

From HomeKit to Homelab: Reclaiming My Smart Home

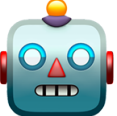
Mike Solin

whoami

It me

- Mike Solin (@flammable)
- Infrastructure Systems Engineer @ Emory Healthcare
- Cofounded Greater Philadelphia Mac Admins regional meetup group
 - We're one of the oldest meetup groups in the community
 - Just celebrated 11 years! 🎉

Why have a smart home?

- Turn on/off lights easily
- Know when the laundry is done
- Who's at the door?
- Are those dang kids on my lawn again?
- Automate almost everything 

**I didn't want to self-host my
smart home.**

 **Privacy**

HomeKit

Easy to get started

Supports a wide range of devices

**Just need a HomePod or Apple
TV**



Homebridge

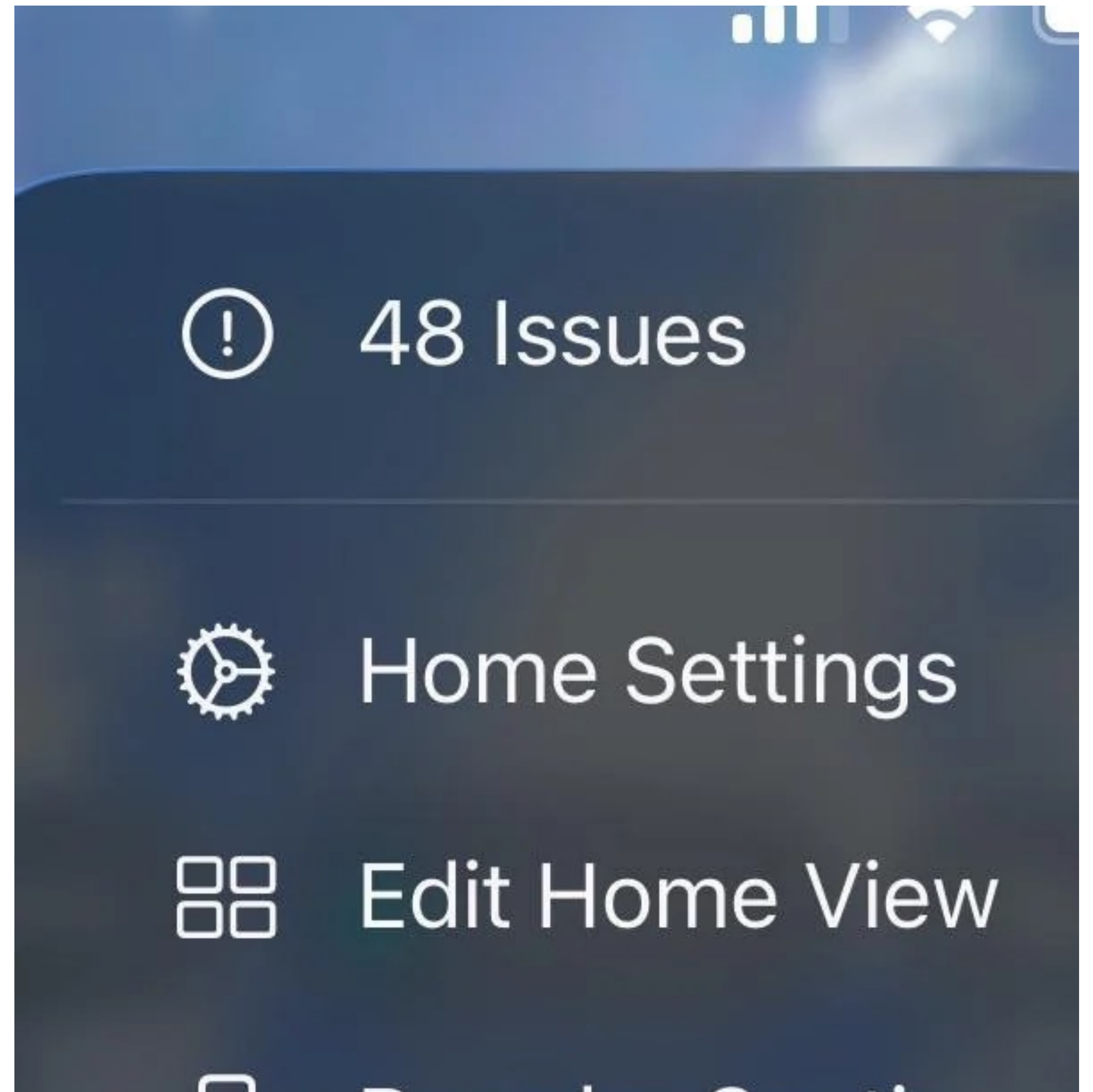
Open source

**Adds unsupported devices
to HomeKit**



HomeKit issues

HomeKit just works! Until it doesn't.



Turns out I was already self-hosting my smart home.

(I was just doing it badly)

Home Assistant

Open source

Huge community

Major updates every month



Interoperability

- Anything can talk to anything!
- Vendor does not matter
- You're limited by your imagination

Integrations - devices and services that work with Home Assistant

All Featured Partners

Category All

Version All

IoT Class All

Quality Scale All

Search integrations...

Brands: Featured

Amazon Alexa

ESPHome

Google Assistant

Google Cast

HomeKit Bridge

IKEA TRÅDFRI

KNX

Leviton Z-Wave

Lutron Caséta

Matter

MQTT

Philips Hue

Plex Media Server

Shelly

SmartThings

SONOS Sonos

Z-Wave

Zigbee Home Automation



10.5 °C

70.4%

Away

Study

In a meeting

Spotlights
49%



Floor lamp
70%

Shutter
Open · 100%

Spotlights
Off

Nest Hub
Off

Outdoor

Door light
100%

Flood light
Off

Temperature
10.2 °C



Motion
Clear

Illuminance
555 lx

Climate

Sun
Above horizon

Rain
7.2 mm

Downstairs
Comfort · 20...

− 21.0 °C +

Kitchen



Shutter
Open · 100%

Spotlights
100%

Worktop
Off



Fridge
Closed

Upstairs
Comfort · 21...

Voltage
232.19 V

− 21.0 °C +

Nest Audio
On

Living room

22.8 °C 57%

Meeting mo...
On

Bar lamp
On

Desk
72 cm

Blinds
Open · 100%

Nest mini
Playing

Energy

EV
Unplugged

Last charge
16.3 kWh

Home power
797.86 W

Fossil fuel
9.84%

CO2 Intensity
62.0 gCO2eq/...

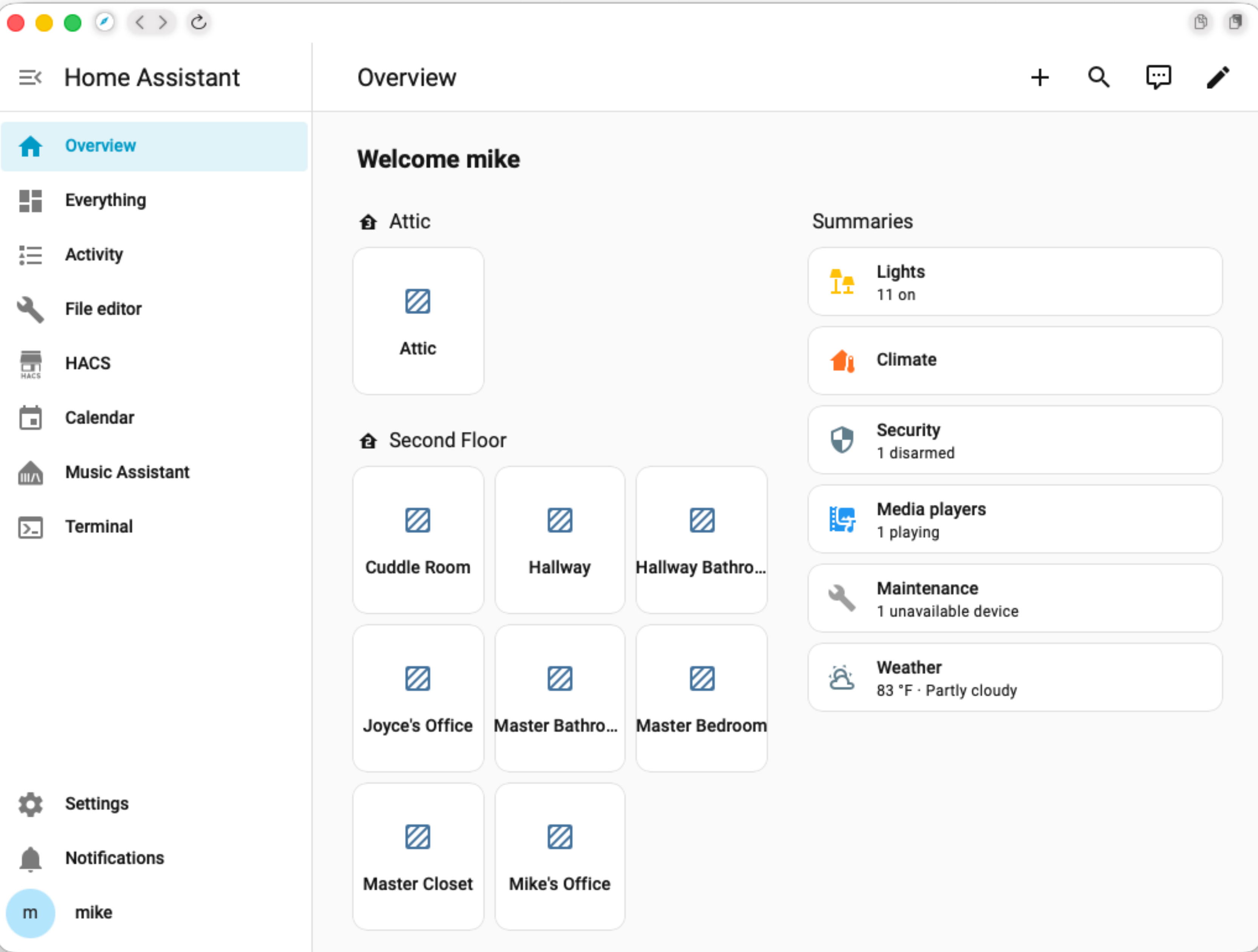
Updates

Auto-update
Off

OS
Up-to-date



DU



Overview

Everything

Activity

File editor

HACS

Calendar

Music Assistant

Terminal

Settings

Notifications

m mike

Welcome mike

Attic

Attic

Second Floor

Cuddle Room

Hallway

Hallway Bathro...

Joyce's Office

Master Bathro...

Master Bedroom

Master Closet

Mike's Office

Summaries

Lights
11 on

Climate

Security
1 disarmed

Media players
1 playing

Maintenance
1 unavailable device

Weather
83 °F · Partly cloudy

Home Assistant

Mike's Office

Overview

- Everything
- Activity
- File editor
- HACS
- Calendar
- Music Assistant
- Terminal

Settings

Notifications

m mike

Lights > On

- Recessed Lig... 75%
- Mike's Office ... 75%
- Mike's Office ... 75%

Media players >

- Mike's Office ... Idle
- Soundbar Paused

Mike's Office dimmer switch > 100%

- Button 4 June 7, 2026 at...
- Button 2 April 27, 2026 a...
- Button 1 May 3, 2026 at ...
- Button 3 January 17, 20...

Automations >

- Button 1 On
- Button 2 On
- Button 4
- Button 3


Mike's Office Apple TV >

- Keyboard foc... Off
- Mike's Office ... On

Home Assistant

Hallway bathroom


In Hallway Bathroom


100% 


Device info


puck_v1
by Flo by Moen


Firmware: 1.2.1

Serial number: 





MAC: 

 Flo >

 UniFi Network >

 Remove device from UniFi Network

Sensors

	Battery	100%
	Humidity	51.6%
	Temperature	73.3 °F
	Water detected	OK

[Add to dashboard](#)

Activity

June 20, 2026

[Hallway bathroom Hallway Bathroom](#)
was detected away
2:06:42 PM - 1 hour ago

[Hallway bathroom Hallway Bathroom](#)
was detected at home
1:56:24 PM - 1 hour ago

[Hallway bathroom Hallway Bathroom](#)
was detected away
12:08:40 PM - 3 hours ago


[Hallway bathroom Hallway Bathroom](#)

Related


[+ Add to...](#)


No automations, scripts or scenes have been added using this device yet. You can add one by pressing the + button above.


Diagnostic

 Hallway Bathroo... Away

[Add to dashboard](#)

 Settings

 Notifications

 mike

Home Assistant Hallway

39% AIRTHINGS

Device info

View Plus by Airthings

Airthings >

Visit

Sensors

Atmospher...	29.47 inHg
Carbon dioxi...	648 ppm
Humidity	44%
PM1	0 µg/m³
PM2.5	0 µg/m³
Radon	49 Bq/m³
Temperature	73.6 °F
Volatile organ...	103 ppb

Add to dashboard

Activity

No activity found.

Related + Add to...

No automations, scripts or scenes have been added using this device yet. You can add one by pressing the + button above.

Diagnostic

Overview
Everything
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File editor
HACS
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Music Assistant
Terminal

Settings
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m mike

Automations

Home Assistant

Basement Front radon levels are low

Traces

- Overview
- Everything
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- Terminal
- Settings
- Notifications
- m mike

When

Basement Front Radon value changes

Basement Front

+ Add trigger

And if (optional)

All conditions added here need to be satisfied for the automation to run. A condition can be satisfied or not at any given time, for example: 'If mike is home'. You can use building blocks to create more complex conditions.

+ Add condition

Then do

Send a notification via mobile_app_flammableph one

+ Add action

Device

Trigger

Device

Basement Front Basement

Trigger

Basement Front Radon value changes

Above Bq/m³

Below 100 Bq/m³

Duration

hh : mm : ss

⌵ Home Assistant

🏠 Overview
🗉 Everything
📅 Activity
🔧 File editor
🏠 HACS
📅 Calendar
🏠 Music Assistant
🖥 Terminal

⚙️ Settings
🔔 Notifications
m mike

← Good Evening ↶ ↷ Traces ⋮

When

🕒 When the sun sets offset by -01:00:00 = ⋮

+ Add trigger

And if (optional)

All conditions added here need to be satisfied for the automation to run. A condition can be satisfied or not at any given time, for example: 'If mike is home'. You can use building blocks to create more complex conditions.

+ Add condition

Then do

🔌 Activate scene 🎨 Good Evening = ⋮

🏠 Adaptive Lighting: set_manual_control = ⋮

+ Add action

Automation Idea



Home Assistant Backyard

Overview
Everything
Activity
File editor
HACS
Calendar
Music Assistant
Terminal

Settings
Notifications
m mike

In Outside

Device info

G6 Bullet (UVC G6 Bullet)
by Ubiquiti
Connected via [grilledcheese](#)
Firmware: 5.3.94
MAC: [A8:9C:6C:46:E8:6D](#)

- UniFi Protect >
- UniFi Network >

[Visit](#)

Related

[+ Add to...](#)

Automations
AI Summary - Backyard >
Scripts
No scripts

Controls

[+2 disabled entities](#)
[Add to dashboard](#)

Sensors

- Animal detected Off**
- Baby cry d... Unavailable
- Barking de... Unavailable
- Car alarm detected Off
- Car horn detected Off
- CO alarm detect... Clear
- Glass break detect... Off

UniFi Protect

Activity

June 23, 2026

- [Backyard Overlay: show logo turned off](#)
12:56:58 PM - 3 hours ago
- [Backyard Person detection turned on](#)
12:56:58 PM - 3 hours ago
- [Backyard CO alarm detected cleared \(no carbon monoxide detected\)](#)
12:56:58 PM - 3 hours ago
- [Backyard Car alarm detection turned on](#)
12:56:58 PM - 3 hours ago
- [Backyard Siren detection turned on](#)

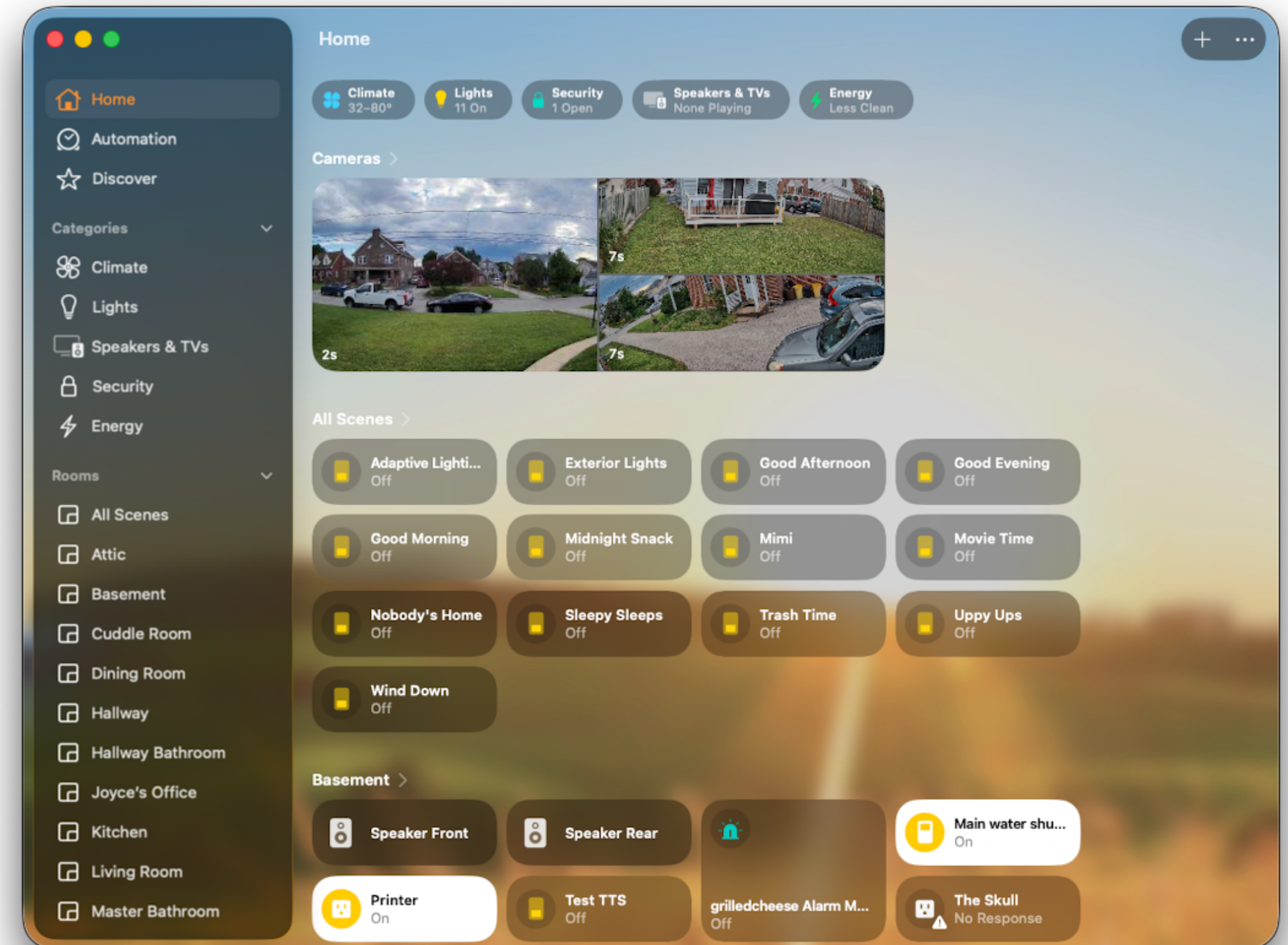


What about HomeKit?

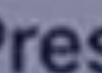
HomeKit

We still use HomeKit for Siri!

We also use it to manually toggle scenes from Home Assistant



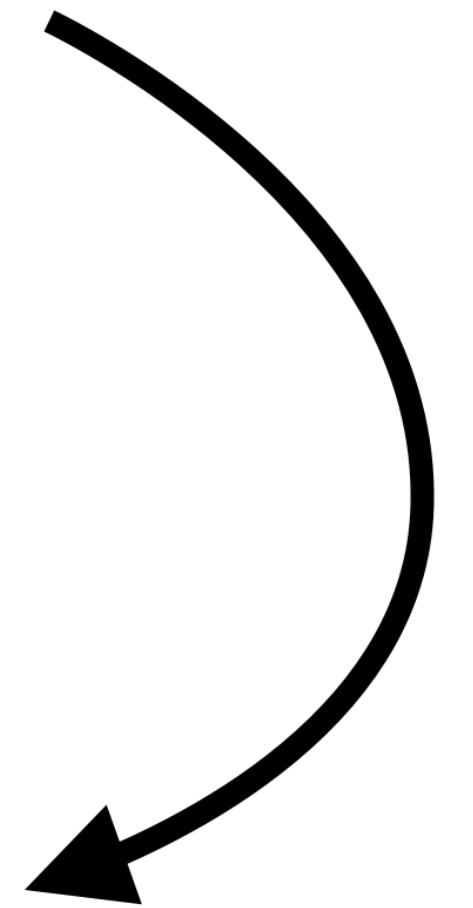


Someone who may be Ashley rang the dog
Press  for full screen

HomeKit Bridge

**Made the transition from
HomeKit to Home Assistant
approachable**

**Can be used to add devices from
Home Assistant to HomeKit**

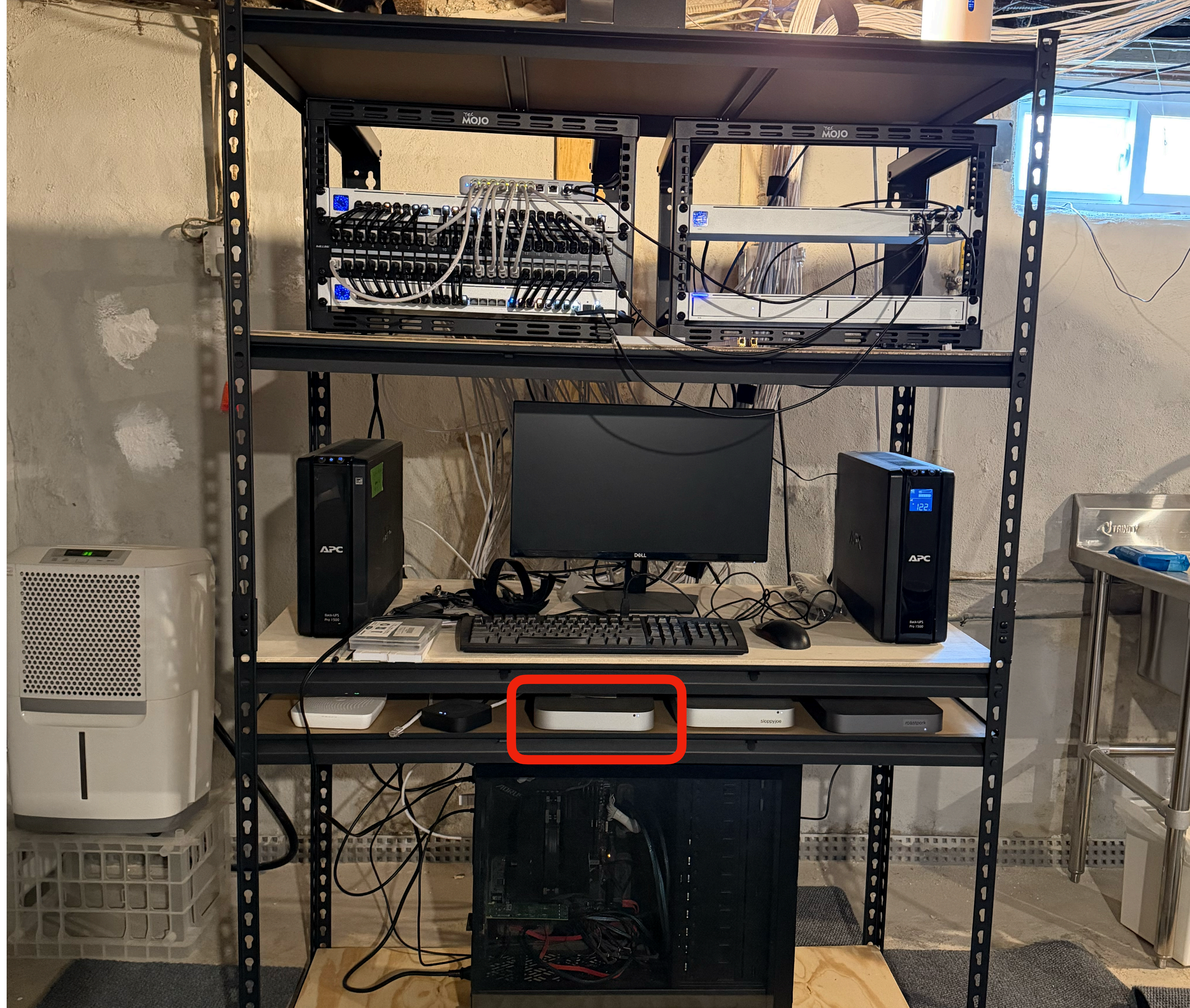


Infrastructure

Infrastructure

My smart home cannot be contained

- I'm a huge fan of Docker in general
- It's *possible* to run Home Assistant as a Docker container
- Biggest downside: need a separate container for Matter support
- Matter is the protocol that modern devices use to connect to your smart home - it's important
- Instead, consider running this on dedicated hardware

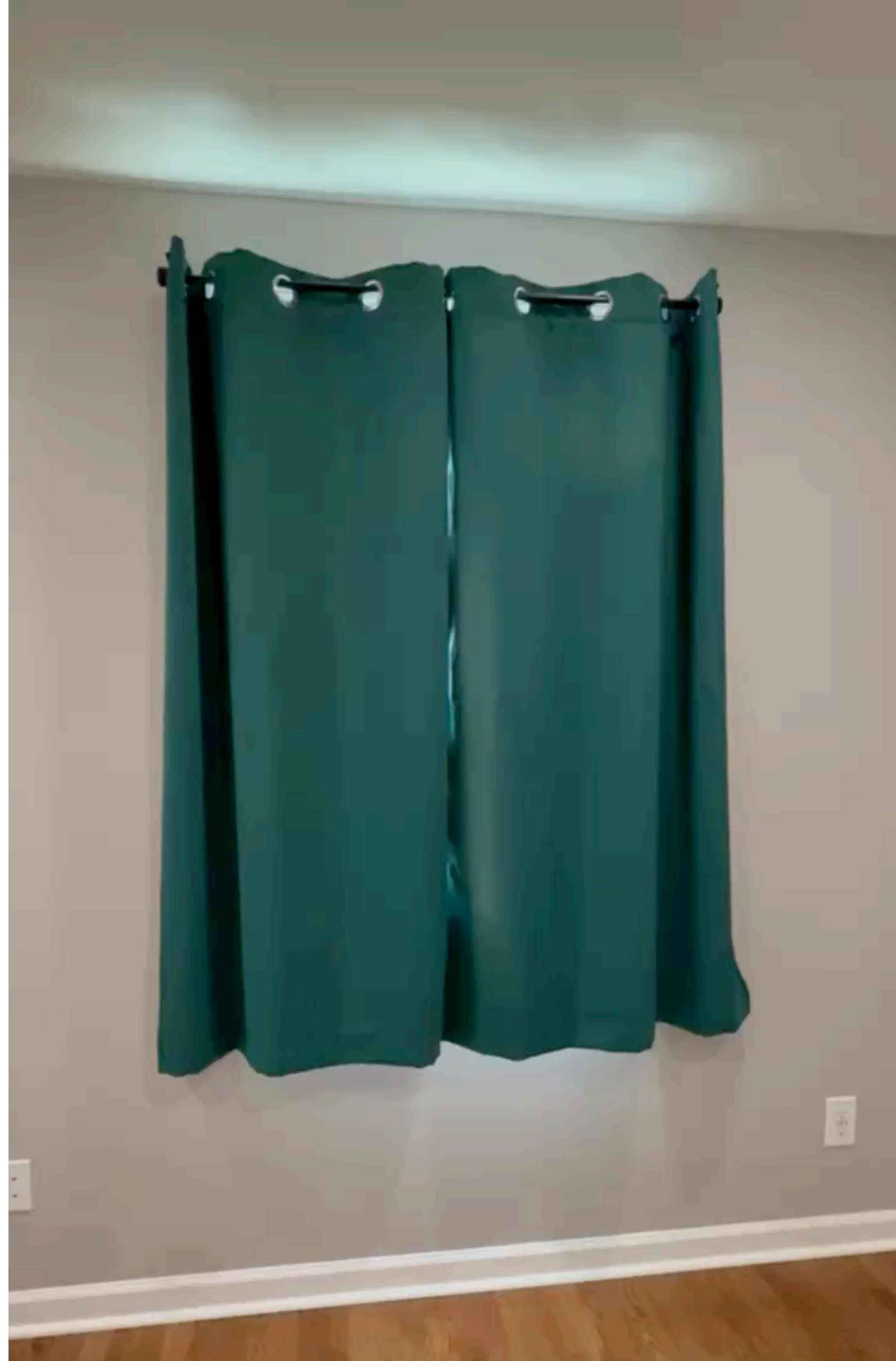


What's next?

Recent upgrades

Smart home getting smarter

- Replaced our Synology network with UniFi switches, APs, and routers
- Replaced our Arlo cameras with UniFi cameras and NVR
- Replaced almost all lighting with Philips Hue
- Added adaptive lighting throughout the house
- Added Switchbot curtain and blind robots



Coming soon

Smart home getting smarter

- Making “dumb” devices smart
 - Infrared (IR)
 - Radio frequency (RF)
- Smoke detectors
- Dishwasher
- High Availability

Resources

DIY

- <https://mikesolin.com/category/smart-home/>
- <https://www.home-assistant.io/>
- <https://www.reddit.com/r/homeassistant/>
- They also have a Discord server!

Thank you, MDO!