
UG11: HOME ASSISTANT

This document describes how to use Elelabs Zigbee USB Adapter (https://elelabs.com/products/elelabs_usb_adapter.html) with existing Home Automation platform called Home Assistant (Hass.io) (<https://www.home-assistant.io/>).

Elelabs Zigbee USB adapter firmware version, referenced in this guide: **6.30**

Home Assistant (Hass.io) software version, referenced in this guide: **0.102.3**

This guide focuses on:

- Connect Elelabs USB adapter to the target
- Setup Zigbee Home Automation component in Home Assistant
- Troubleshooting
- Zigbee devices Pairing and Removal
- Zigbee devices examples

This guide DOES NOT focus on Home Assistant (Hass.io) installation and initial configuration. Please follow the official instructions <https://www.home-assistant.io/hassio/installation/>.

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Introduction

Elelabs Zigbee USB adapter can be used in 2 options with Home Assistant:

With a generic Linux machine, with Home Assistant installed

Home Assistant installed and running



With a Raspberry Pi (any other single board computer) with Home Assistant installed

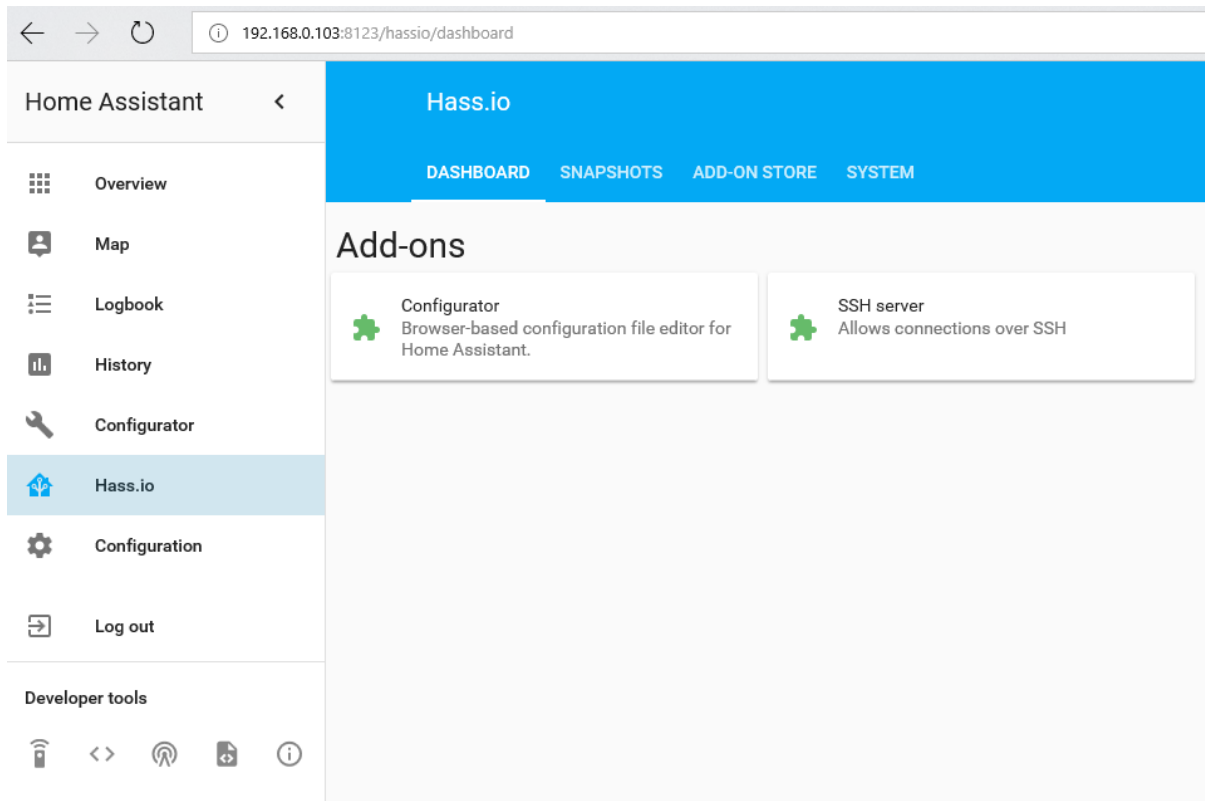
Home Assistant installed and running



Initial setup and connection

This guide does not cover Home Assistant (Hass.io) installation. We assume, that you can access Home Assistant Web Interface using your browser.

It's highly recommended to have SSH Server and Configurator addons installed, at least during the Zigbee setup phase. To install them just follow the Hass.io installation guide (<https://www.home-assistant.io/hassio/installation/>).



Once Home Assistant is ready, please SSH into the machine using any tool available to you.



Then insert the Elelabs Zigbee USB adapter into your Host machine and confirm that it's visible to Home Assistant by running the following command:

```
hassio hw info
```

This should give the following output:

```
core-ssh:~# hassio hw info
audio:
  "0":
    devices:
      - chan_id: "0"
        chan_type: digital audio playback
      - chan_id: "1"
        chan_type: digital audio playback
    name: bcm2835_alsa - bcm2835 ALSA
    type: ALSA
disk:
- /dev/mmcblk0p3
- /dev/mmcblk0p8
- /dev/mmcblk0p5
- /dev/mmcblk0p4
- /dev/mmcblk0p6
- /dev/mmcblk0p1
- /dev/mmcblk0p7
- /dev/mmcblk0
- /dev/mmcblk0p2
gpio:
- gpiochip0
- gpiochip128
input: []
serial:
- /dev/serial/by-id/usb-Silicon_Labs_CP2102N_USB_to_UART_Bridge_Controller_64c20ccc36f4e711a5436b160c17285f-if00-port0
- /dev/ttyAMA0
- /dev/ttyUSB0
```

Here you can see 2 serial ports:

- /dev/ttyAMA0 (which is the UART port of the Raspberry Pi)
- /dev/ttyUSB0 (which is the Elelabs Zigbee USB Adapter)

If any of these steps failed, please check out the Troubleshooting section of this document.

Zigbee HA Component configuration

To work with Elelabs Zigbee USB Adapter from Home Assistant we are using Zigbee Home Automation Component (<https://www.home-assistant.io/components/zha/>). It comes preinstalled into Hass.io so we only need to configure it properly to get it working.

Setup Logging (optional)

To spot any potential issues it's good practice to enable logging, at least during the setup and installation period. To do it, just add the following lines to the configuration file

/config/configuration.yaml:

logger:

```
  default: warn
```

logs:

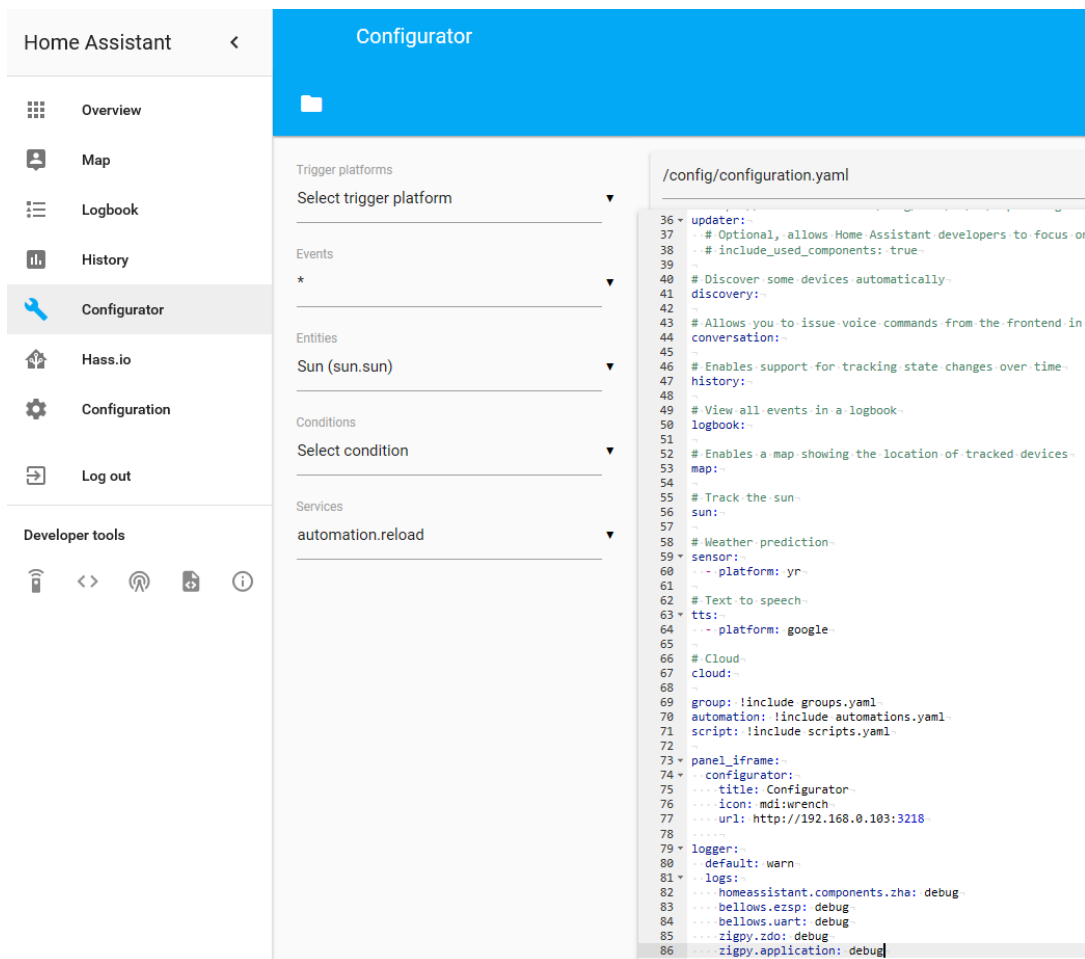
```
  homeassistant.components.zha: debug
```

```
  bellows.ezsp: debug
```

```
  bellows.uart: debug
```

```
  zigpy.zdo: debug
```

```
  zigpy.application: debug
```



```
36 updater:
37   -# Optional, allows Home Assistant developers to focus on
38   -# include_used_components: true
39   -
40   # Discover some devices automatically
41   discovery:
42   -
43   # Allows you to issue voice commands from the frontend in
44   # conversation:
45   -
46   # Enables support for tracking state changes over time
47   history:
48   -
49   # View all events in a logbook
50   logbook:
51   -
52   # Enables a map showing the location of tracked devices
53   map:
54   -
55   # Track the sun
56   sun:
57   -
58   # Weather prediction
59   sensor:
60     - platform: yr
61     -
62     # Text to speech
63     tts:
64       - platform: google
65       -
66     # Cloud
67     cloud:
68     -
69     group: !include groups.yaml
70     automation: !include automations.yaml
71     script: !include scripts.yaml
72     -
73     panel_iframe:
74     - configurator:
75       - title: Configurator
76       - icon: mdi:wrench
77       - url: http://192.168.0.103:3218
78       -
79     logger:
80     - default: warn
81     - logs:
82       - homeassistant.components.zha: debug
83       - bellows.ezsp: debug
84       - bellows.uart: debug
85       - zigpy.zdo: debug
86       - zigpy.application: debug
87     -
```

Then you can enter the following command in the SSH console to see the log output (do not forget to reload Hass.io after each modification of configuration file).

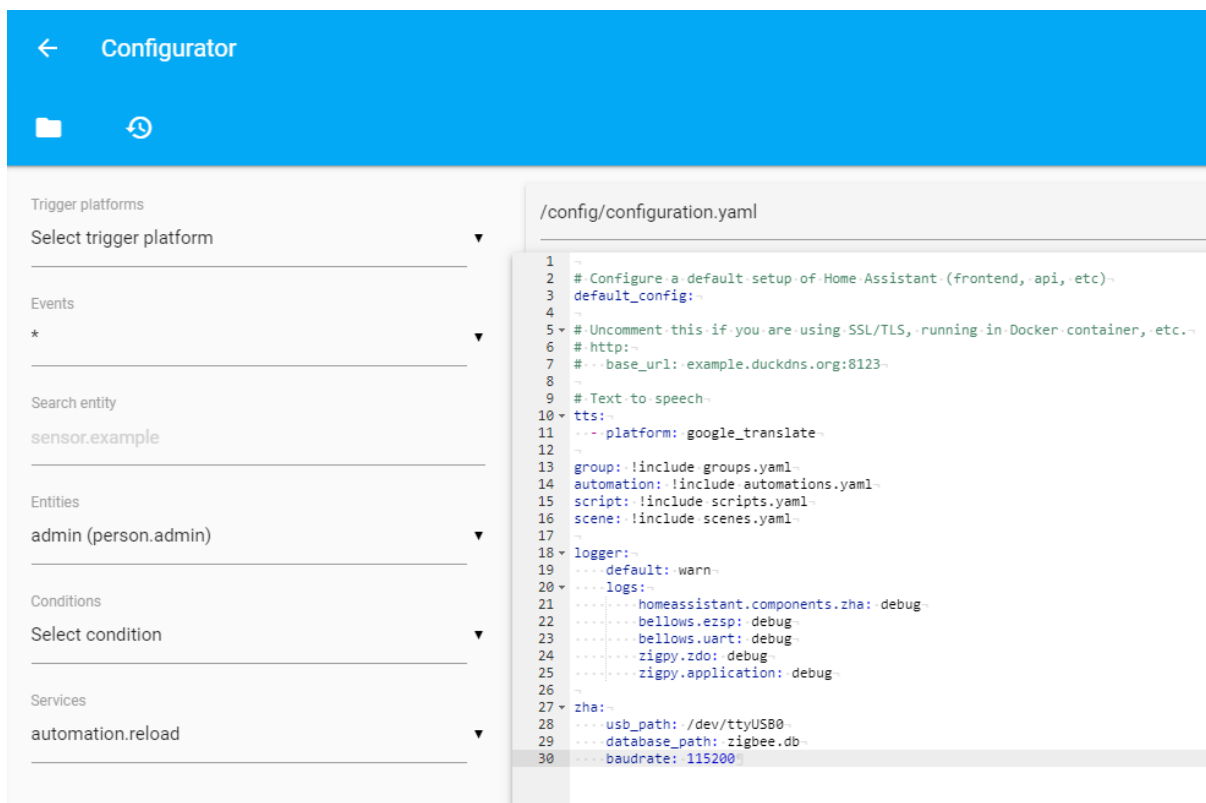
```
hassio homeassistant logs
```

Configure Zha component

To setup Zigbee Home Automation component to work properly with Elelabs Zigbee USB Adapter we need to add the following lines in the Configurator Interface to **/config/configuration.yaml**:

zha:

```
usb_path: /dev/ttyUSB0
database_path: zigbee.db
baudrate: 115200
```



Here `/dev/ttyUSB0` is from the output of `“hassio hw info”` command issued in the previous chapter. It might be different for your setup.

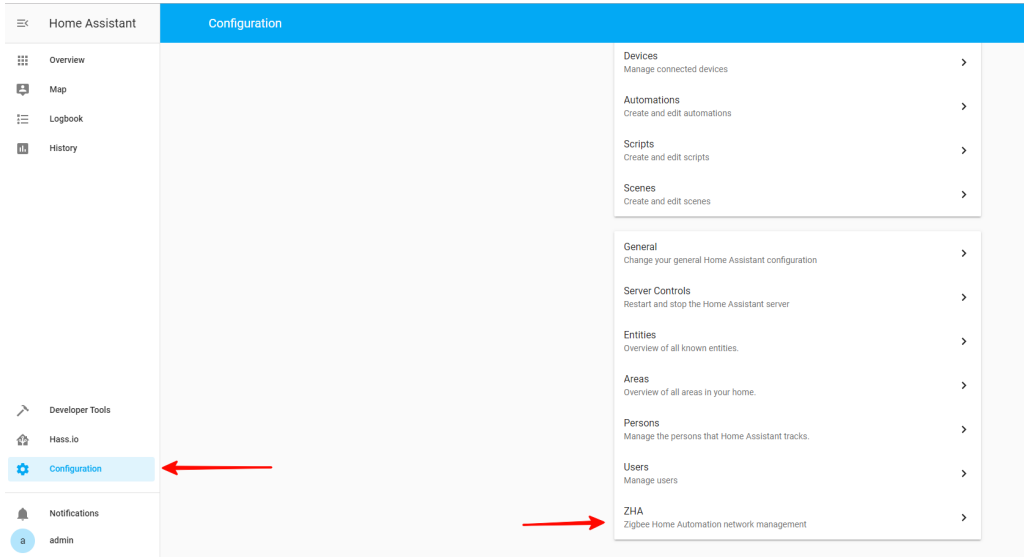
After the modification reload the Hass.io and the component would be added.

Zigbee HA Component Usage

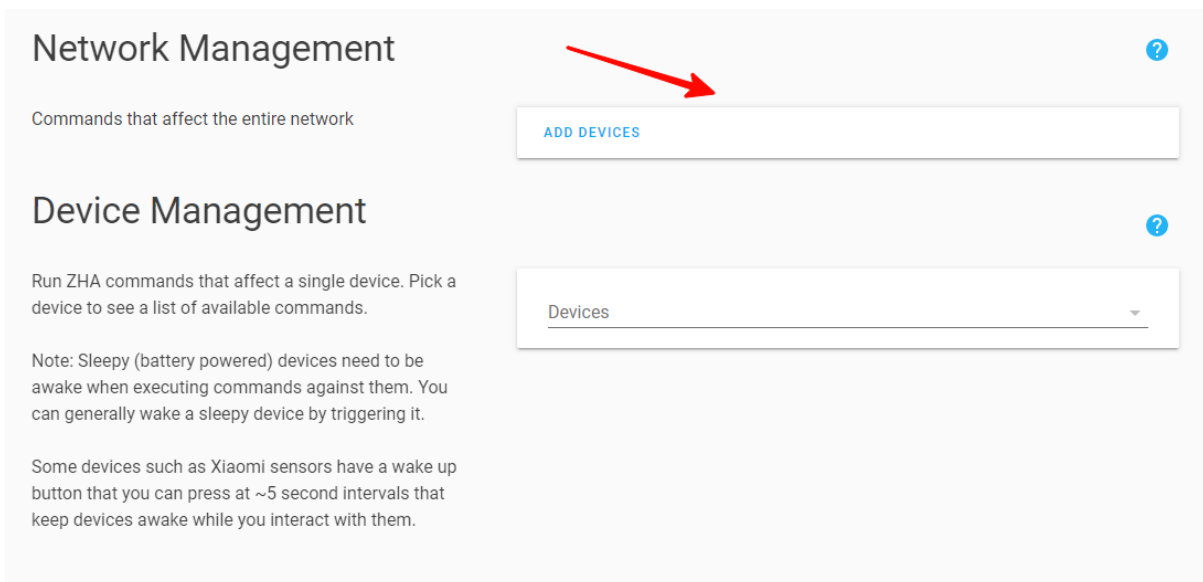
Once Zigbee Component is added and configured properly you can start to use it.

Add your devices to the Home Assistant

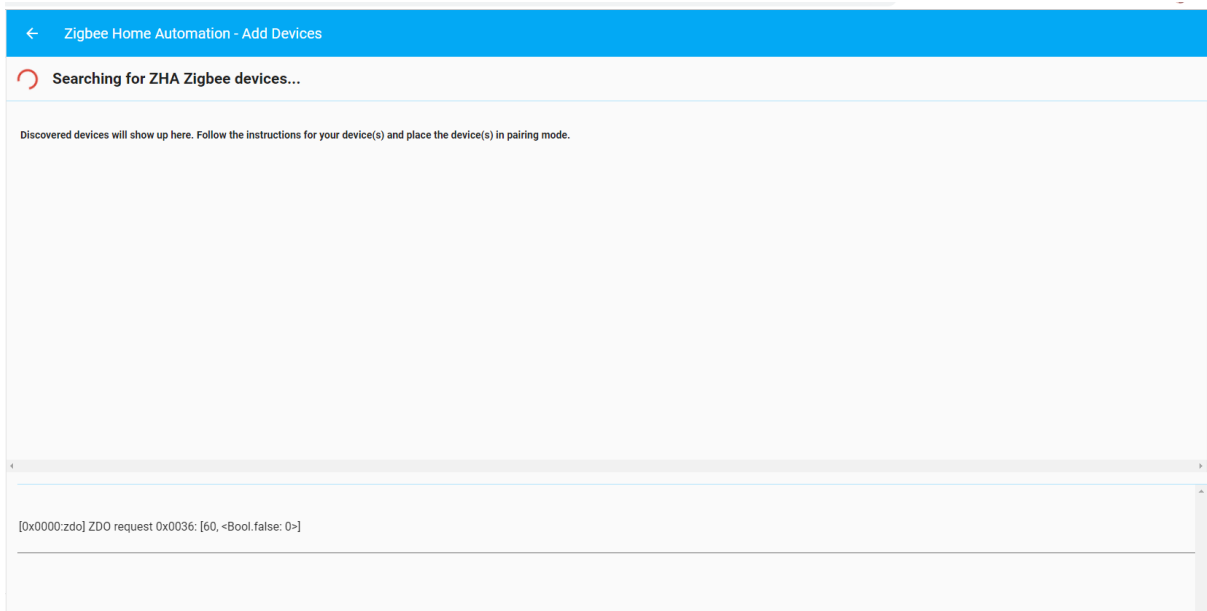
Open Configuration and go to ZHA



Start “Add Devices”

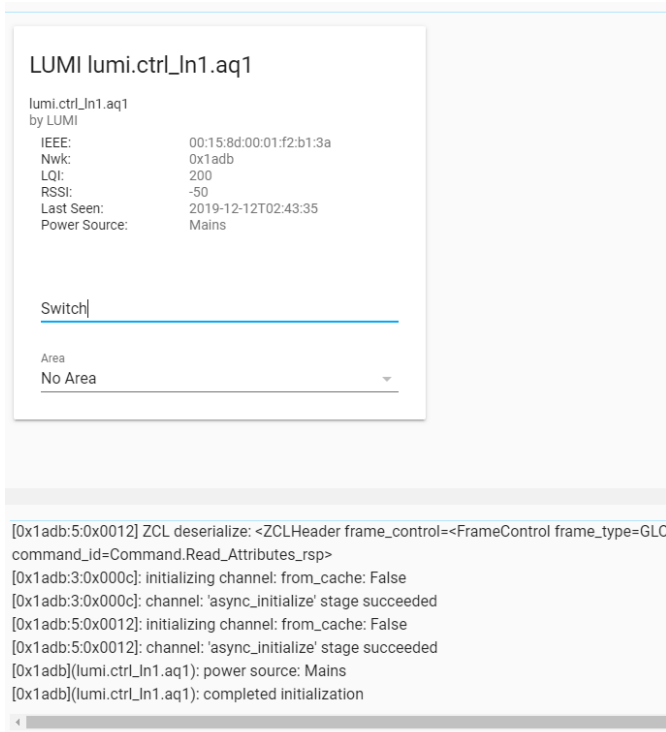


When you will call it, you have 60 seconds to add the device.



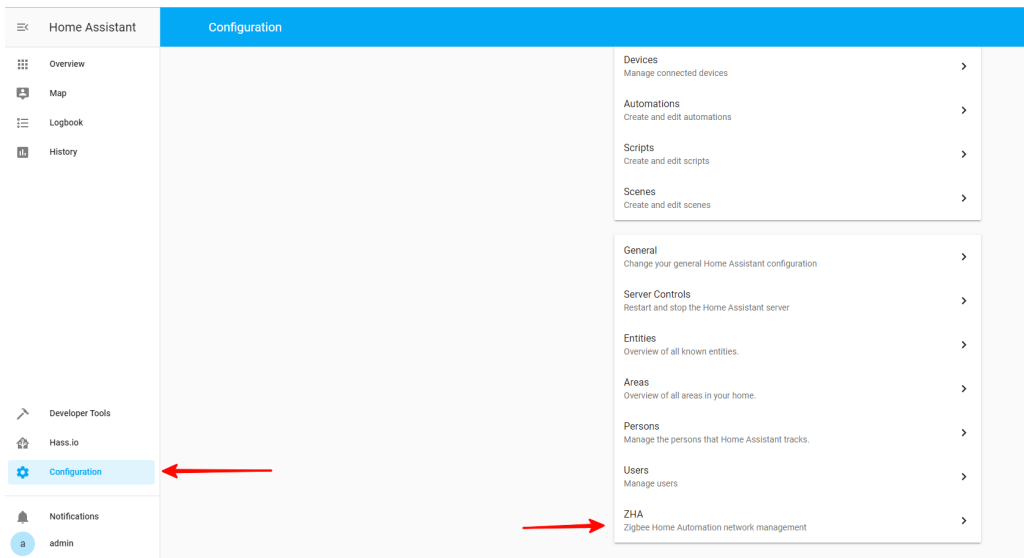
During this period, you need to follow Device manual to put it in Association mode. Sometimes you just need to give it power.

If the device is found, you will be able to see it in the logs (example device)

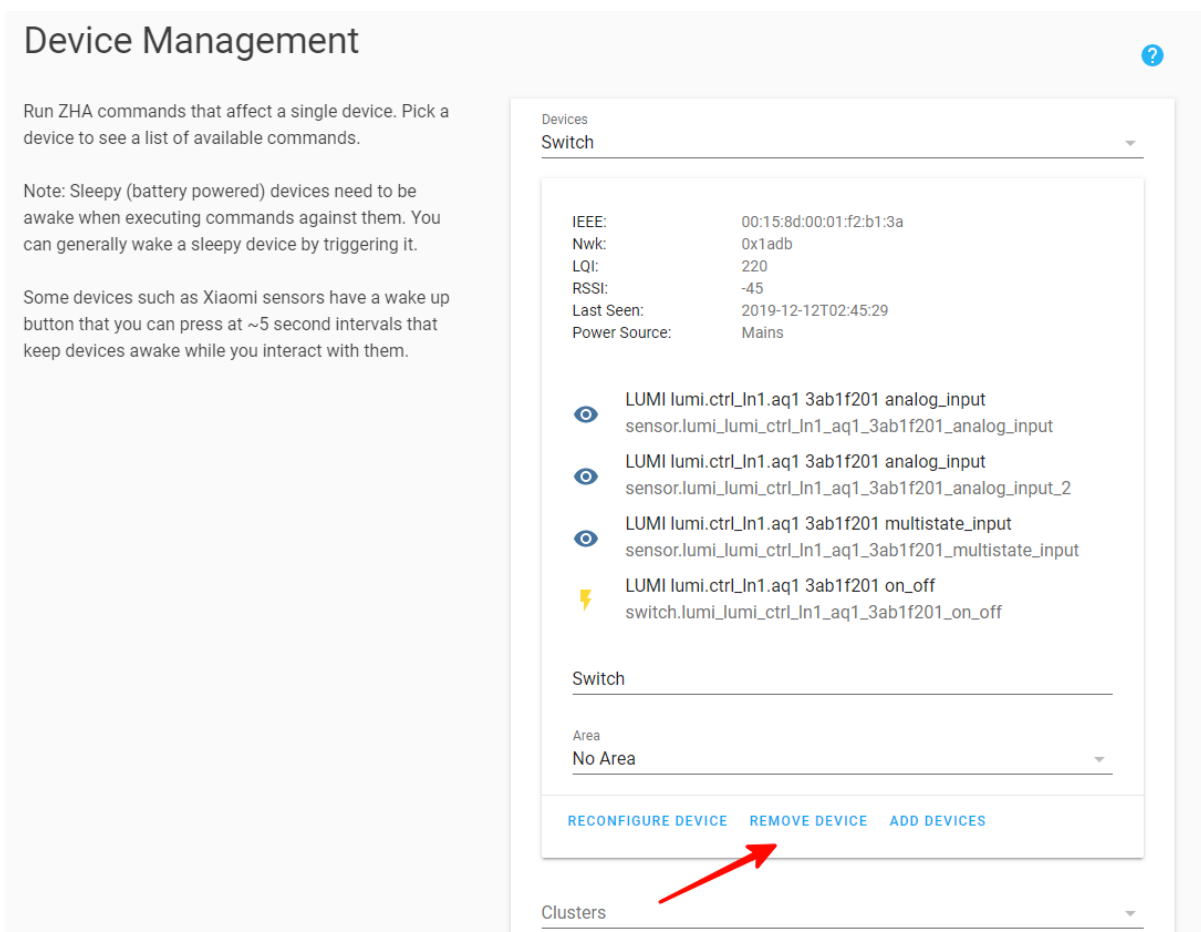


Remove your device from Home Assistant

Open Configuration and go to ZHA



Select the device, which you would like to remove



Once you call this service you can verify in the logs, that the device has left the network.

Example: Philips Hue Bulb

This example is done with Hue White Single bulb E26 but is applicable to other products as well.

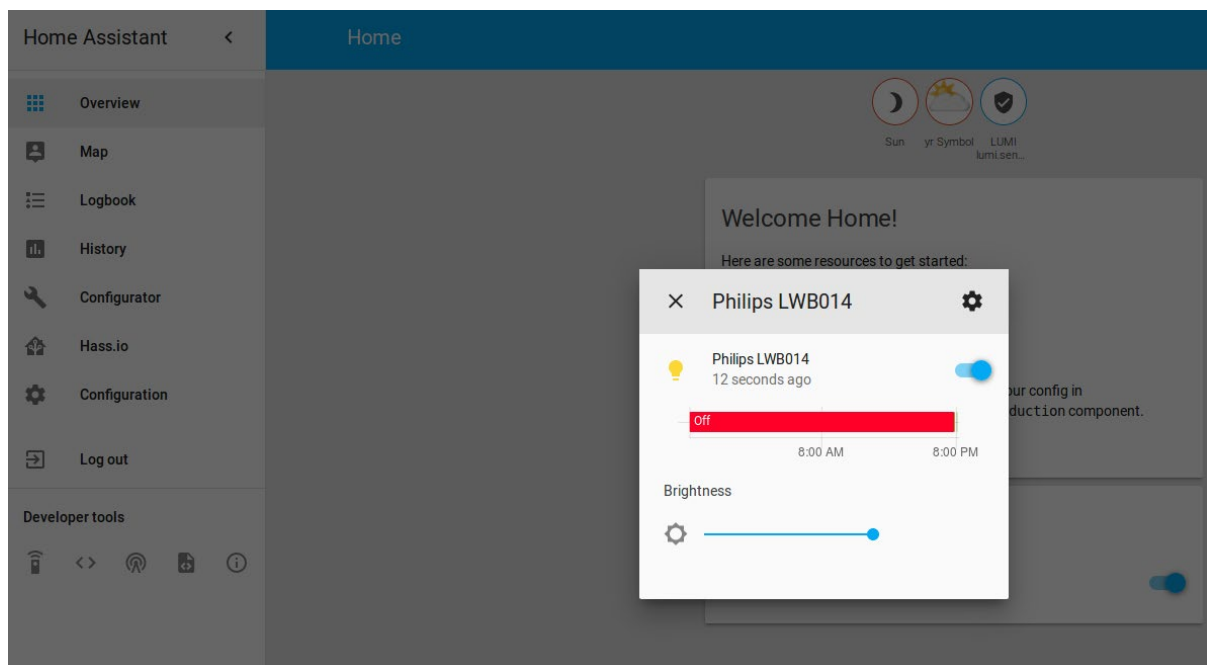


To control Philips Hue Light bulb using Home Assistant, one first needs to reset it.

Once it is reset, you can follow the regular process to Add it to the Home Assistant.

- Call permit service in the Developer Tools
- Power ON the Lightbulb
- Confirm it's added to the Home Assistant

Now you can control it directly or use in the scenarios.



Example: Xiaomi Smoke Sensor

This example is done with Xiaomi Mijia Honeywell Fire Alarm Detector but is applicable to other Xiaomi Zigbee products.

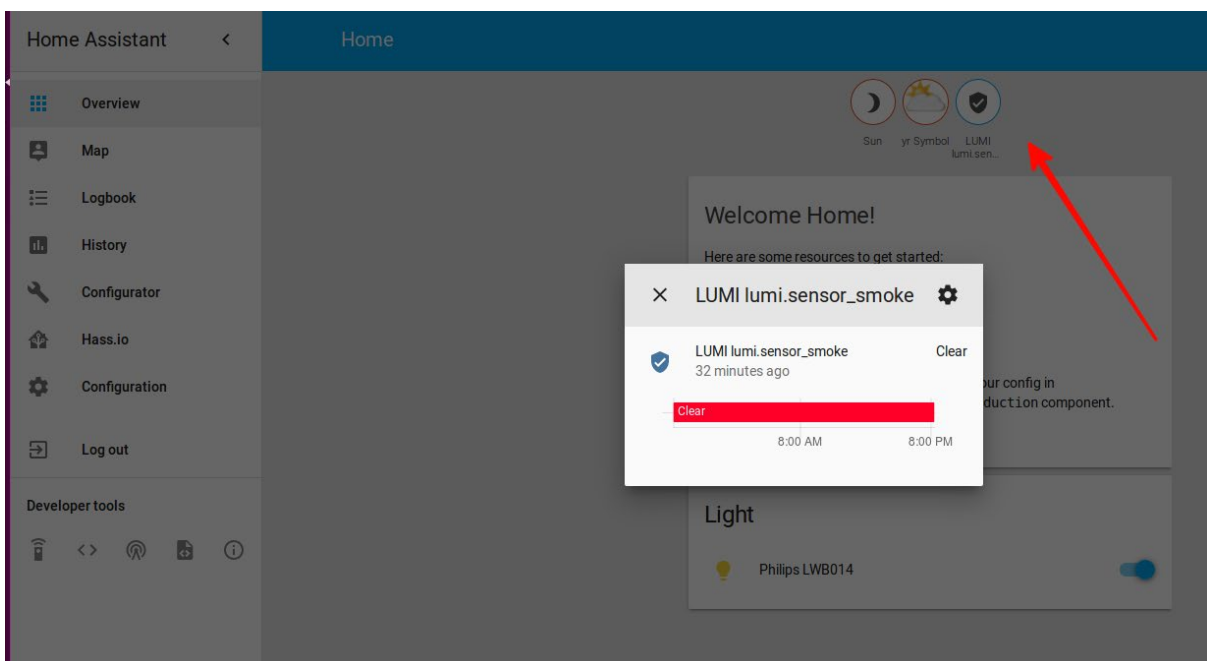


To use it in Home Assistant:

- Call permit service in the Developer Tools
- Press the button on the sensor promptly within 1second
- Confirm it's added to the Home Assistant

Once included, do the test Alarm. To do it – hold the button on the sensor until it starts alarming and then release it.

The sensor icon should appear in Home Assistant:



Troubleshooting

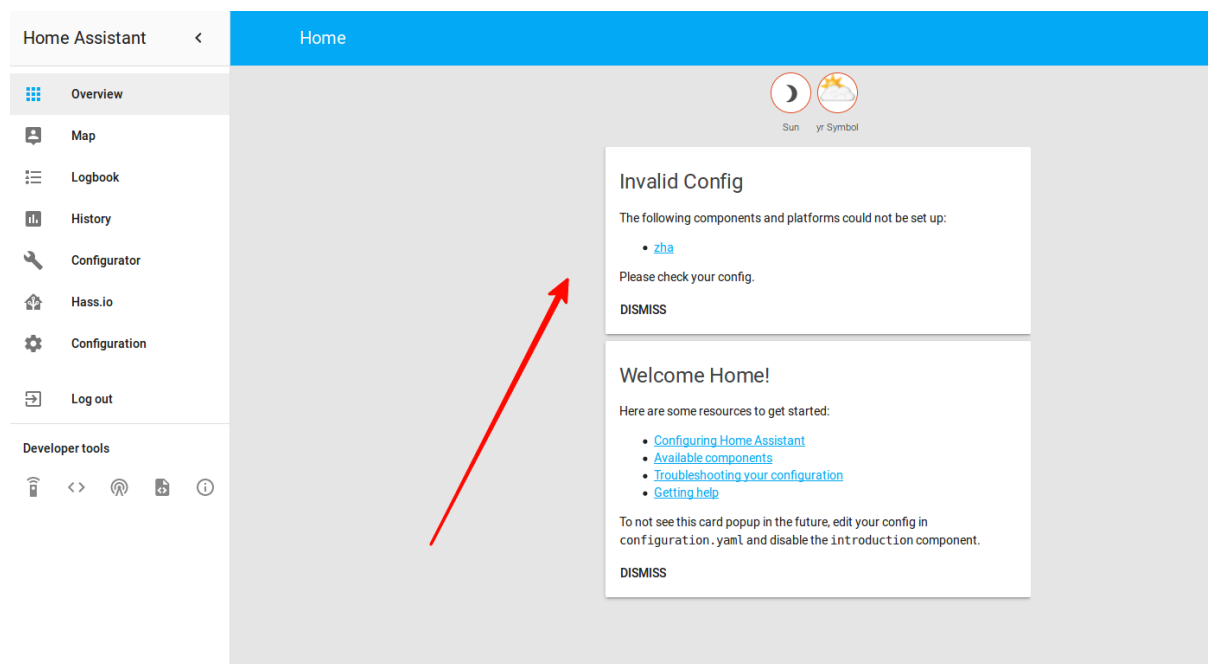
If your issue is not described here or you need help resolving it, please contact support at info@elelabs.com.

Elelabs Zigbee USB Adapter is not recognised

If there is no proper output of `hassio hw info` command and you can't spot the device, please try it first on your PC/laptop. If it is not recognised as well – the device is faulty and must be replaced.

Home Assistant Zha component couldn't be set up

If you have modified the `configuration.yaml` file and found issues after you have restarted the Hass.io, like:



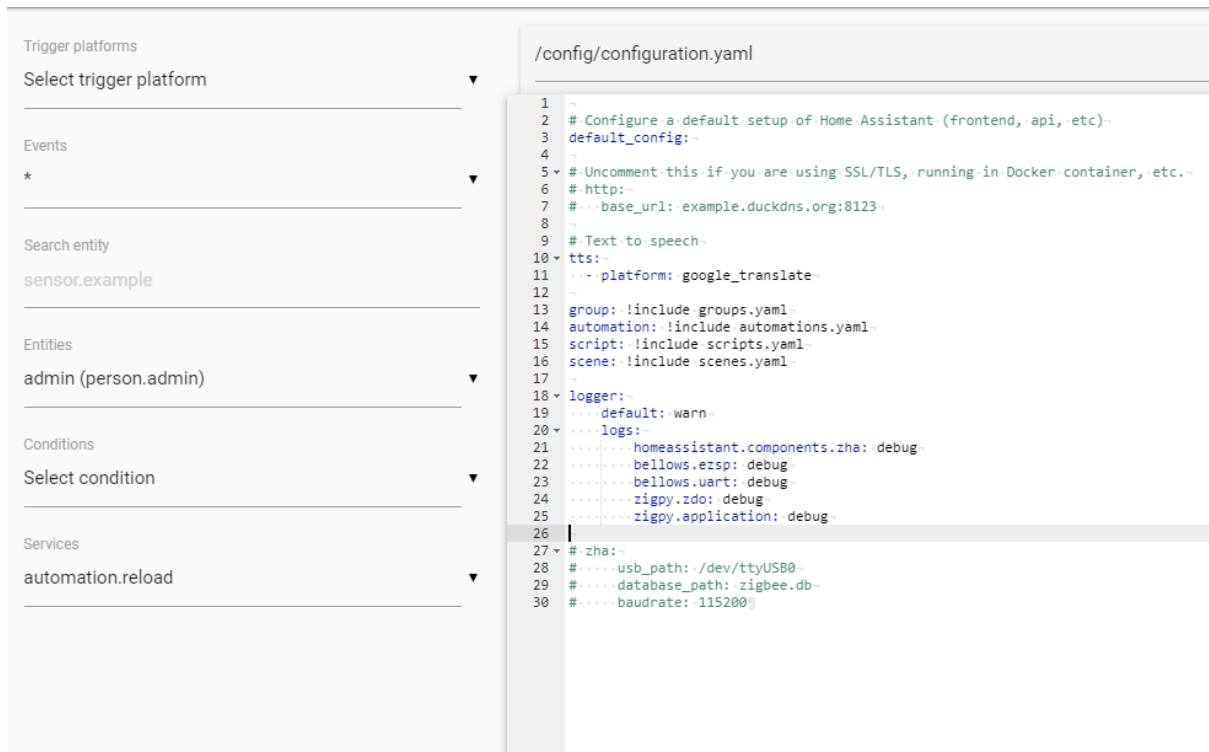
This probably means you have set up the `usb_path` part of the configuration wrong. Check it once again.

Home Assistant does not boot at all

If you have modified the `configuration.yaml` file and the Home Assistant does not boot at all after the restart, first DON'T PANIC.

Revert using Configurator Addon

Just open the Configurator Addon Web UI and comment the `zha` component configuration like this:



Then restart Hass.io and it will work as before.

Zha component is loaded correctly but no zha.permit service

In this case, most probably the Zigbee component is simply not loaded. Try to look into the logs for the issue or contact us.

There are no packets from the device at all

This most probably means that your device is already part of the different network and just can't join your new network. Try to reset it, using the manufacturer specific reset procedure.