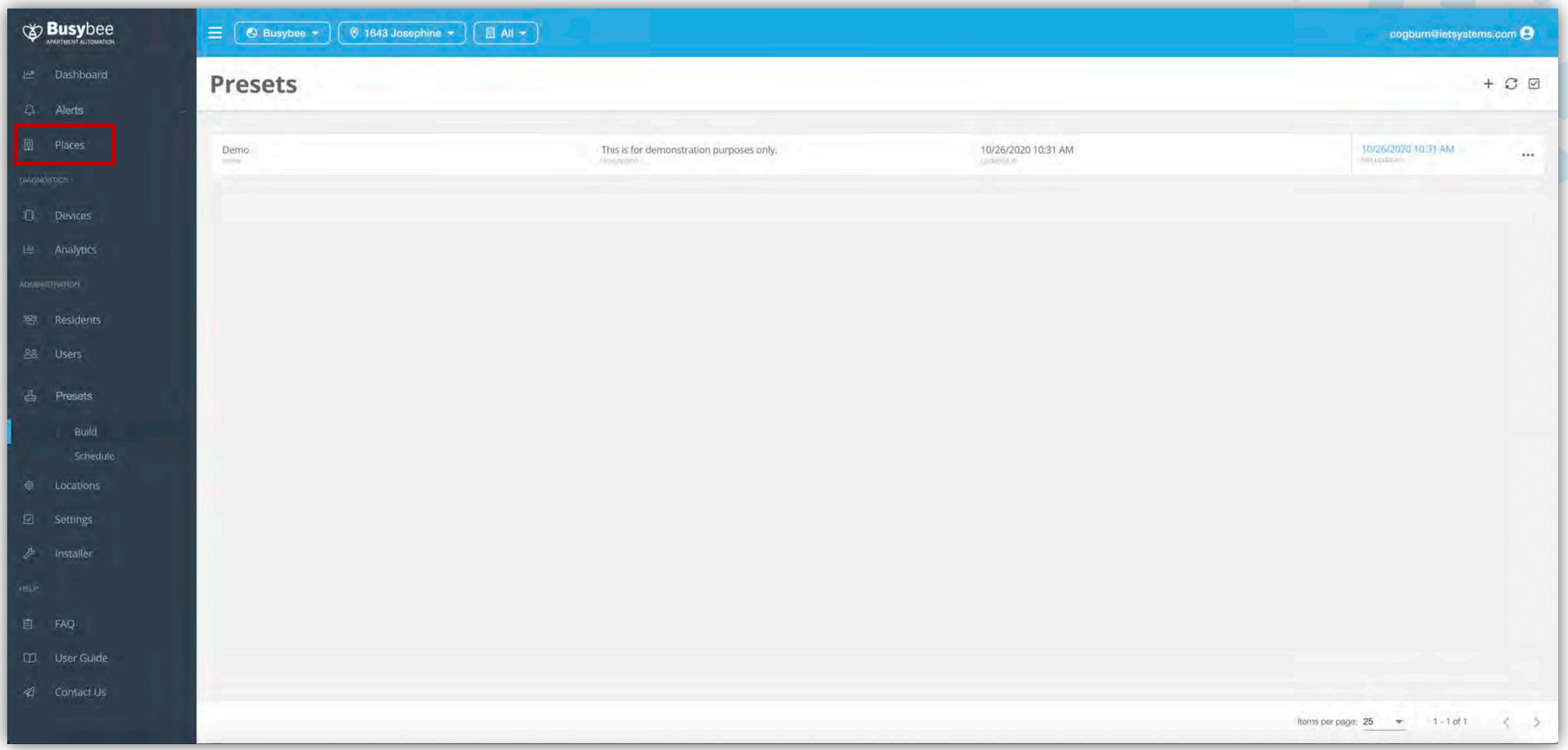
Step 9. Move to the next thermostat listed, select edit, and apply the preset



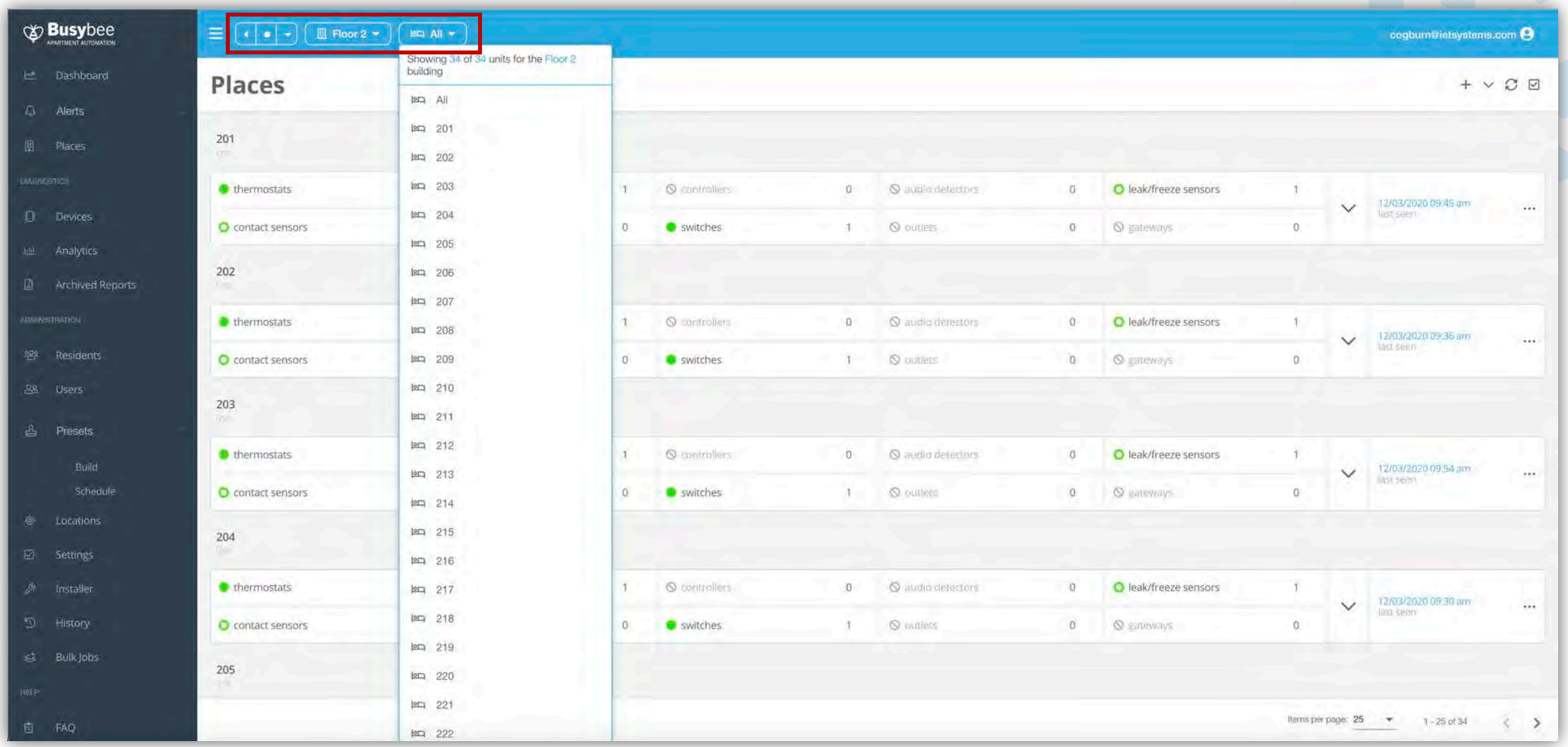
Applying To An Individual Apartment

BACK TO TOP

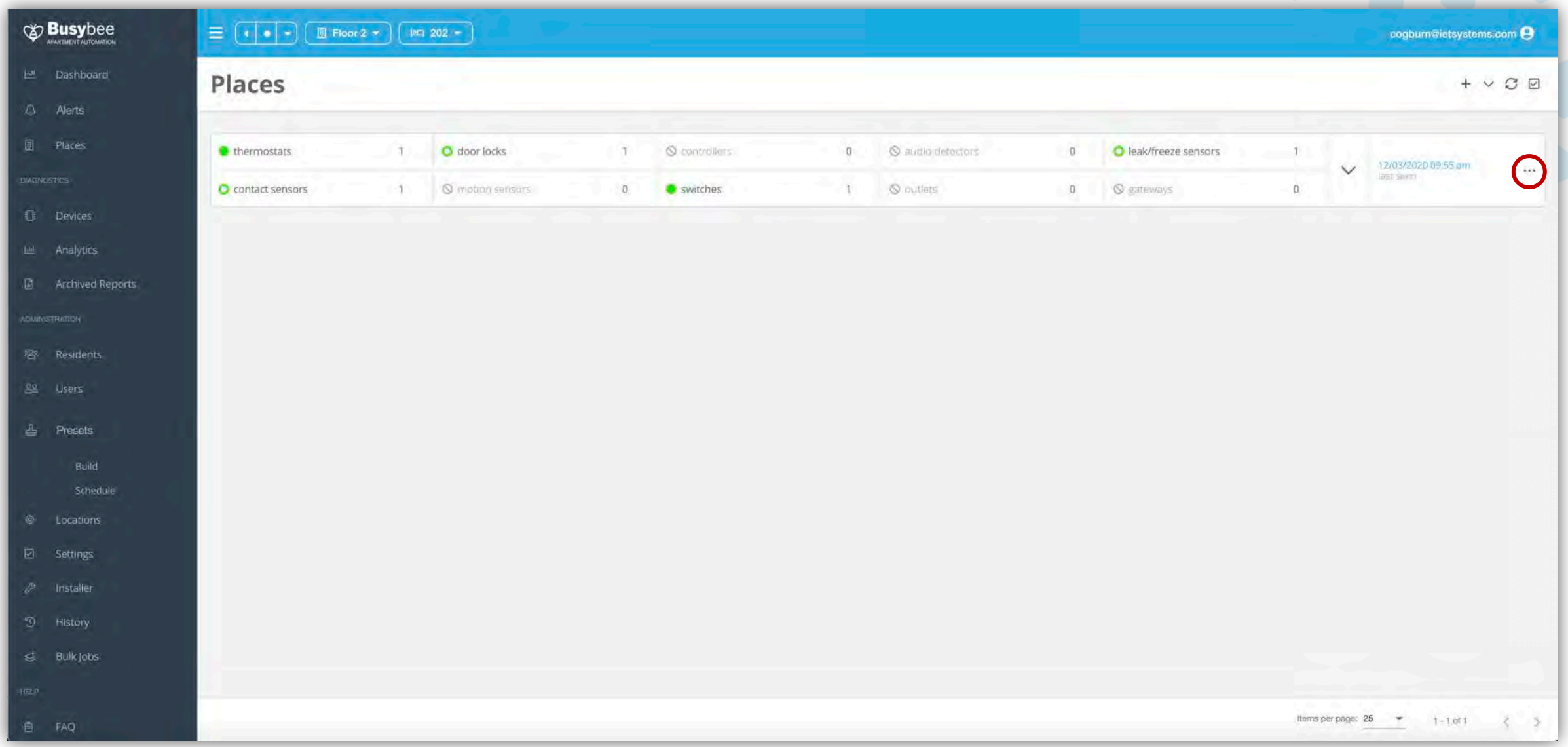
Step 1. Select “Places” from the left-hand side task tab



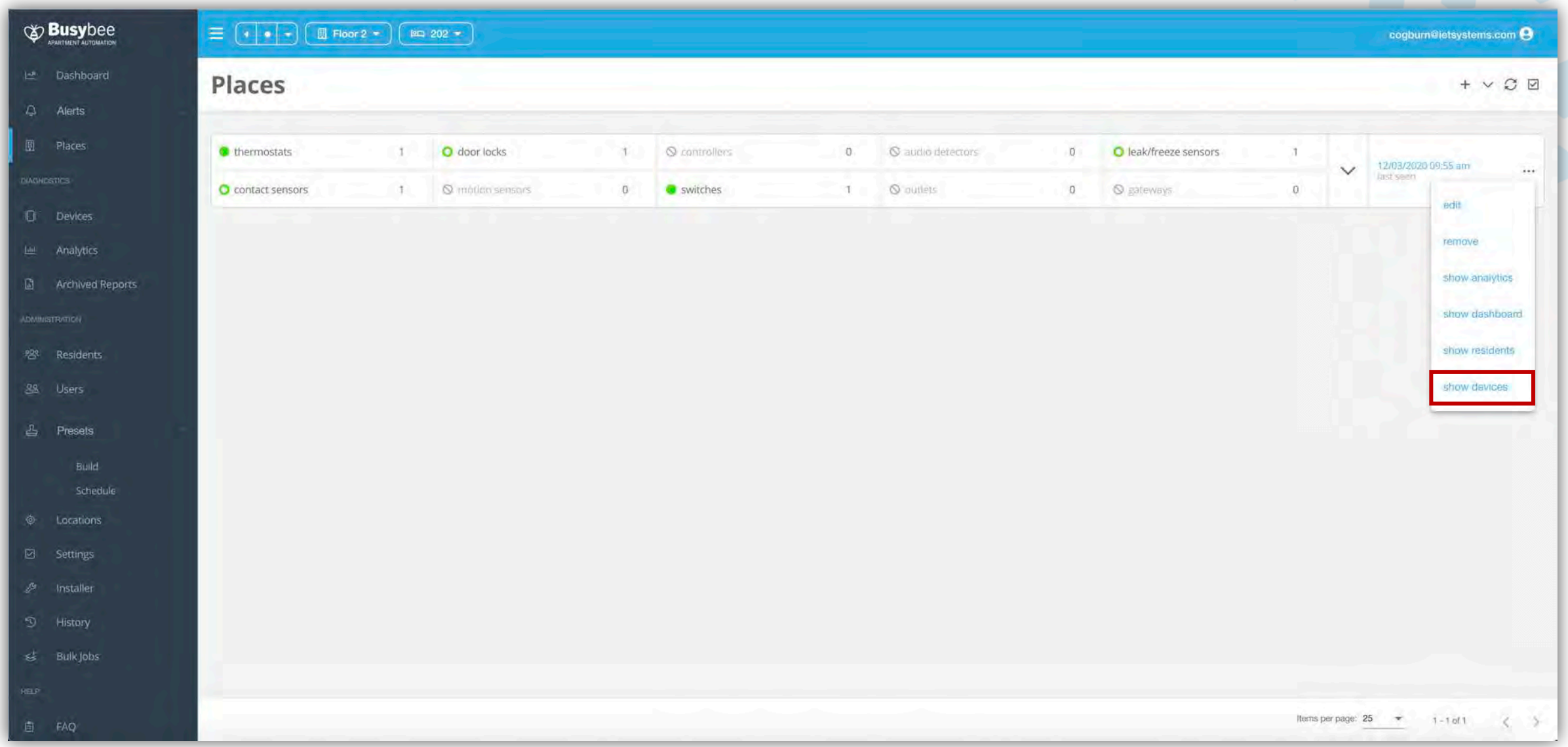
Step 2. Use the top bar to select the Apartment home of interest



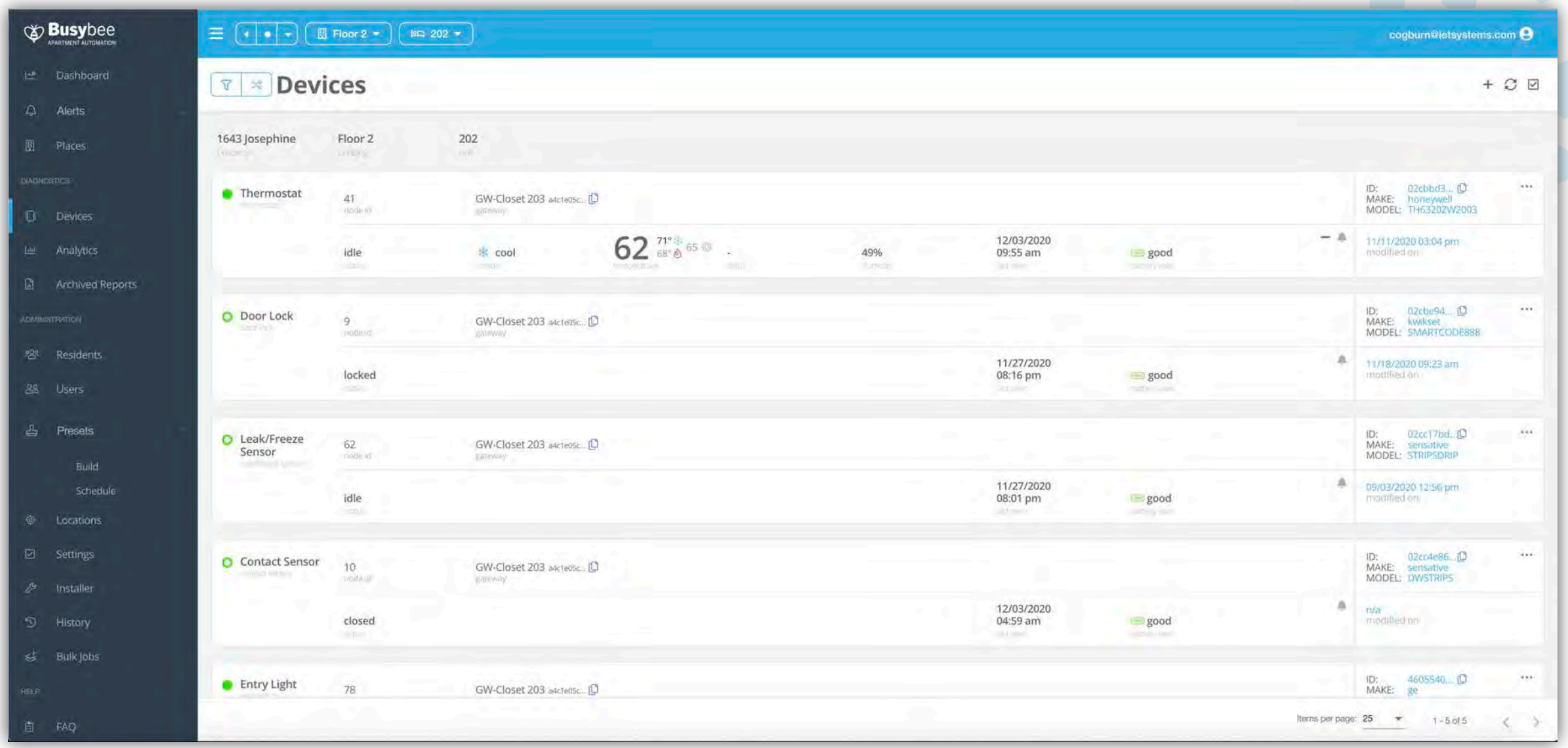
Step 3. Click on the three dots on the right-hand side



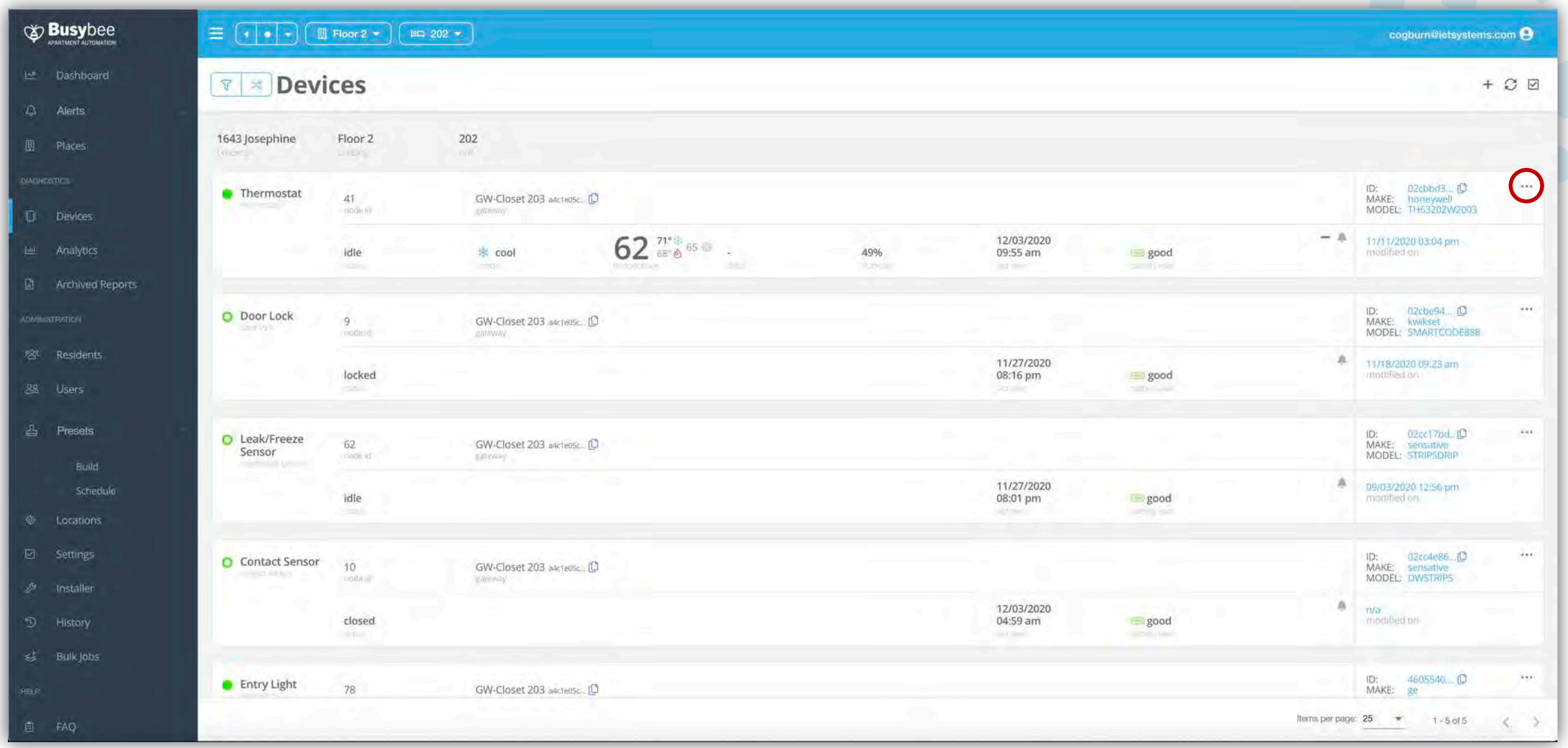
Step 4. Select “Show devices”



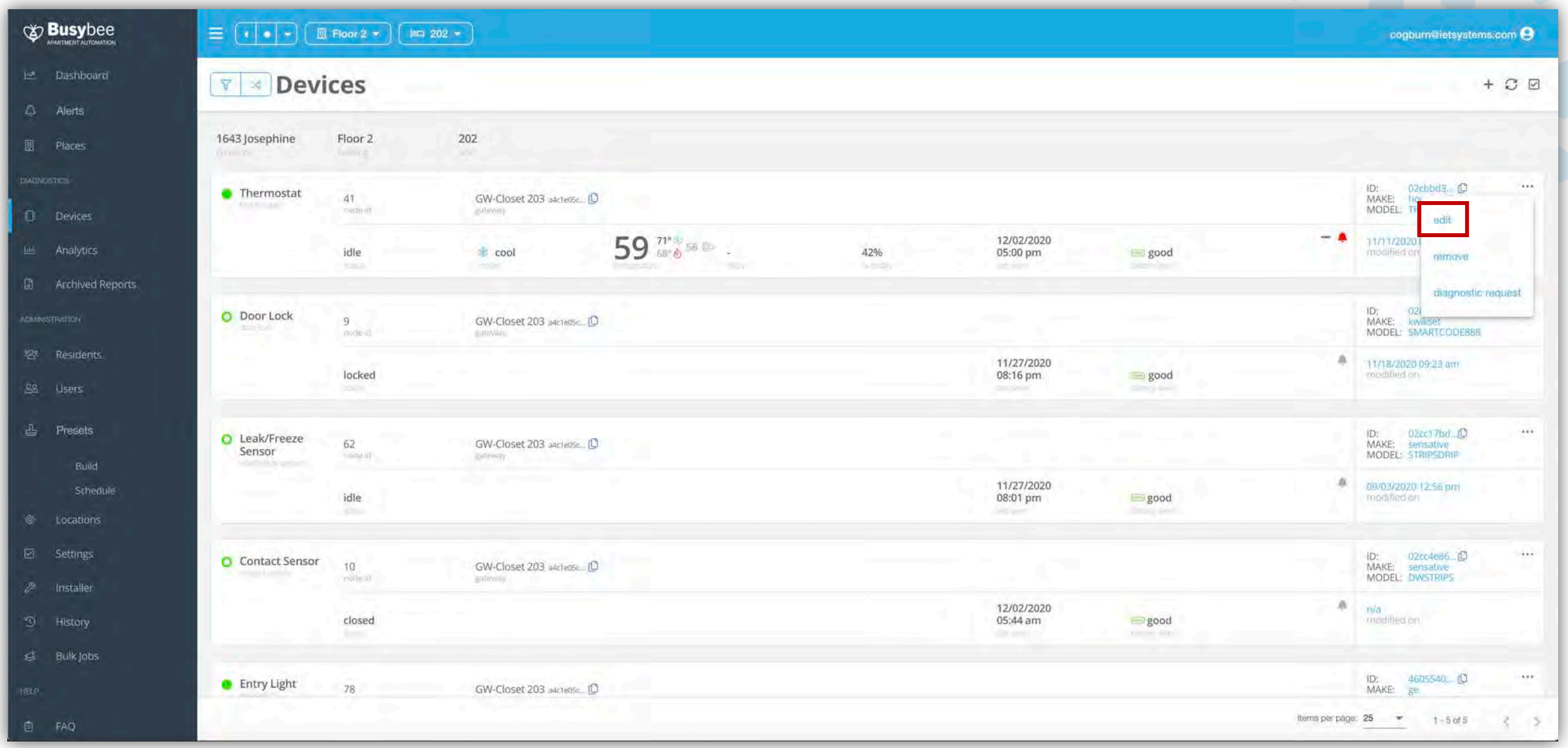
This will bring up all smart devices in the apartment home



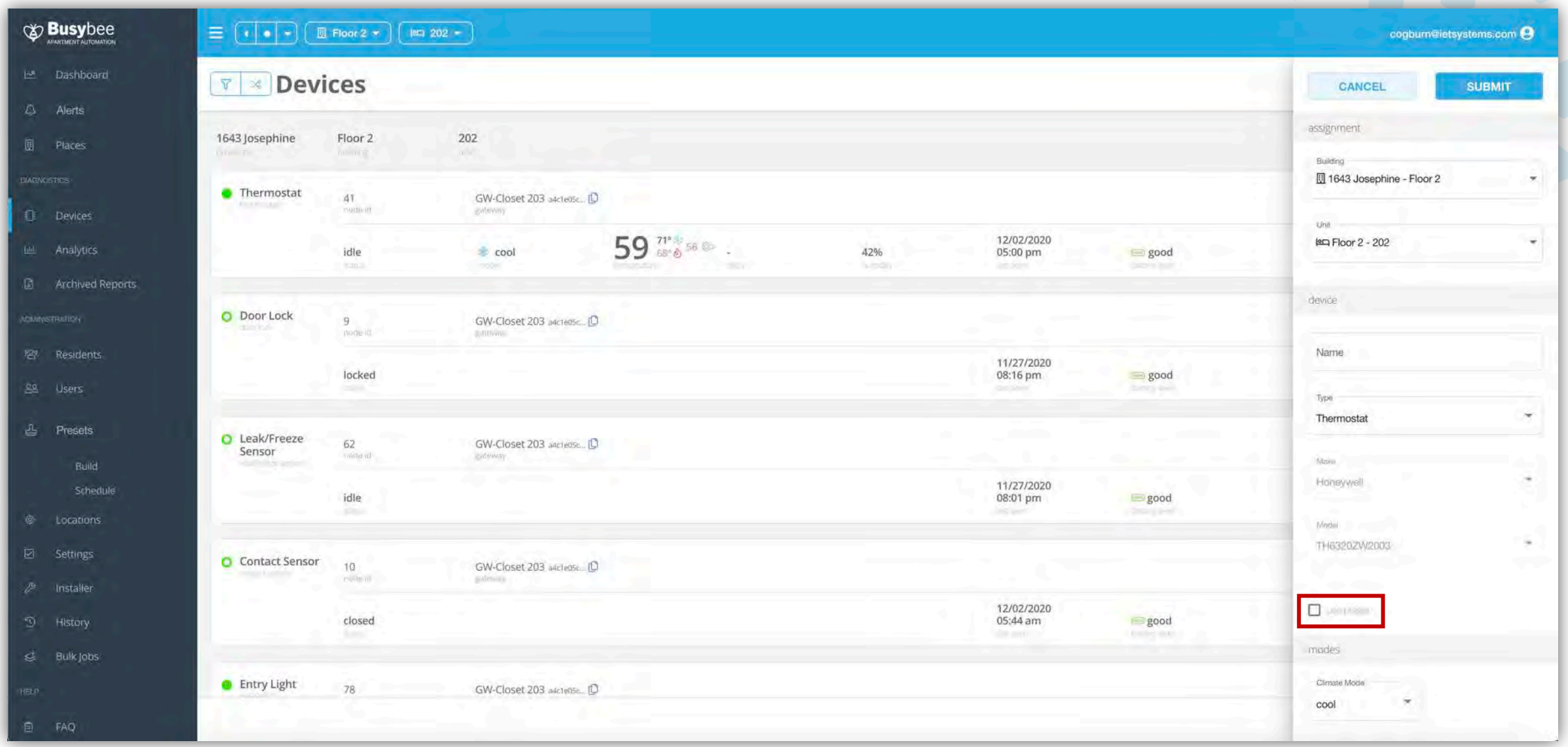
Step 5. Click on the three dots on the right-hand side of the thermostat



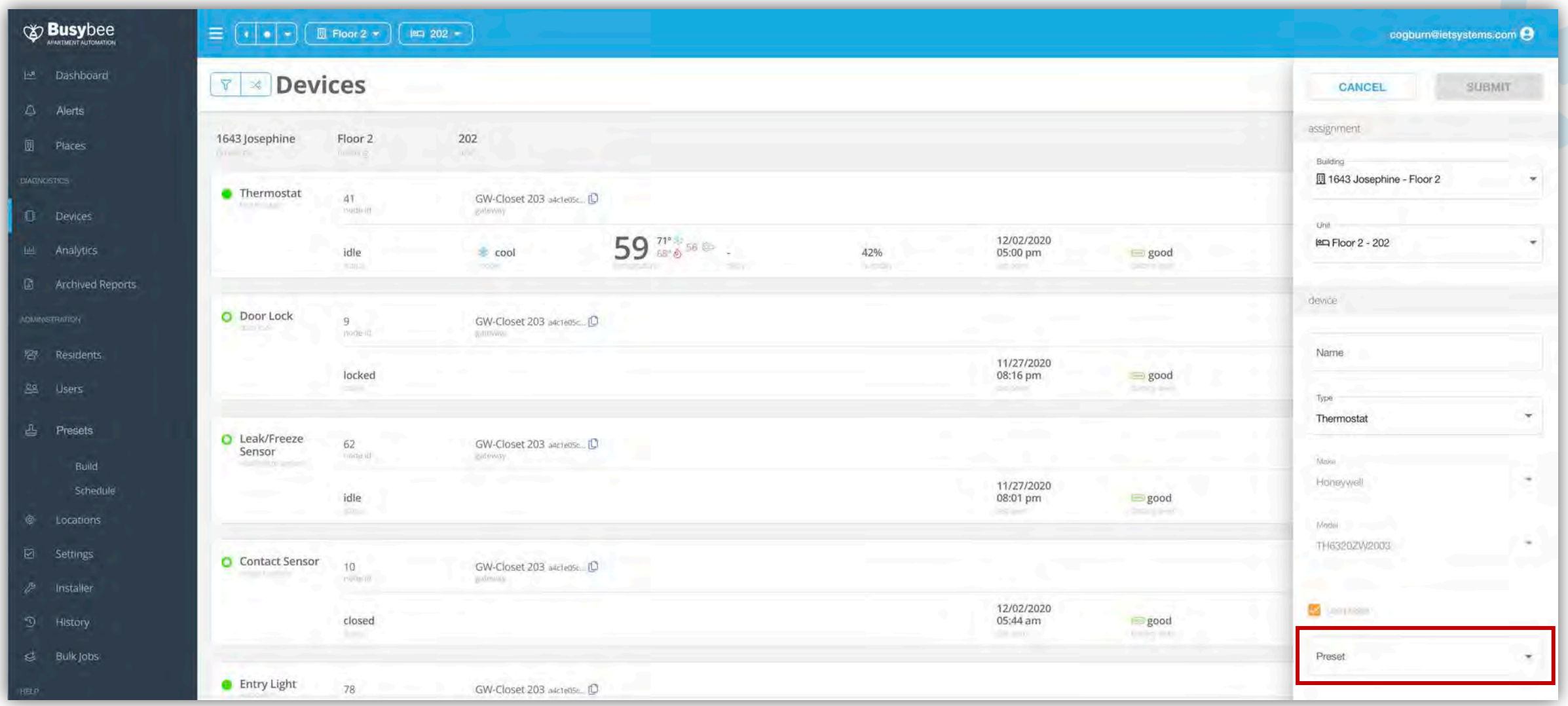
Step 5. Select “Edit”



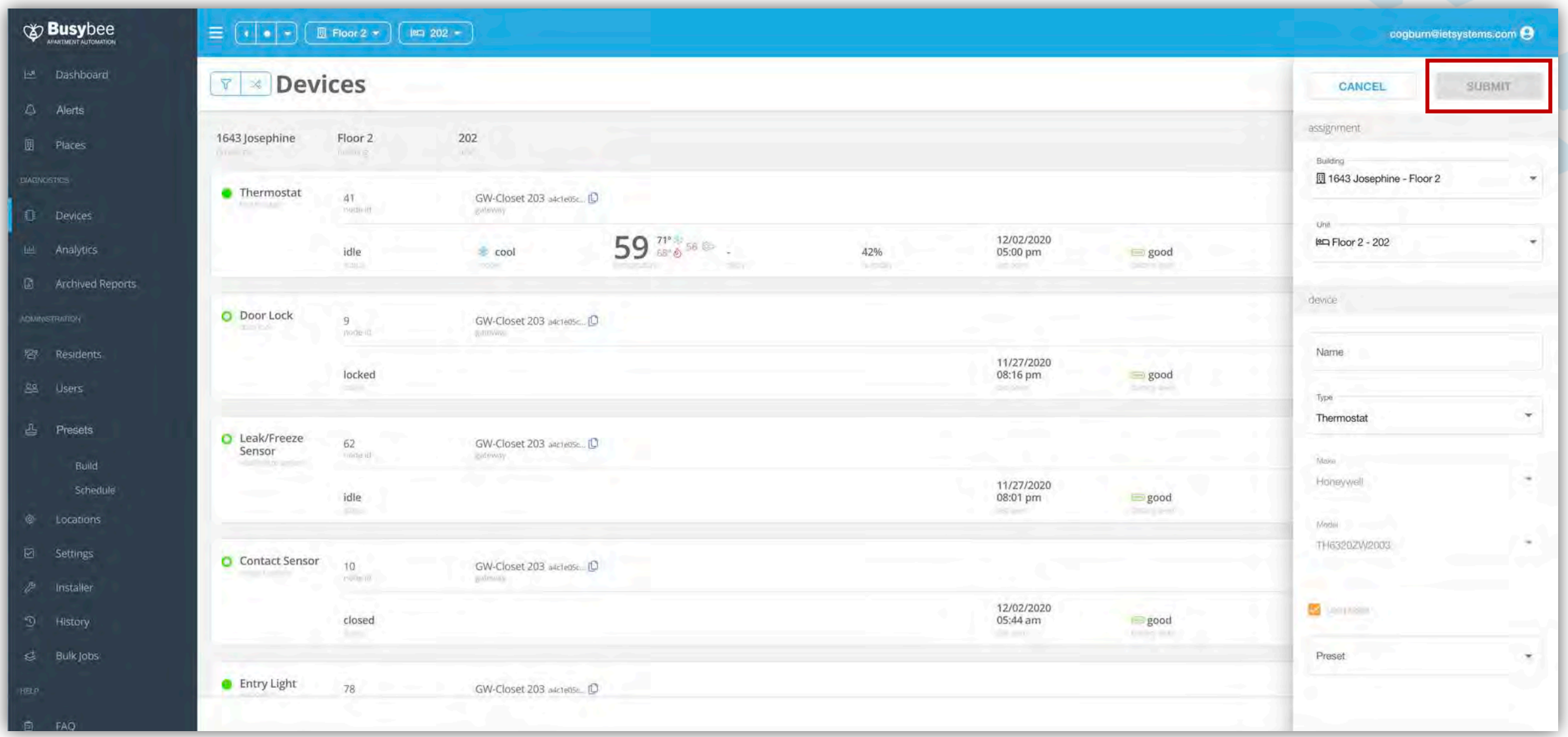
Step 6. Halfway down the page, check the “use preset” box



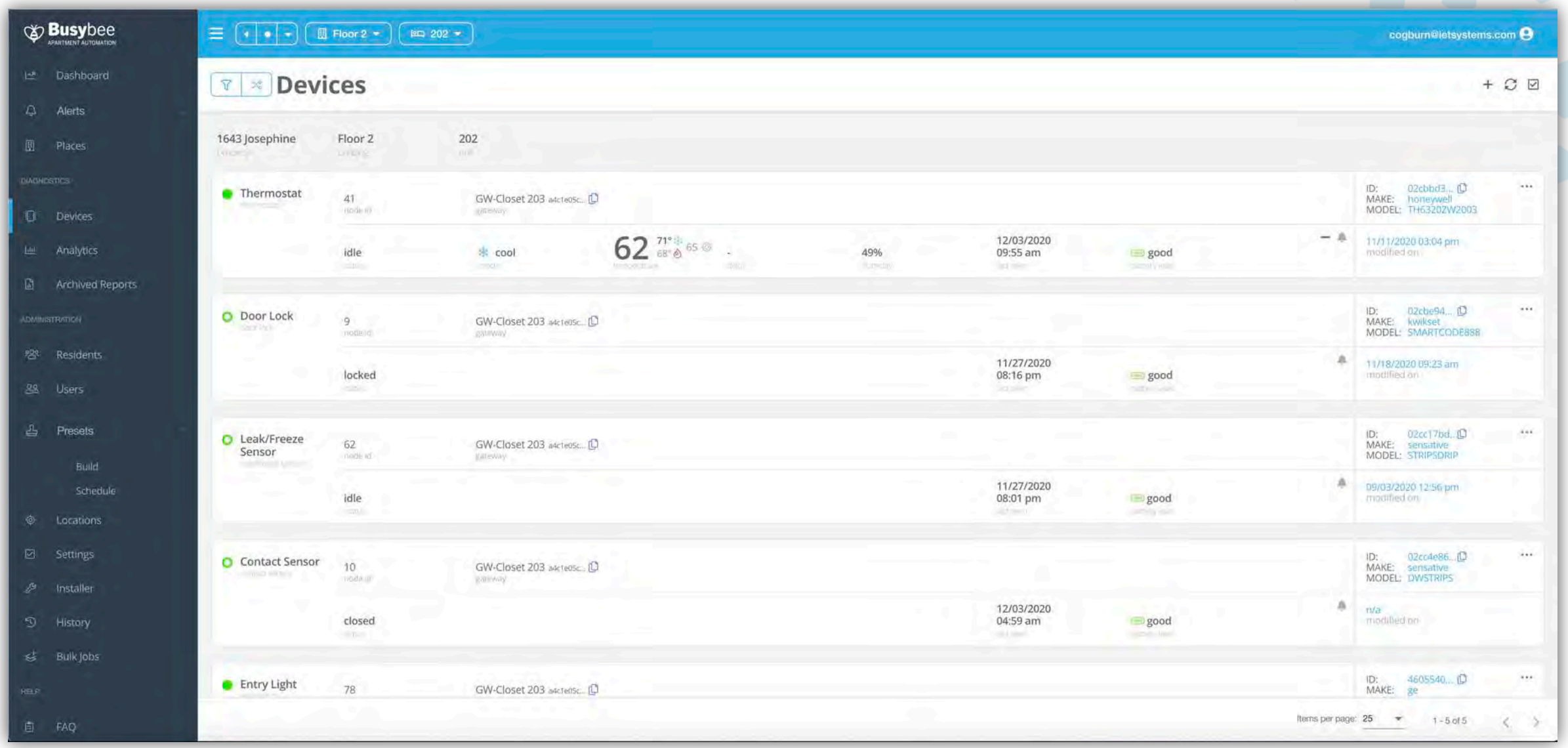
Step 7. A drop-down menu will be displayed with all the previously created presets, select the preset you would like to apply



Step 8. Click “submit”



You have now applied the preset to that apartment home



Humidity Control Logic (HCL)

BACK TO TOP

The HIVE’s HCL Feature

As mentioned in the previous section, humidity levels can be controlled by using the Humidity Control Logic (HCL) feature found in the preset section.

Utilizing the HCL feature allows the smart thermostat to run extra cooling cycles when high humidity is detected.

The HCL settings can be configured and applied to as many or as few apartments as required when using the presets and scheduling features.

The HIVE's HCL Feature

Using the HCL feature, the settings can be configured to meet the specific needs of the property. For example, the HCL set-point can be configured to 70% then when 71% is reached, the HCL will engage.

Humidity can be a major headache for many properties, as excessive humidity for even as little as a few days in a row can lead to mold growth. Even in units where the ambient temperature is as low as 70 degrees, if humidity consistently stays over 70% mold growth will start in as little as 2-3 days. The Busybee platform can ensure that relative humidity (RH) in all your controlled apartments will always stay at a safe and comfortable level using the Humidity Control Logic (HCL).

There are additional parameters available when attempting to lower the relative humidity with HCL. The following will cover additional settings that include examples.

Vocabulary

Setpoint - this is the RH value that would trigger HCL

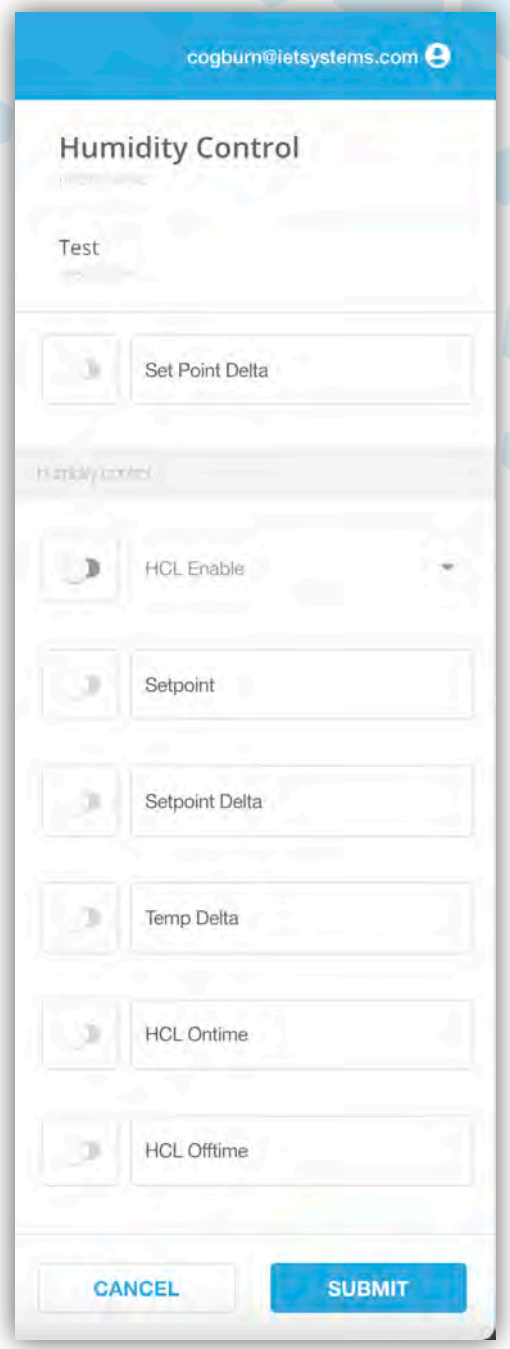
(ex. if HCL Setpoint is 70, then when 71% is reached, HCL will look to engage)

Setpoint Delta - this is how many degrees past the current RH setpoint the thermostat is allowed to surpass before attempting to lower RH with HCL

(ex. if HCL Setpoint is 70, and Setpoint Delta is 2, HCL will not engage until RH hits 72%)

Temp Delta - this is how many degrees past the current cooling setpoint the thermostat is allowed to cool to when attempting to lower RH with HCL

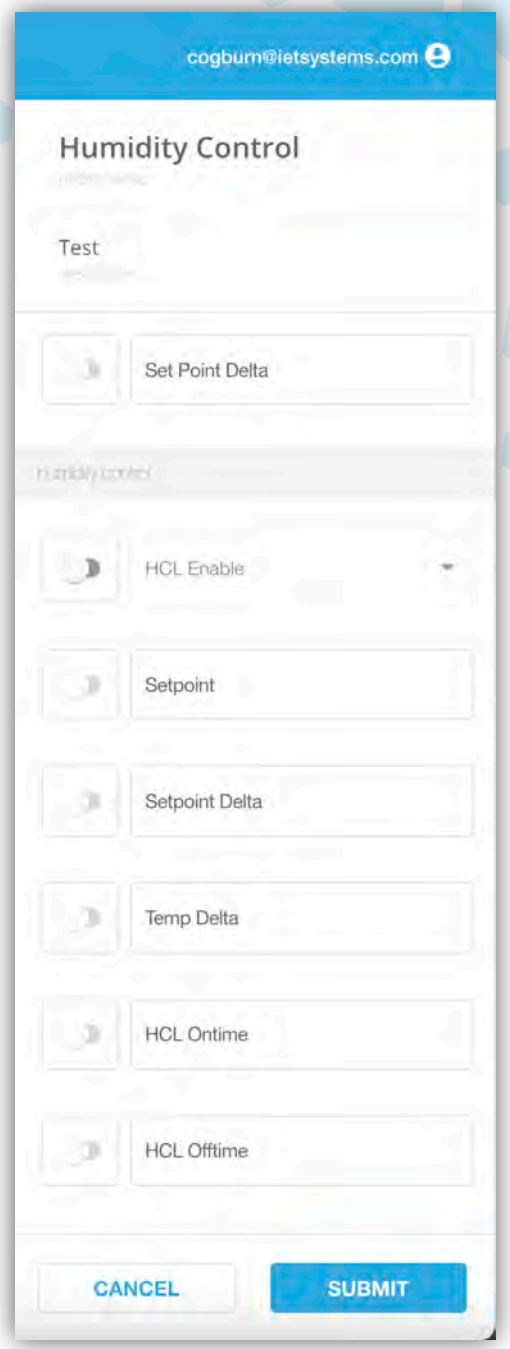
(ex. if CSP is 73, and HCL Temp Delta is 2, thermostat will stop cooling and end current HCL cycle when 71 degrees is reached even if RH is still above RH Setpoint)



Vocabulary

HCL On time - this is the maximum amount of cycle time for a cooling cycle to remove humidity

(ex. if HCL On time is 30, then the thermostat will attempt to cool until RH level is below setpoint or for 30 minutes)

HCL Off time - this is the minimum amount of idle time that must occur before allowing HCL to trigger more cooling

(ex. if HCL Off time is 30, then the thermostat will wait 30 minutes after an HCL cycle has finished before running another HCL cycle)