

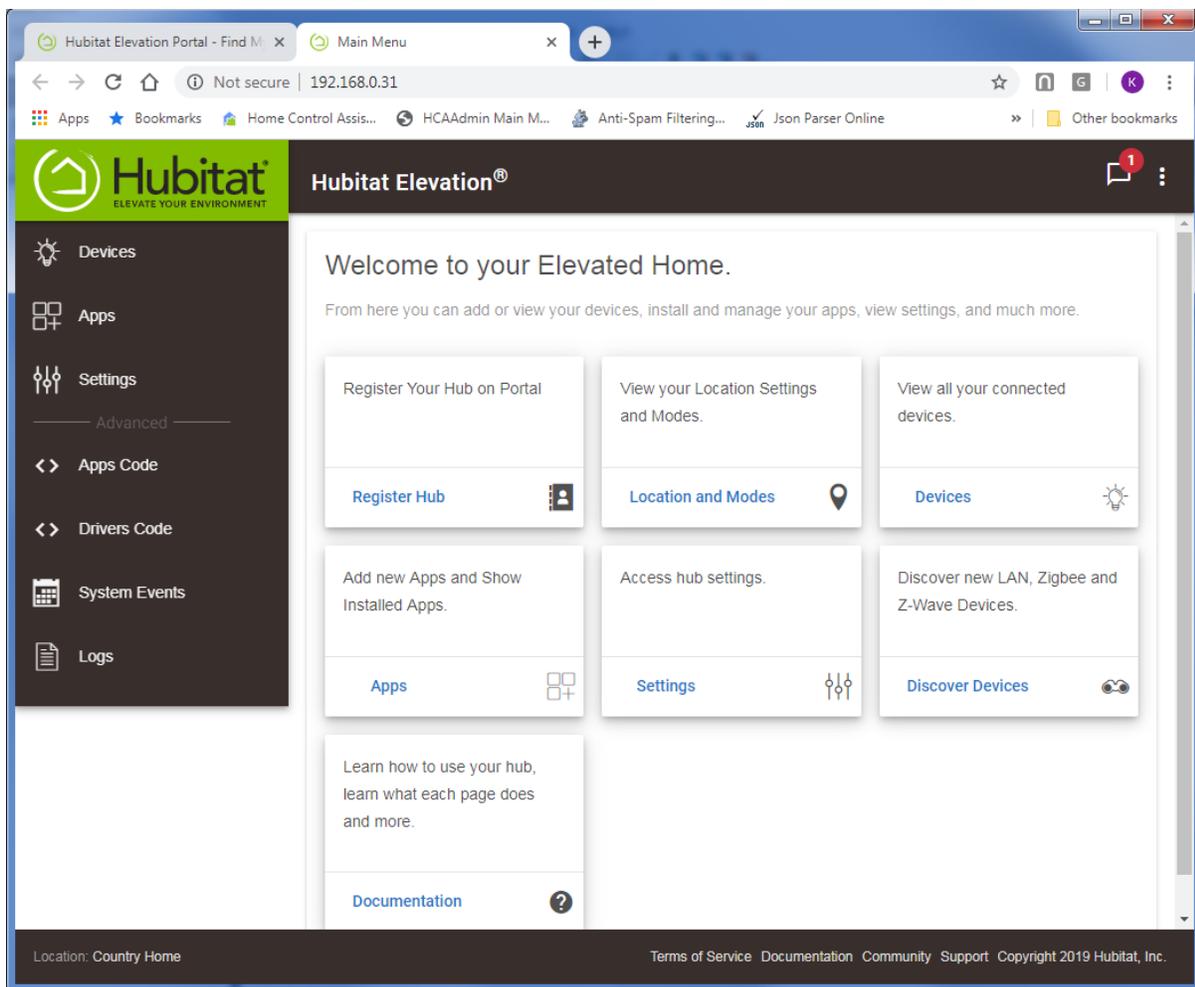
HCA 16: Hubitat Support

Hubitat is an integrator of various protocols that uses a hub that provides a protocol independent interface to devices of different types – a bit like HCA. The Hubitat app allows you to add, view, and modify devices and then to perform simple actions on them. The advantage of having HCA support Hubitat is that all the device types they support are then available to HCA.

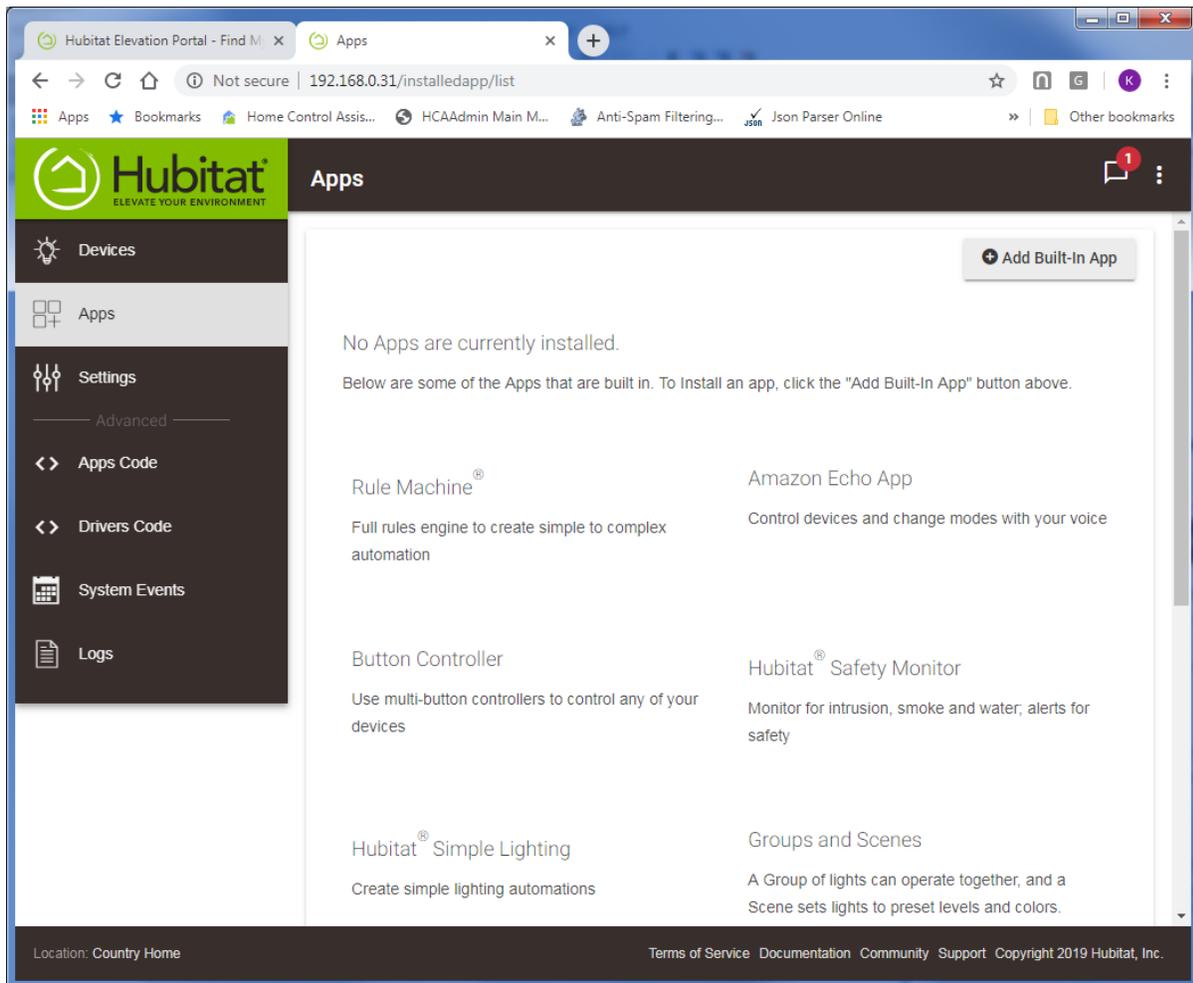
For HCA support, a user must have a Hubitat hub installed. Any devices that will be controlled by Hubitat need to be added to their system so the hub can control and receive signals from them.

NOTE: Hubitat works in two ways either local control or control via the Hubitat Cloud. The HCA implementation uses Hubitat only in local mode. This requires that you determine the IP address of the Hubitat hub and ensure it doesn't change. Investigate what facilities your network router has for maintaining the same IP address for a device over time. Some routers call this "IP Reservations" or provides some facility in the LAN setup section. Each router is different but most modern ones have this ability someplace in the settings.

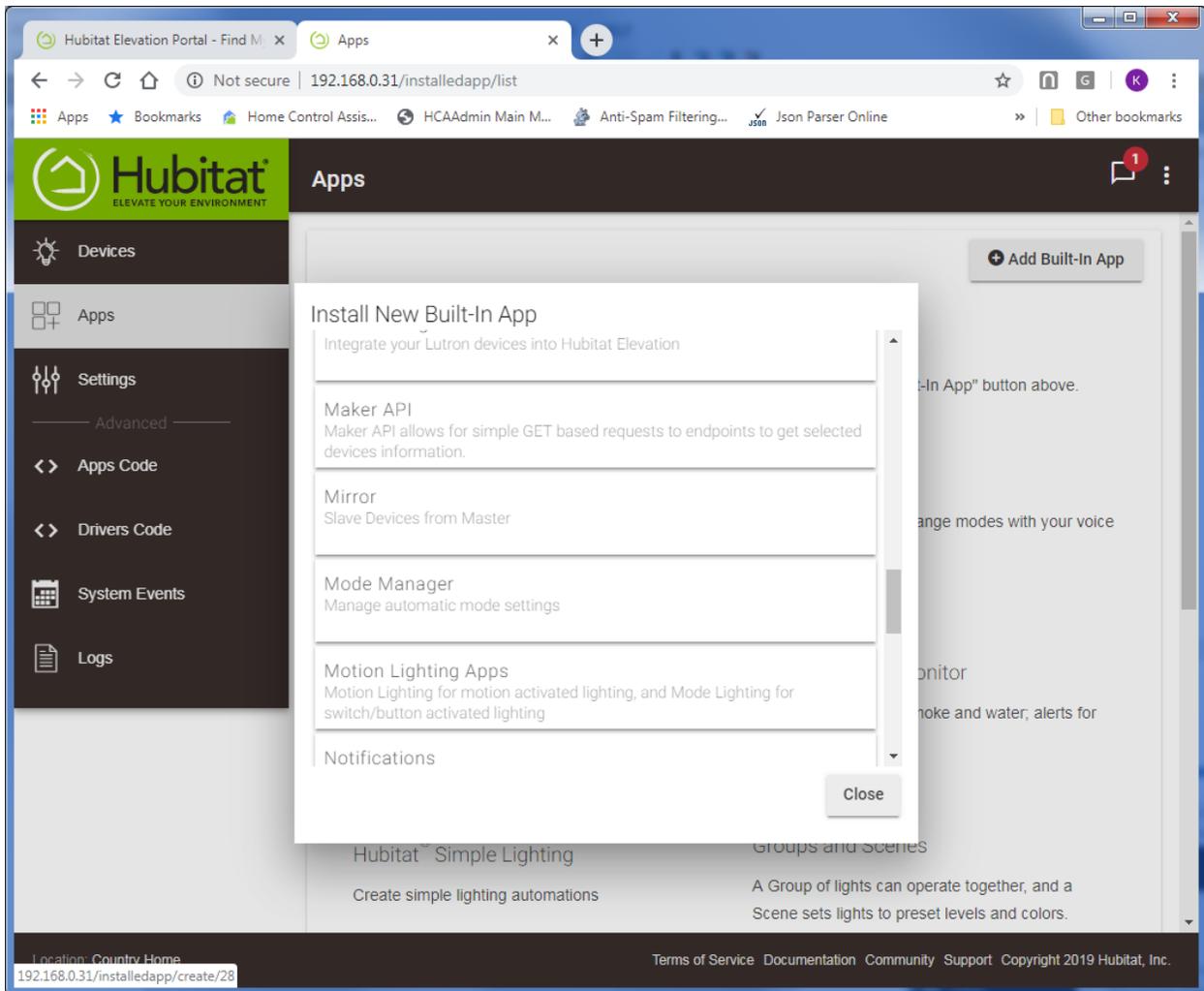
Follow the instructions in the Hubitat documentation to setup your hub. In the portal.hubitat.com website there is a "Find Hubs" button. This locates your hub IP address.



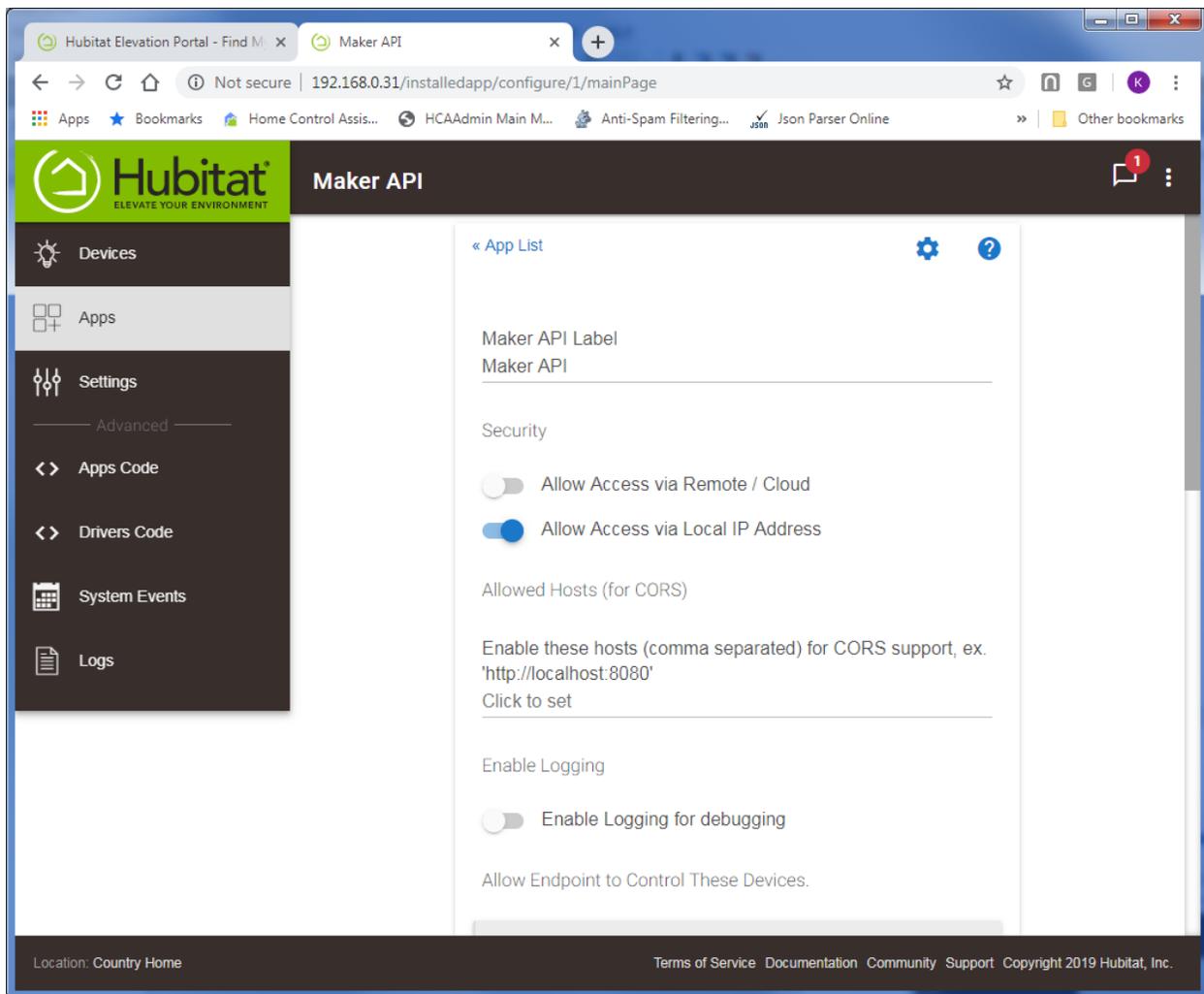
Take note of the IP address shown. Next, click on “Apps” in the left menu.



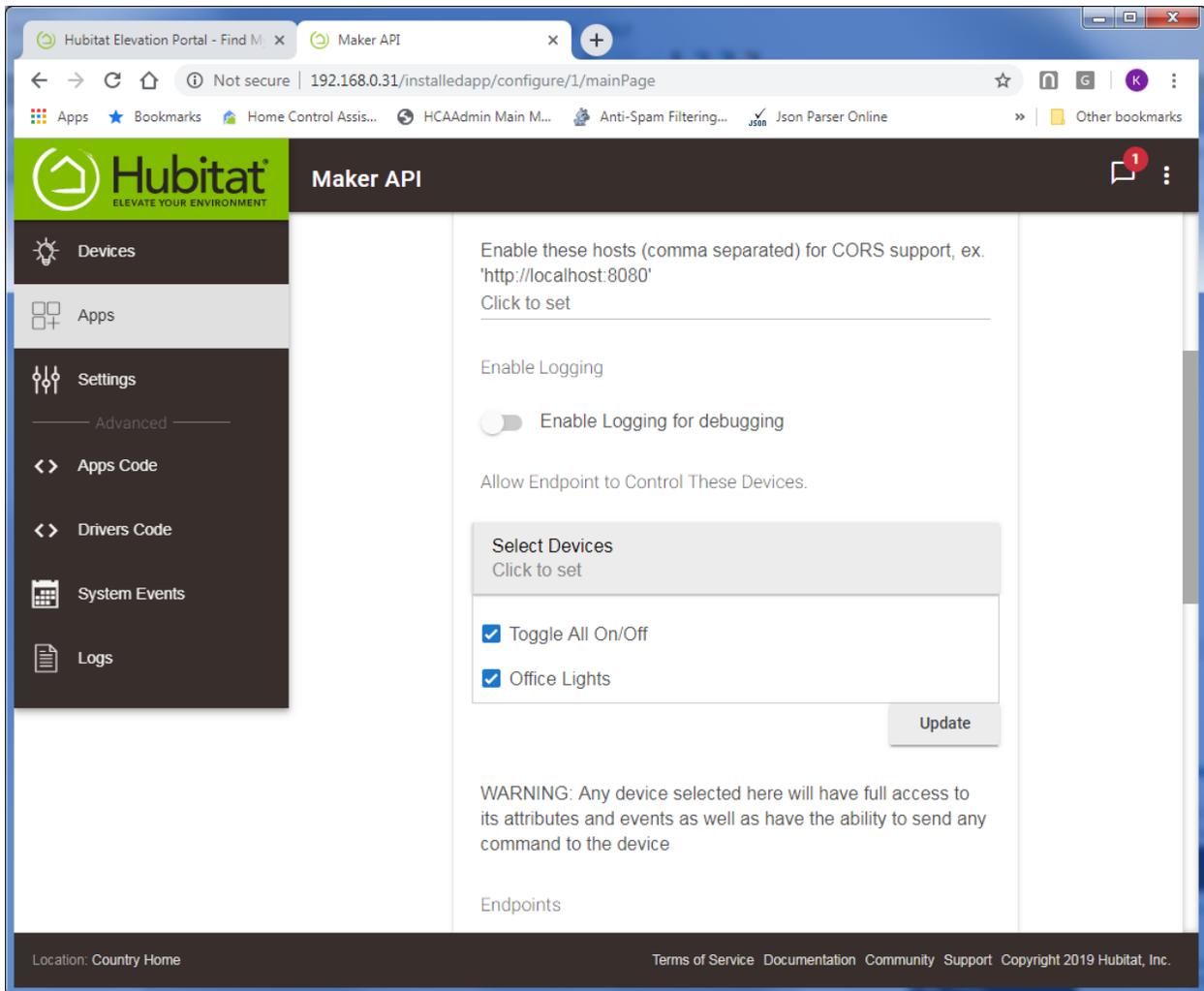
Press the “Add Built-in App” button.



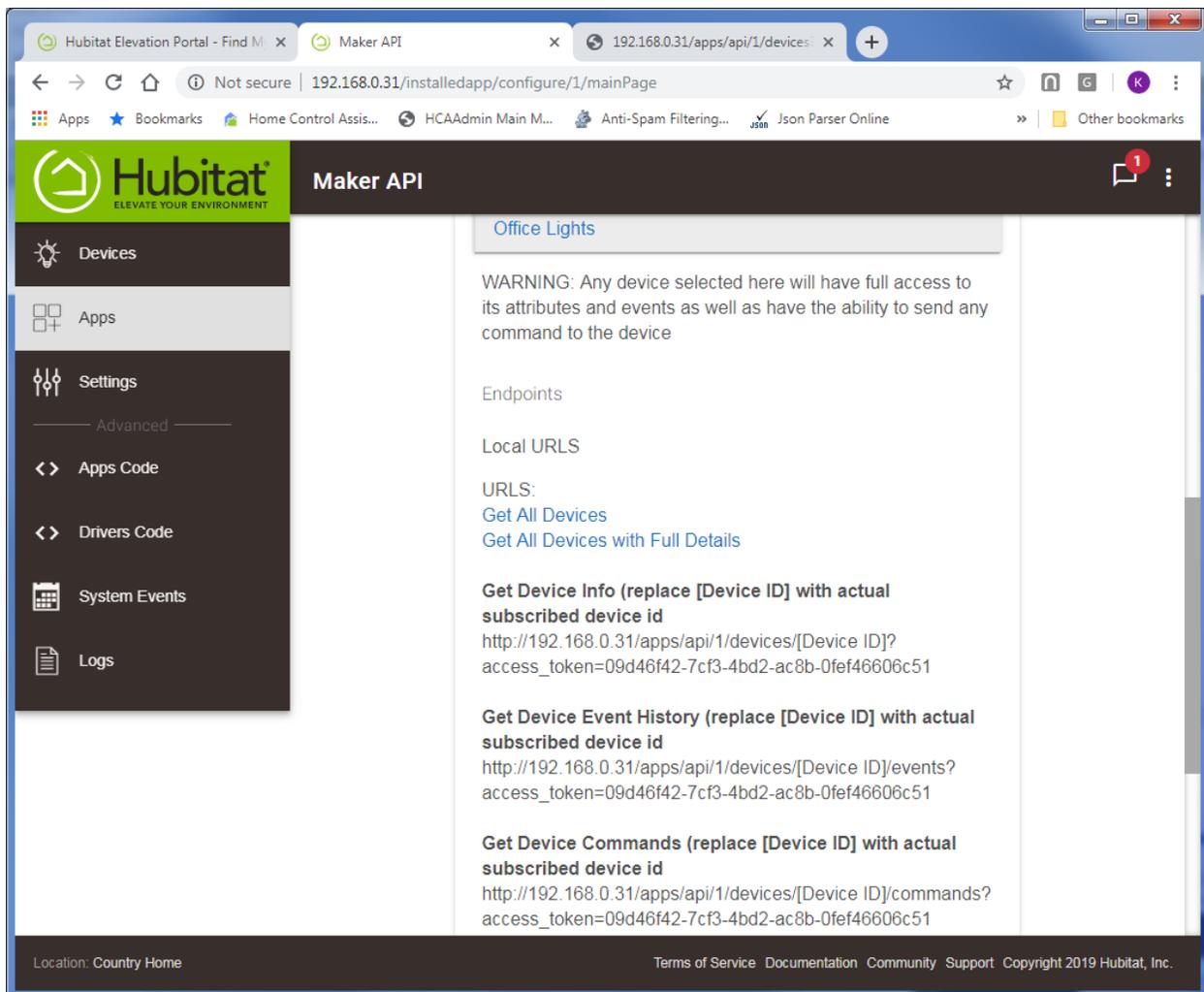
Select the "Maker API"



Slide the option “Allow Access via Local IP Address” to the right to enable it.



Scroll down and tick the checkbox next to the device you want to allow HCA to control.

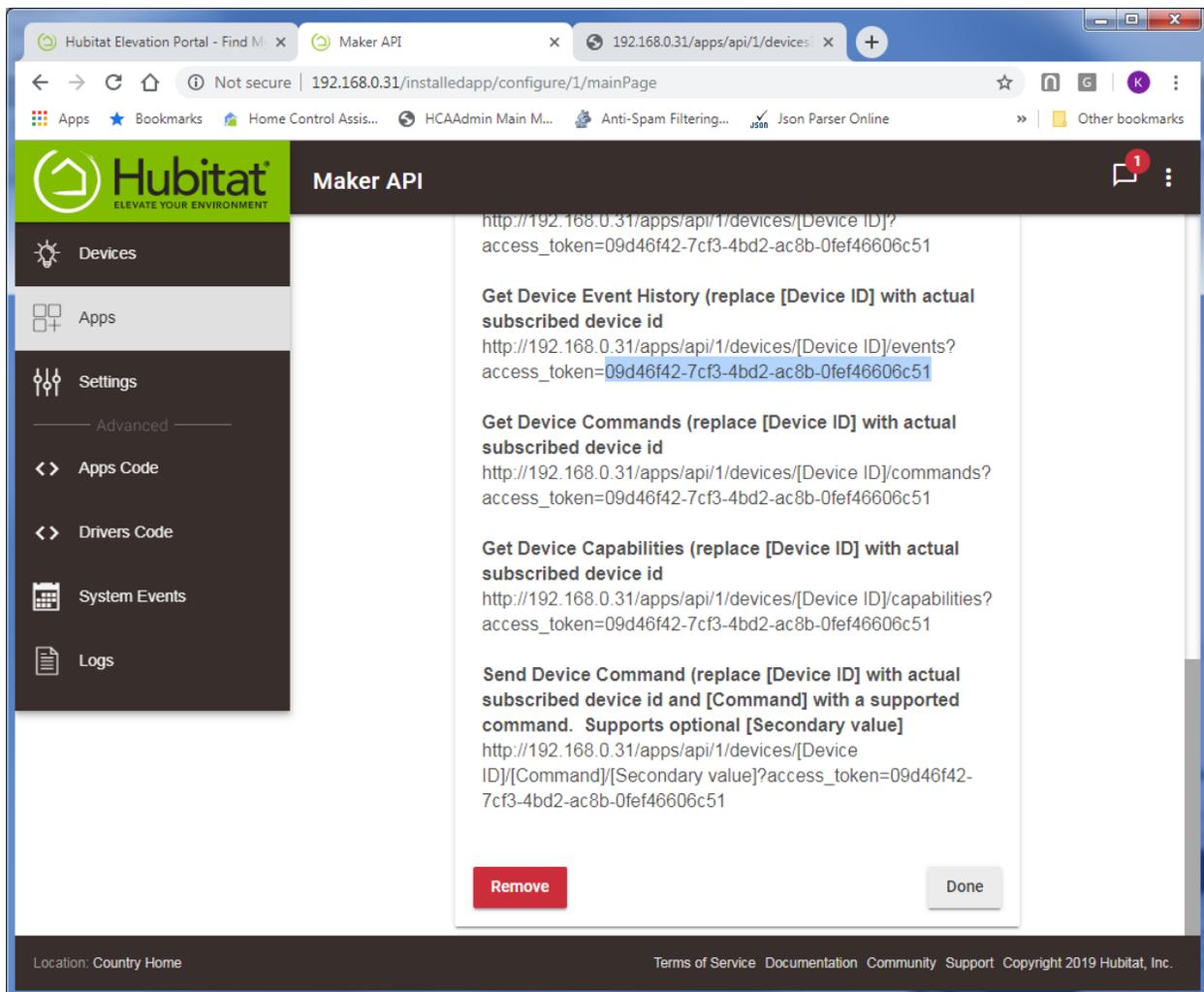


Again, scroll down and take note of two key pieces of info. Look at any of the URLs it displays and extract the number between the “/api/” and the “/devices”. In the above example that is “1” but yours may be different.

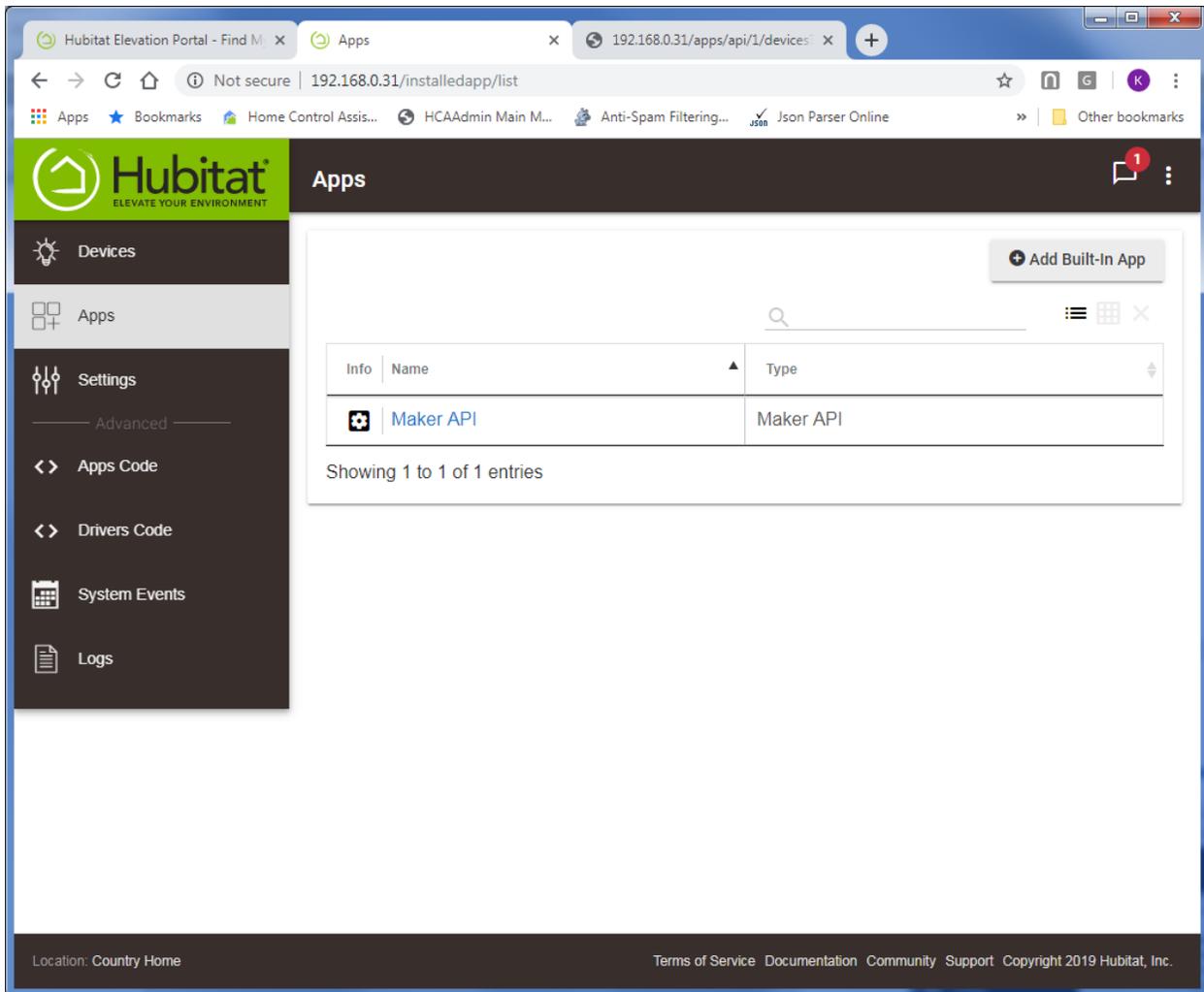
The second piece of info to extract is the at the end of the URL following the “access_token=”. In the above example, it is.

09d46f42-7cf3-4bd2-ac8b-0fef46606c51

You may want to cut and paste this info and save in a text file for now.



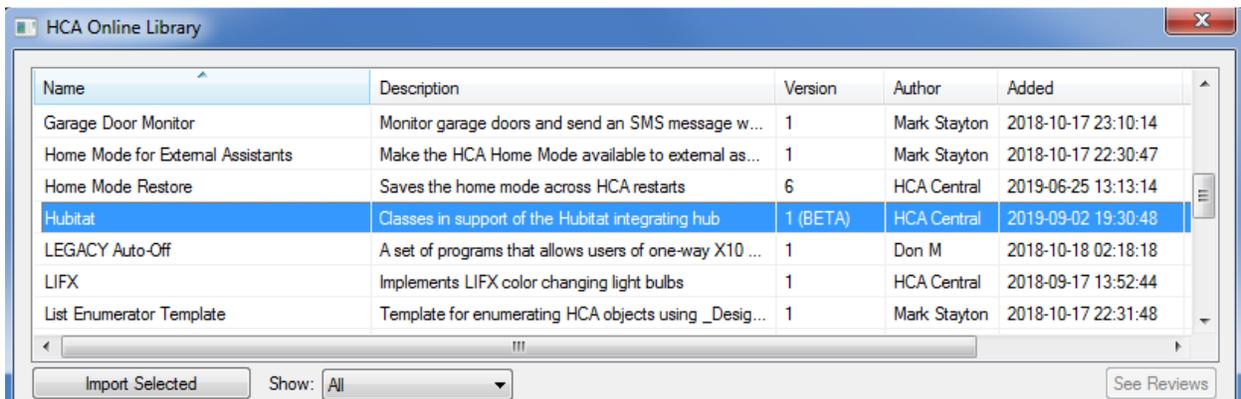
Scroll down to the bottom and press the “Done” button.



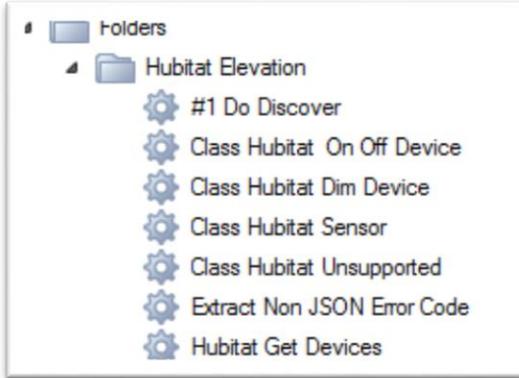
The display updates to show that the Maker API has been added.

Adding the Hubitat Package

For HCA to discover and operate all the devices controlled by Hubitat you next add to your design a package from the online library. Open the library browser (“Design” ribbon category, “Library Browser/Import” button) and locate the Hubitat package and add that to your design.



The import creates a “Hubitat” folder containing these programs.



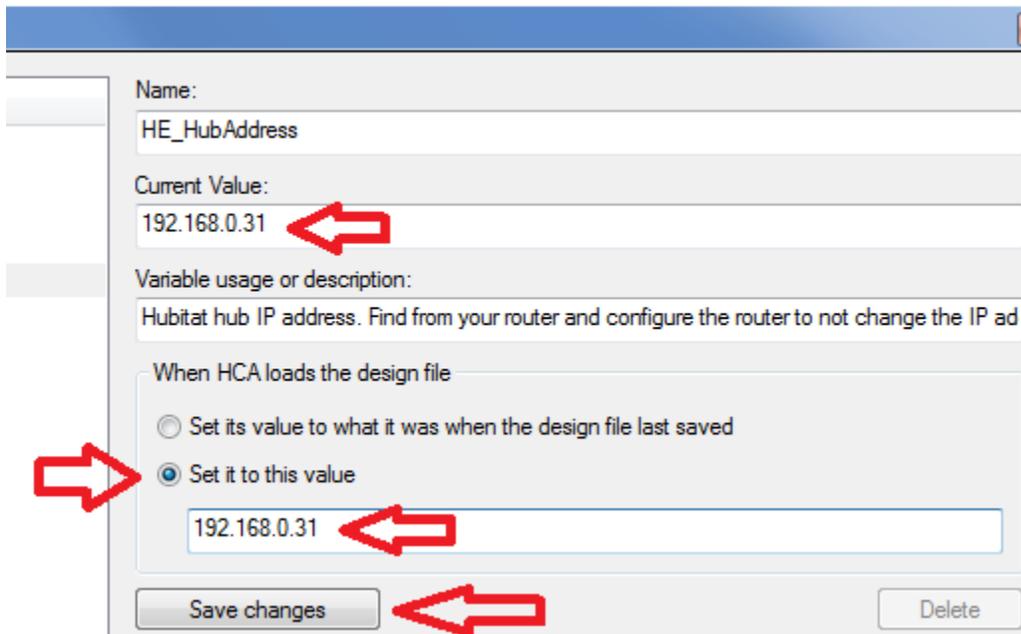
NOTE: there may be more or fewer of these programs as the package evolves.

Before doing anything else open the Global variables inventory (“Control” ribbon category, “Tools” panel, “Variables” button).

There are three variables to update:

- HE_AccessToken
- HE_APICode
- HE_HubAddress

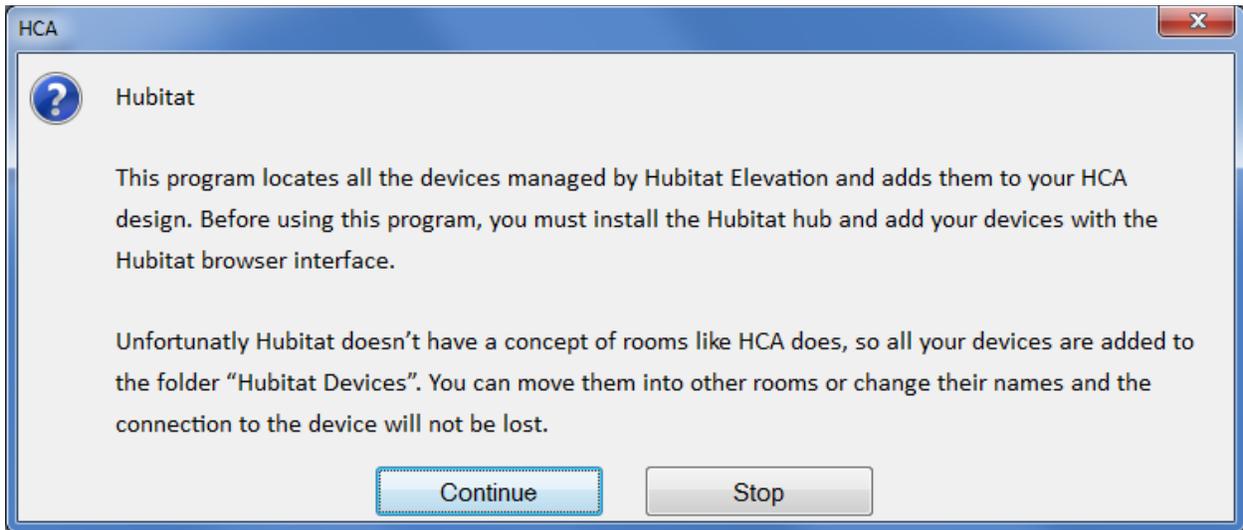
When adding the Hubitat package these variables are created but all have empty values. Start with HE_HubAddress and in the right section of the dialog change the values like this:



Enter the IP address in the “Current Value”, choose the “Set it to this value” option and then enter the same address in the edit below that option. Then press the “Save Changes” button.

Set the “HE_AccessToken” and “HE_APICode” in the same way. Both the values came from what you cut from the example URLs when enabling the “Maker API” as described above. Make sure that you enter the values correctly. When all done, close the variables inventory.

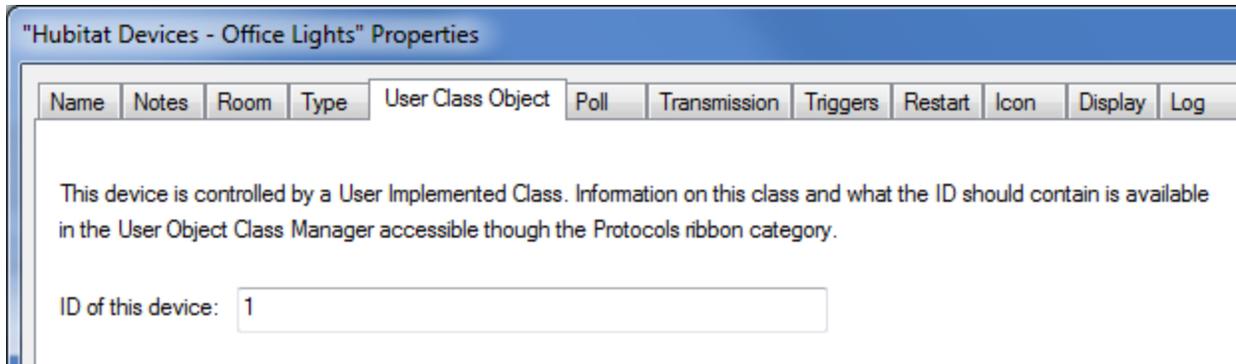
Start the program “Hubitat Elevation - #1 Do Discover” to locate your Hubitat managed devices and to add them to your HCA design.



Press Continue and in a few seconds the devices are found.



The Hubitat has no concept of rooms so all the newly discovered devices are added to a room called “Hubitat Devices”. You can move them to new rooms or change their names and the connection to the Hubitat device will not be lost. The key is what is shown on the “User Class Object” tab of the device’s properties.



That ID is the way that HCA identifies each device when talking to the Hubitat hub. You can't change the ID.

Using Hubitat devices

Once the devices are added you can control them like any other HCA device – ON, OFF, set to a percentage if dimmable, schedule it, use in programs, etc. Each action is handled by one of the class programs in the package.

For devices of the "Hubitat Sensor" class you can get their status.

Any devices assigned to the "Hubitat Unsupported" class will be non-functional as this class is a placeholder. See the next section.

NOTE: If a device goes offline, unfortunately HCA has no way of knowing this. When controlled or its state requested, the Hubitat hub returns no error.

Hubitat Device Types

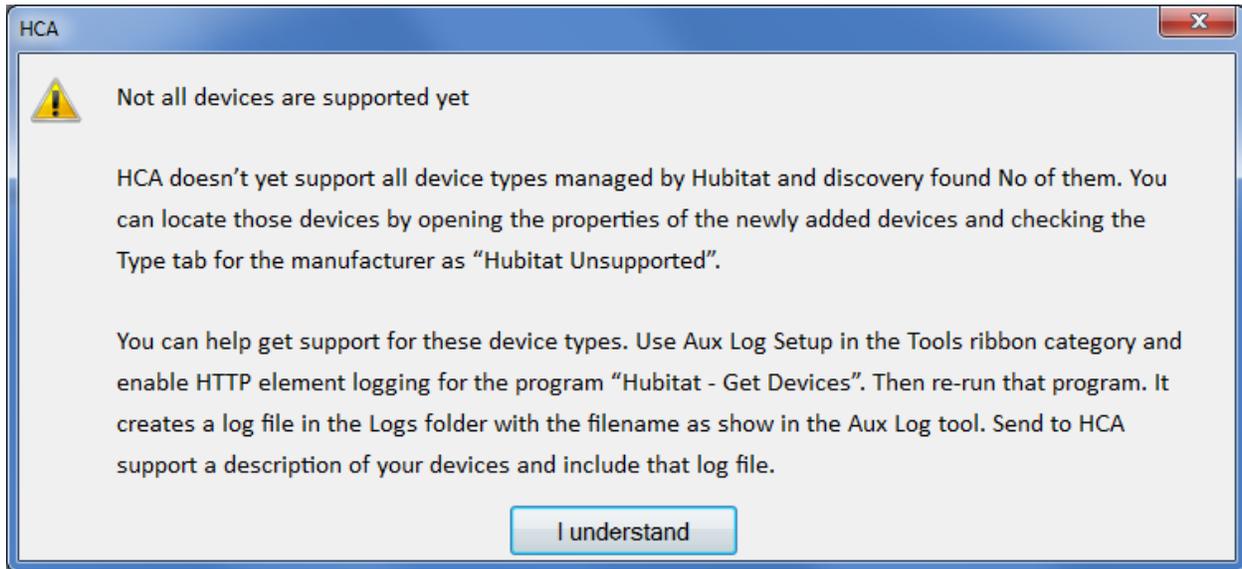
The problem (and feature) of Hubitat is that they support so much. Each device is represented by info that the server provides that shows the "components" of a device and the "capabilities" of a device. By Hubitat not providing a simple type – from some pre-determined list of available types - means is that it isn't immediately obvious what you can do with a device unless you process the capability list. The HCA program that discovers your Hubitat devices attempts to understand the capabilities of each device and assigns that device to a class that handles devices with those capabilities.

At this point, these classes were created, and each Hubitat device is assigned to one of those classes. The classes are:

- Hubitat Dim Device
- Hubitat On Off Device
- Hubitat Sensor
- Hubitat Unsupported

The first two are for dimmable and non-dimmable switches, modules, etc. The third class is for sensors that have some sort of state - contact, motion, button, or water - and the final class is for everything else and is a placeholder as it doesn't allow any control or status reading.

If during the Discover program's execution any of the devices are managed by class "Hubitat Unsupported", a second popup suggests what you should do.



Inbound Notifications

Currently there is no mechanism for HCA to receive updates from the Hubitat hub when devices change state or sensors detect something. This may be added later.

##end##