PuriFi

Smart Hub Set-Up & Device Pairing Guide



PLEASE REVIEW THIS GUIDE BEFORE INSTALLATION.

For best results, we recommend completing set-up BEFORE installing equipment into ducting.

This quick-start guide provides brief instructions for the most common configurations of the PuriFi™ smart air purification system. In order to use the monitoring and remote access functions, you will need to connect and “pair” your systems.

Overview

This guide will lead through the following steps:

1. **Planning Your Installation – Site Survey**
2. **Required Software and Network Connections**
3. **Connecting To and Communicating with the HUB**
4. **Discovering and Default Naming the PM Sensors and Generators From the Hub**
5. **Selecting the Configuration Using the Snap Selector App**
6. **Renaming the PM Sensors and Generators Based on the Locations**
7. **Tuning the System**
8. **Registering the System**

STEP 1: Planning Your Installation – Site Survey

Depending upon how many heating/cooling zones there are, the approach used for planning where the HUB is located might change. If there is a single zone used in the residence or office, the HUB should be located within 20-40 feet of the Generator and/or PM Sensor. A general rule would be to locate the HUB in a central location within the residence or office to provide the best possibility for the "mesh" network to form and remain stable during operation.

Avoid placing the HUB at one end of a residence or office knowing that the Generator will be at the opposite side of the installation. It is also important to know that the mesh network formed by the PuriFi™ system can "hop" through Generator or PM Sensor devices to communicate with other devices on the network. This means that devices normally just need to be within 20-40 feet of another Zigbee RF radio device, not the main HUB.

PM Sensors are normally placed at a level of 3 feet (1 meter) above ground or higher on a shelf or wall outlet within the zone of the associated (paired) Generator. Avoid areas that would have excessive smoke such as close to a kitchen stove or oven, or positioning too low to the ground, where dust particle measurements are not truly in the desired "breathing zone" for proper measurements.

Note: If the hardwired local area network (LAN) is difficult to access or forces the HUB to be in a non-optimum location, consider using a wired-to-wireless bridge as described in Appendix 3. PuriFi has utilized some of the low-cost smart "travel routers" to accomplish this if needed. Please consult with your Licensed Installer.

STEP 2: Required Software and Network Connections

Software - There are two options for software, and both provide similar user interfaces:

Option A - You can visit the Apple App Store or Google Play Store and download the Hubitat Elevation app for your mobile device.

Option B - you can use any laptop, PC, or tablet with a modern browser (Firefox or Chrome recommended) to access the online portal.

Network - The HUB requires a hardwired connection to the LAN to function properly. This hardwired setup expects to receive an IP address from a dynamic host configuration protocol (DHCP) Server. For initial setup, it will need to be able to access the internet for configuration data (pre-configured setups for PM Sensors, Generators, and Dashboards). In addition, if the mobile app or geofencing is used, internet service is required to function properly.

The HUB also creates a local radio mesh network (via Zigbee protocol) to communicate between the PuriFi devices. This is different from the LAN used in the residence or office. In the average residence or small office, the HUB should maintain connection with equipment regardless of location. If equipment will be installed more than 50 feet from the HUB, ZigBee routers/repeaters or an additional HUB may be required.

STEP 3: Connecting To and Communicating with the HUB

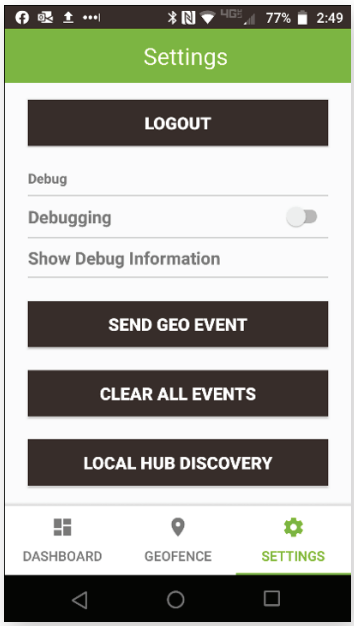
Use the provided network cable to connect the HUB to your LAN (at the router, switch, or wired-to-wireless bridge) and the provided power supply cable to connect your HUB to power. After a few minutes of powering up, the LED on the front of the HUB should turn GREEN. This indicates it is in the final stages of powering up or fully powered up and should be “discoverable”.

Once the HUB is discovered, there will be a few initial screens to navigate through (this is a one-time operation at initial startup for naming, etc.).

NOTE: Do not attempt to continue the installation until the local HUB has been discovered as described below.

Mobile App – First make sure that your mobile device is on the same LAN subnet as the HUB. This means you should be connected to the same Wi-Fi within the residence or office that is also part of the LAN physically connected to the HUB.

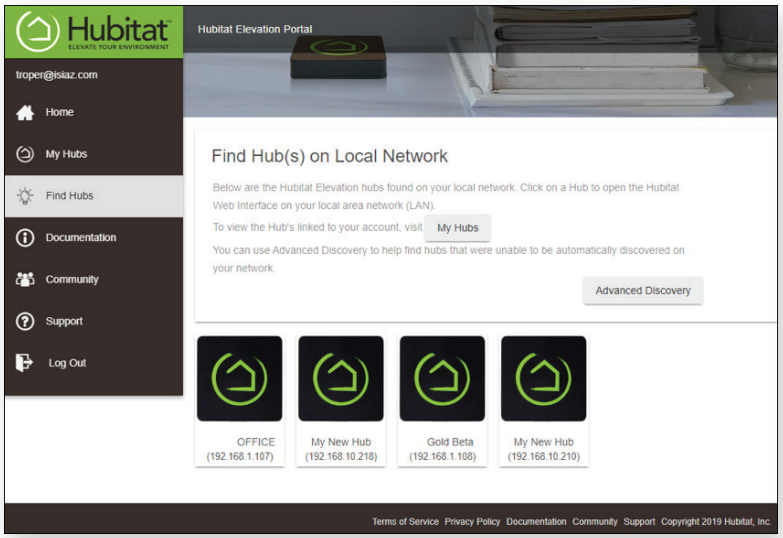
1. Open the App and go to “Settings” in the lower right corner of the main (default) screen.
2. From the Settings menu, scroll down to “Local HUB Discovery” and press that button.
3. A new screen will appear and then select “Search” – After clicking this button, the HUB that is **physically** located on your network should appear.



Mobile App

Web Browser – First make sure that your computer is on the same LAN subnet as the HUB. This means you should be connected to the same LAN that is physically connected to the HUB.

1. Open a web browser and navigate to **portal.HUBitat.com/findmyHUB**
2. Upon navigating to this web page, the browser should begin searching for HUBs located on the local LAN and should look similar to the following image (it will find as many HUBs as it can on the LAN – four are showing below, but typically it would be a single HUB).



Web Browser/ Desktop Interface

STEP 4: Discovering and Default Naming the PM Sensors and Generators from the HUB

For best results, we recommend adding the PuriFi™ devices to the HUB **before** physically installing the Generator in the HVAC Unit. Additionally, we recommend adding devices in pairs (one PM Sensor, one Generator at a time). **If installing multiple systems at once, adding devices in pairs provides the opportunity to label the Generators and PM Sensors individually by location.**

Important: Initial naming of the discovered devices should be as follows in order to properly automate the configuration:

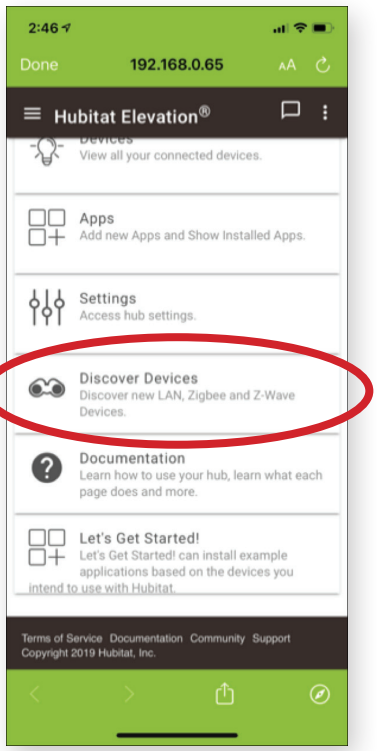
Configuration	Sensor Name	Generator Name
EXP-1 (Single system)	Sensor 1	Zone 1
EXP-2 (Dual systems)	Sensor 1 Sensor 2	Zone 1 Zone 2
EXP-3 (Three systems)	Sensor 1 Sensor 2 Sensor 3	Zone 1 Zone 2 Zone 3
EXP-4 (Four systems)	Sensor 1 Sensor 2 Sensor 3 Sensor 4	Zone 1 Zone 2 Zone 3 Zone 4
...	...	...

Important: In the above names there is a space between the Name and the Number. Improper naming will result in an invalid configuration. The following are examples to be aware of:

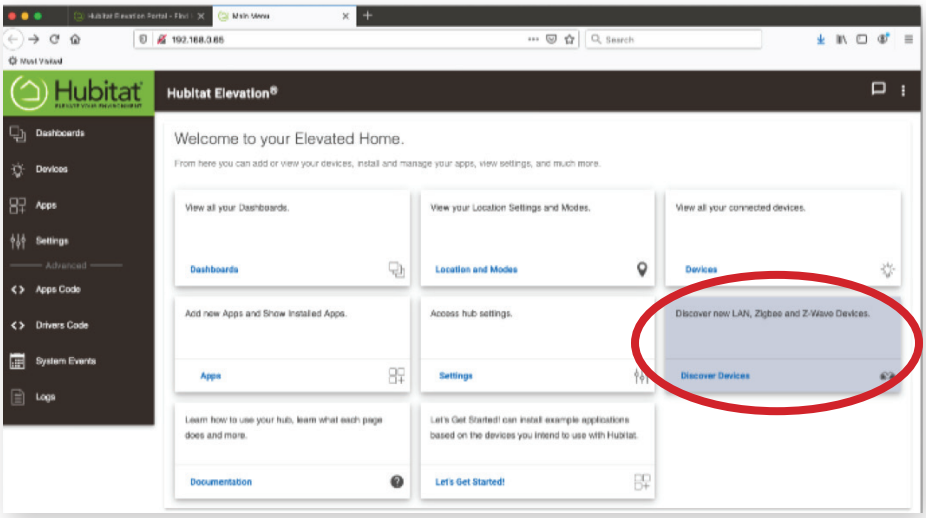
Correct	“Sensor 1” (space between the ‘r’ and the ‘1’)
Incorrect	“Sensor1” (no space)
Incorrect	“Sensor 1” (two spaces)

To begin adding equipment to the Zigbee network, power up the PuriFi™ devices you want to pair (generally one (1) Generator and one (1) PM Sensor) within a few feet of the HUB and wait for them to power up completely.

From the Hubitat Elevation Main Menu, on either the Mobile App (left) or Web Browser (right), select **Devices: Discover new LAN, Zigbee and Z-Wave Devices.**



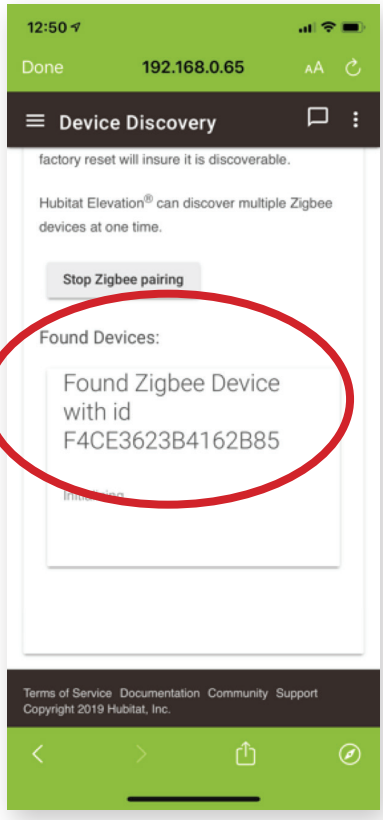
Mobile App



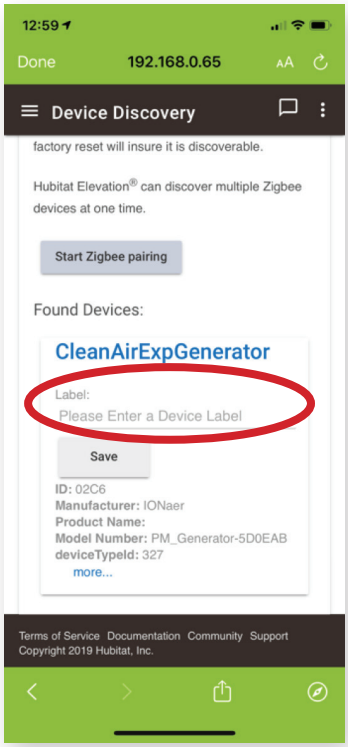
Web Browser/ Desktop Interface

On the following screen, select “Zigbee.” After making this selection, a new set of instructions will appear. Select “Start Zigbee Pairing.” Your HUB will go into pairing mode for 60 seconds.

Once a connection is made, you will momentarily see a message with the device’s radio ID (circled at right).



When the connection is established, all of the device details will be added to the screen. Generators will be labeled as **PuriFiGenerator** and PM Sensors will appear as **PuriFiSensor**. You will also see that you have an option to add a label to each device. **VERY IMPORTANT: At this point, add the Name as suggested in the previous "site survey" table matrix for the equipment.** Once this is done, press "Save" and wait for the confirmation that the device has been added to your network. We recommend using a piece of masking tape to physically label each piece of equipment after it has been added to the network.

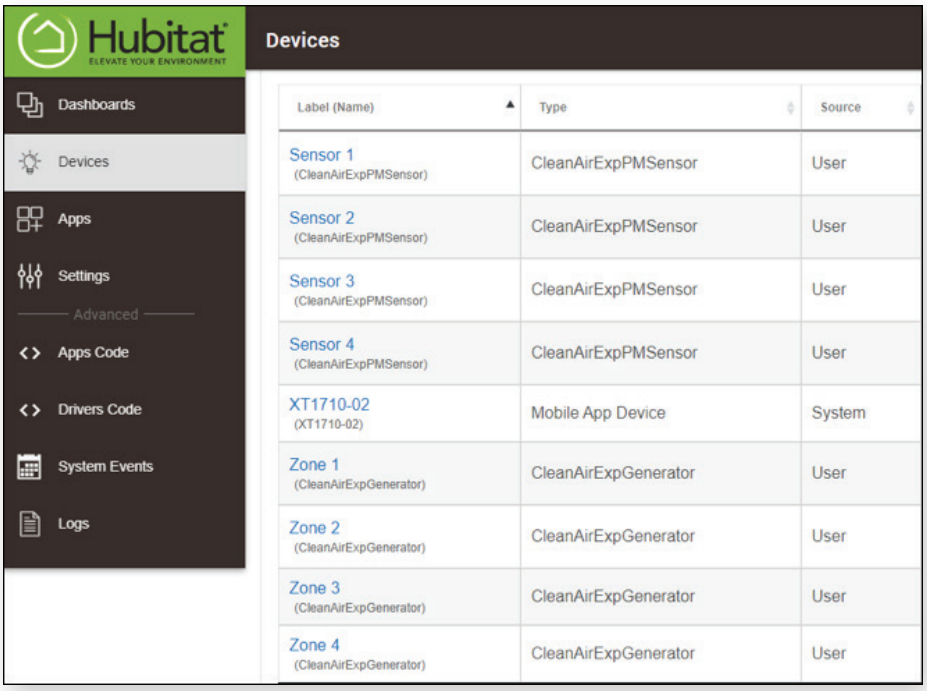


Mobile App

After your equipment has been added to the network and labeled (as shown circled at left), it is safe to power it down and set it aside. Repeat this step as many times as needed to add all equipment to the network.

As a reminder, this step of pairing the equipment should be done before installing the Generator in the HVAC system or positioning the PM Sensor in its desired location.

To check that all devices are named properly, navigate to "Devices" on either the Mobile App or the Web Page and the list should appear there. As shown in the image (at right), there are four PM Sensors and four Generators - indicating a configuration of EXP-4.



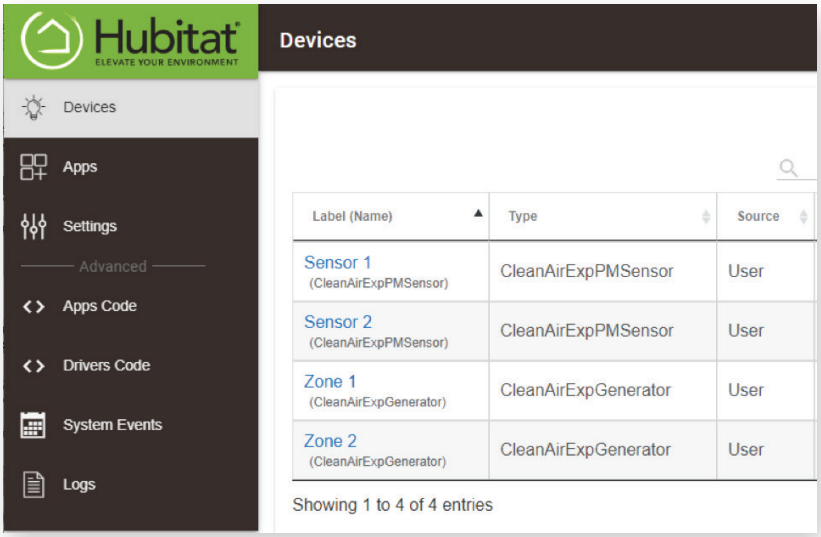
Web Browser/ Desktop Interface

STEP 5: Selecting the Configuration Using the Snap Selector App

The HUB is pre-loaded with the software you need to load default configurations into the PuriFi™ system.

Before beginning, ensure that the Devices are all present and named correctly as “Zone X” and “Sensor X”. In the following example images, the screens will show an installation of a typical two (2) Generator and two (2) PM Sensor EXP-2 system configuration.

1. Check for the correct Device count and Naming



Web Browser/ Desktop Interface

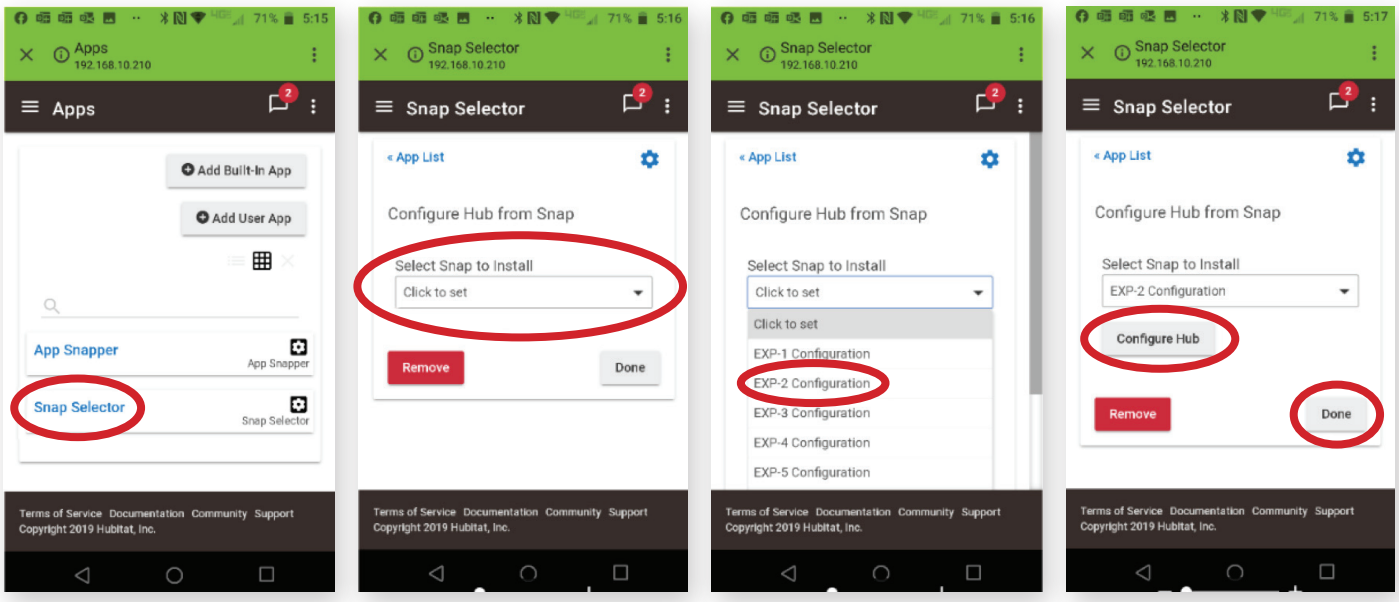
2. From the main menu, select **Apps: Snap Selector.**

3. Select the Snap to Install (in the example EXP-2 Configuration)

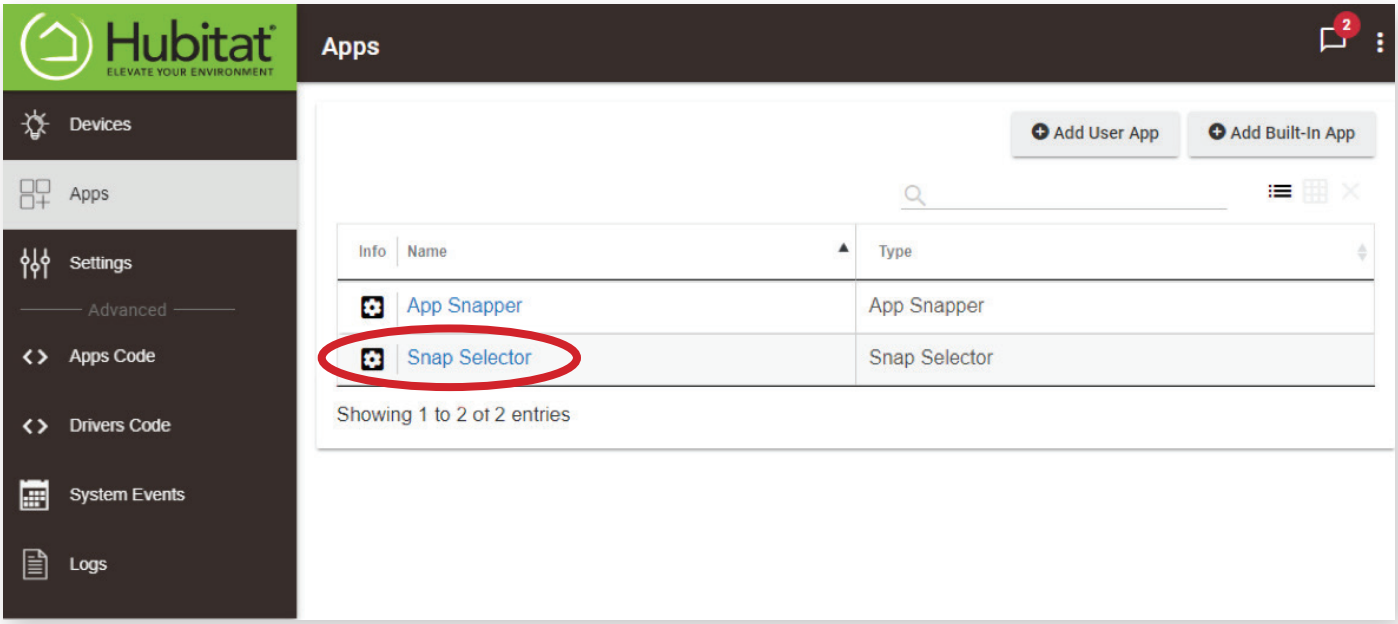
4. Click “Configure HUB” button

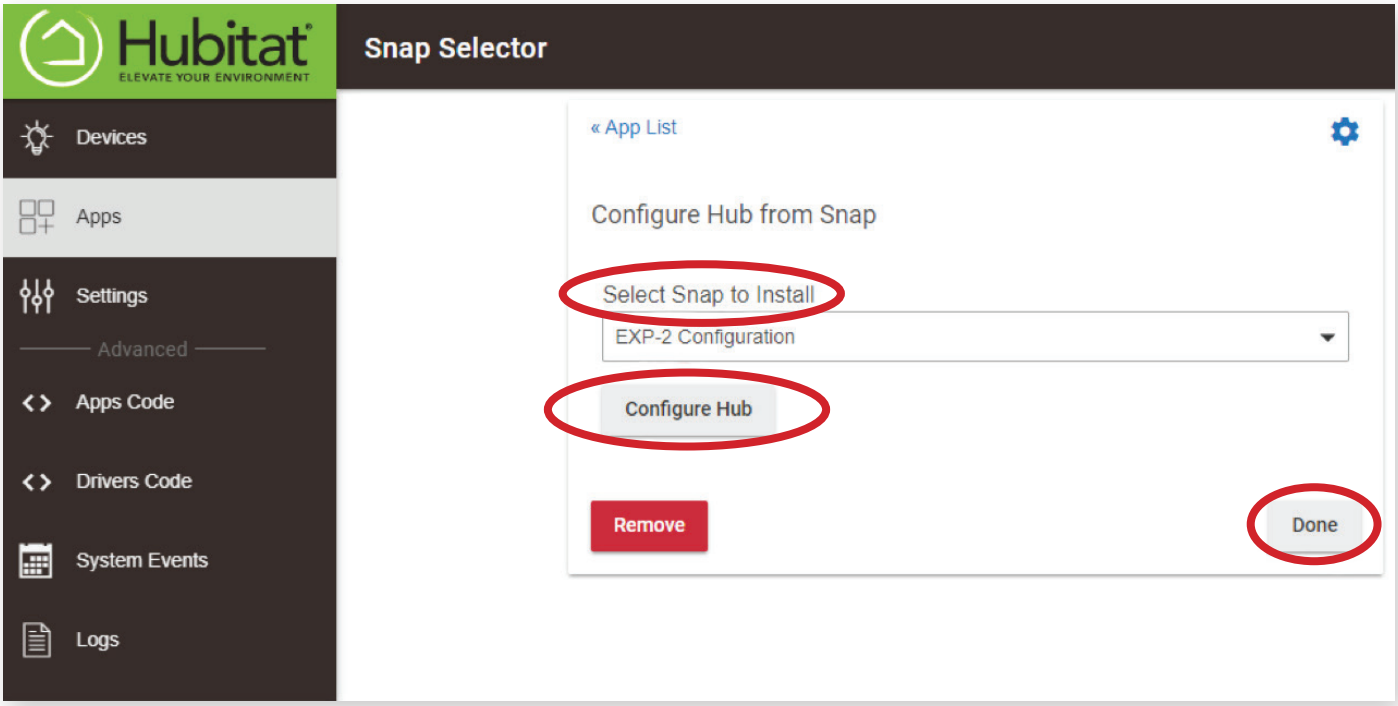
5. Click “Done” button

Mobile App Sequence



Web Browser Sequence





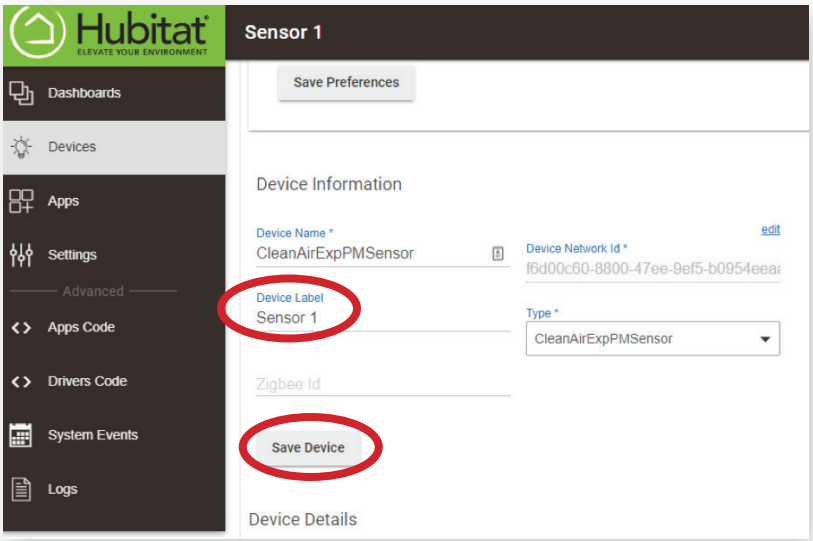
Important: Once the "DONE" button is pressed above, the system will automatically load the PuriFi™ Stat App, Dashboard, plus Add and Pair devices for the selected configuration.

STEP 6: Renaming the PM Sensors and Generators Based on the Locations

Once the configuration has been loaded, it may be desirable to rename the Zone X / Sensor X names into something that represents the area served. For example, “Kitchen” or “Office” may be more appropriate names for the Devices.

This is accomplished by:

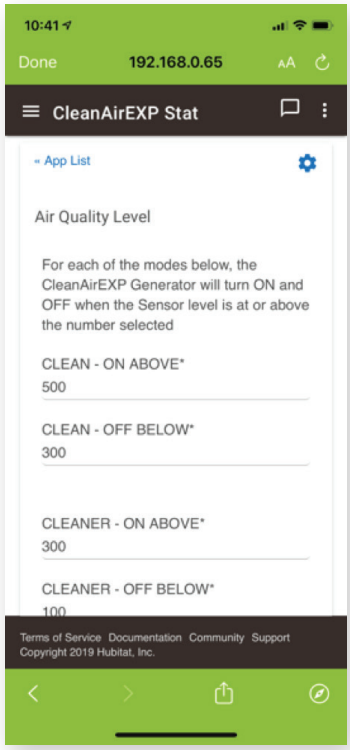
1. Clicking on the Devices menu
2. Selecting the Device to rename
3. Scrolling down to Device Information and changing the **Device Label**
4. Clicking on the Save Device button when done.



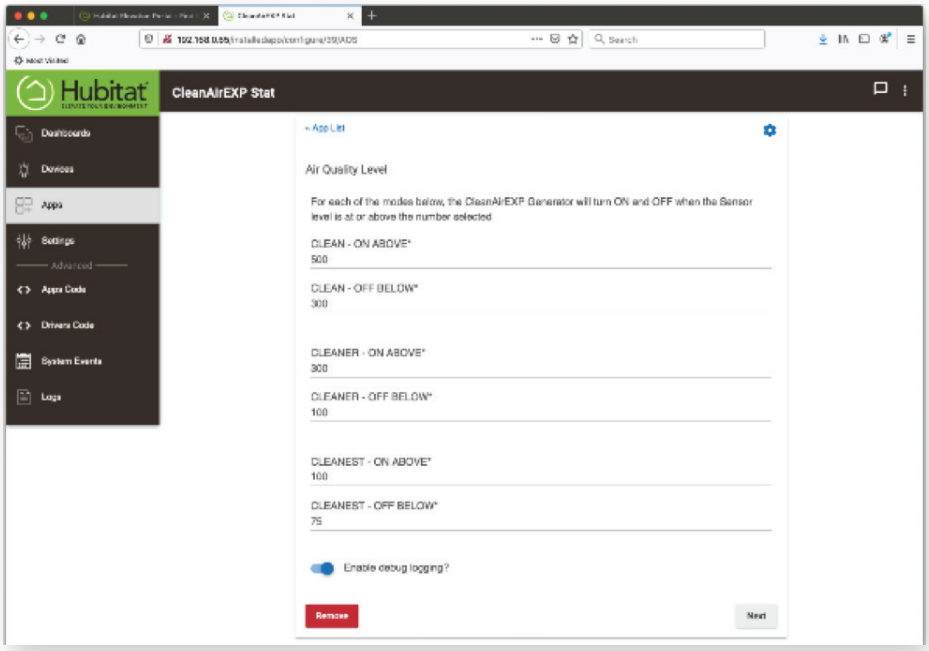
Web Browser/ Desktop Interface

STEP 7: Tuning the System

The first screen of the PuriFi™ App includes the default system run settings. **We do not recommend changing these settings.** Scroll to the bottom and hit next.



Mobile App



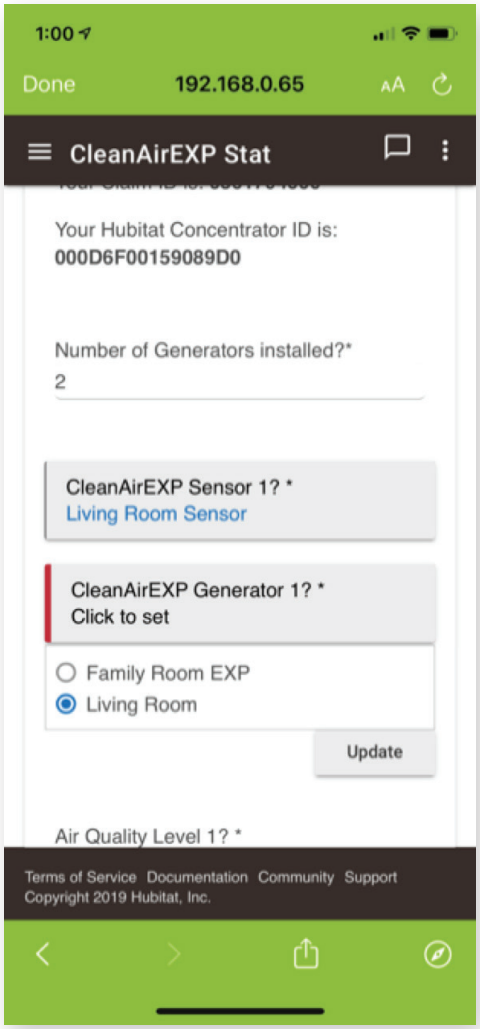
The PuriFi™ Stat App will show the paired PM Sensors and Generators.

Select whether that zone is set to:

- "Clean" (airborne particulates between 300-500 parts per cm^3),
- "Cleaner" (airborne particulates between 100-300 parts per cm^3), or
- "Cleanest" (airborne particulates between 75-100 parts per cm^3).

NOTE: Changing the setting from "Clean" to "Cleanest" will cause the Generator to run more often.

Once completed, take note of the **"Claim ID"** number at the top of the page. You will use this in the final step of registering the system.



STEP 8: Registering the System

Go to **app.purifilabs.com** and register for an account linked to the customer or end user's email. When you select "Register as a new user" you will need the **Claim ID** from the previous step to complete this registration. This online portal will allow the customer or end user to see their device history, track their air quality over time, and view the amount of time the system runs throughout the day.

PuriFiLabs

PuriFiLabs.com

602-CLEAN-AIR (602.253.2624)

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