



DEVSTAFF  
13/11/2025

# MAKING YOU CONNECTED DEVICES SMART

Michalis Zampetakis

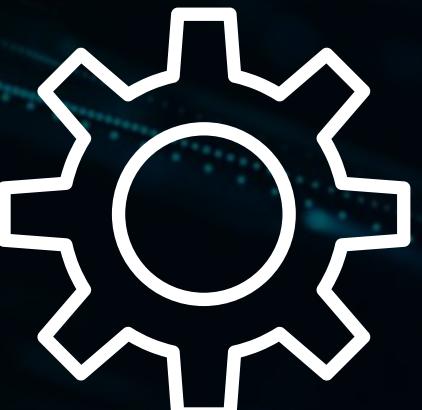
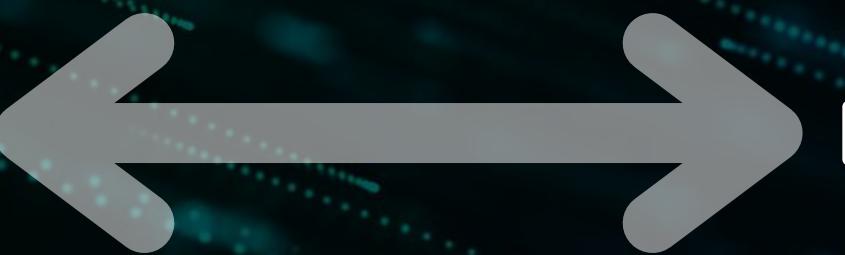
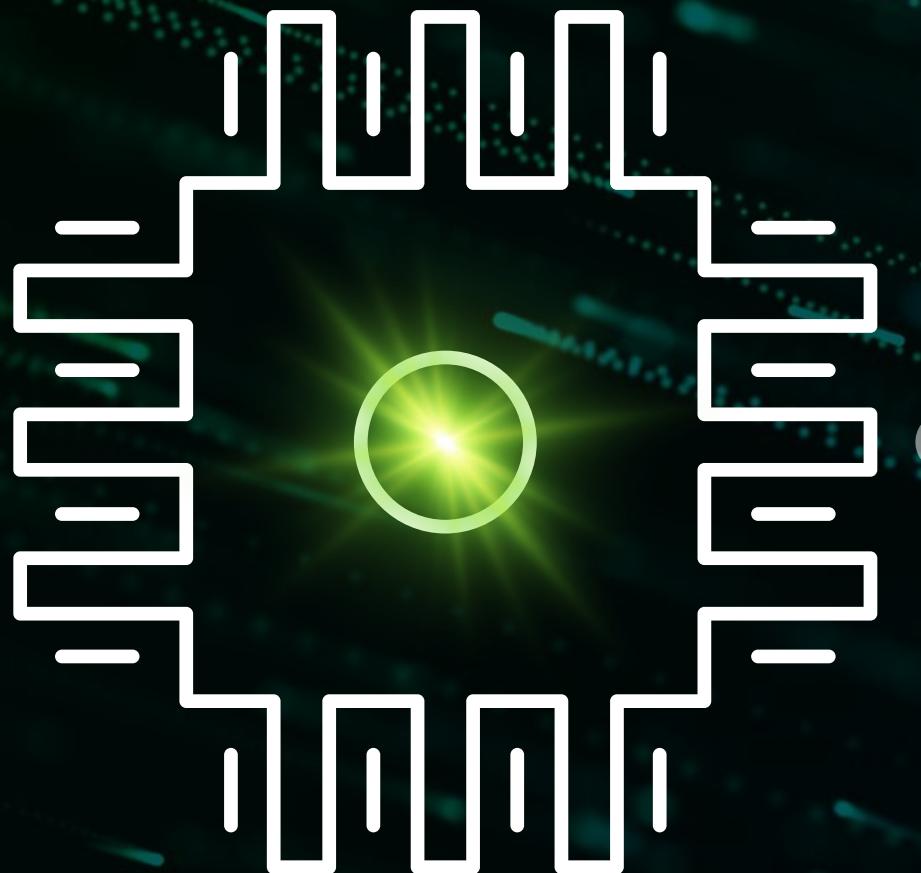
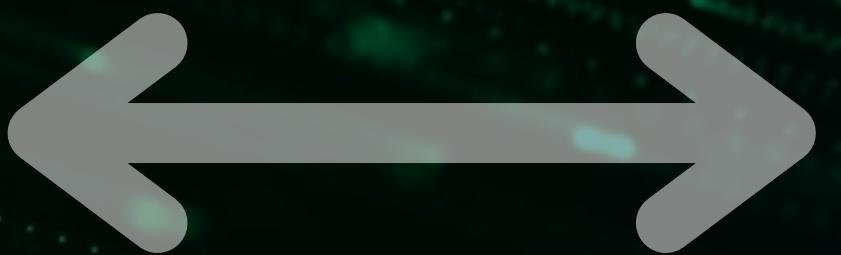
# CONNECT



# CONNECT



# INTEGRATE



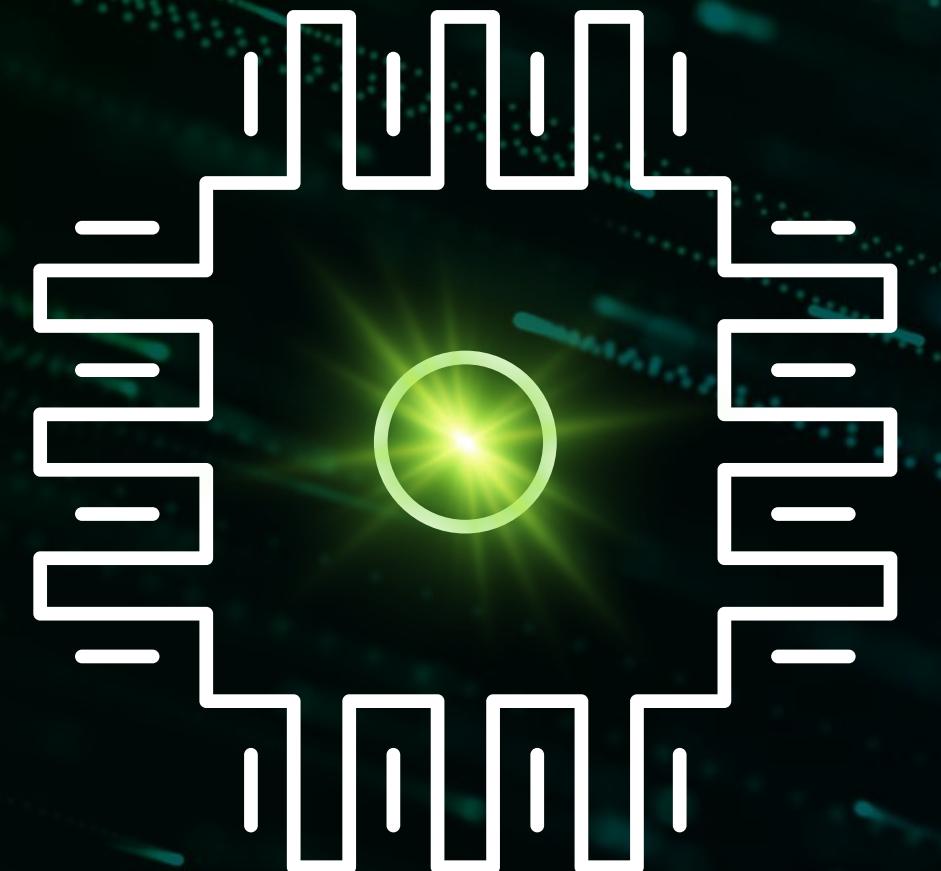
# INTEGRATE

Cloud based

- More Fancy
- Easy Bootstrap
- Ease of Use
- No Manual Updates
- More Powerful

Local based

- Local First
- Privacy Focused
- OSS
- Reliable
- Customization
- Devices' Support



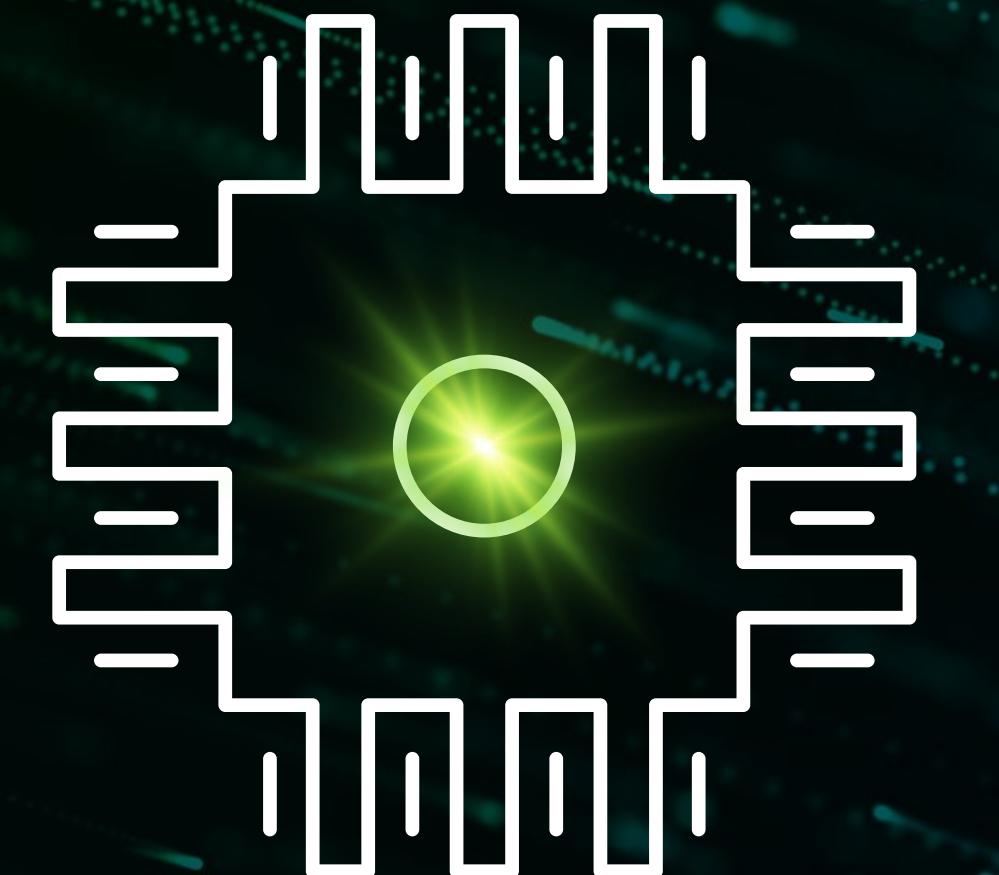
# INTEGRATE

Cloud based

- Amazon Alexa
- Samsung SmartThings
- Shelly Hub
- Google Home

Local based

- Home Assistnt
- openHAB
- ioBroker
- Node-RED



# HOME ASSISTANT

## Software

- Operating System
- Container

## Hardware

- Home Assistant
- Raspberry Pi
- x86\_64
- NAS

# HOME ASSISTANT

MONITORING

ACTING

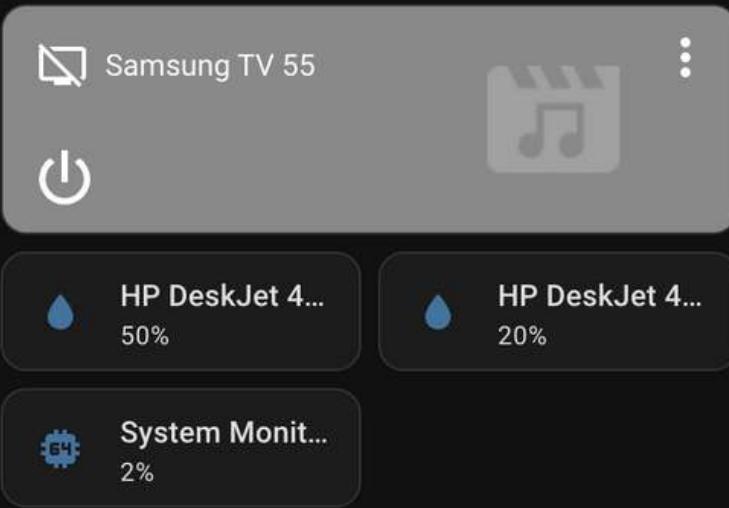
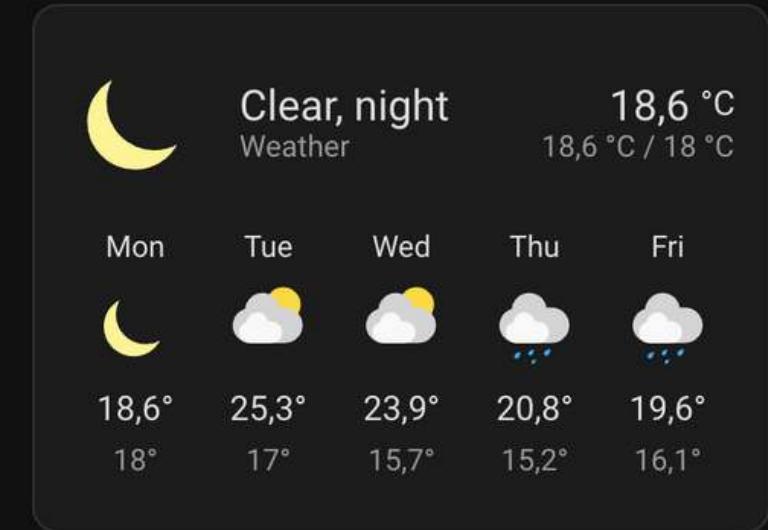
ALERTING

AUTOMATING

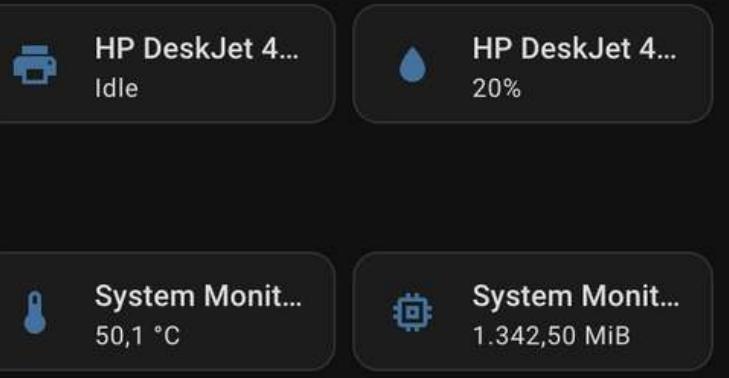
# HOME ASSISTANT

MONITORING

- Overview
- Map
- Energy
- Activity
- History
- Developer tools
- Settings



**09:56 PM**  
Mon, Nov 03



# HOME ASSISTANT

MONITORING

Home Assistant

Integrations Devices Entities Helpers

Search

AdGuard Home 1 service	Backup 1 service	Bluetooth 2 devices	Broadlink 1 device <small>Failed setup, will retry</small>
Brother Printer 1 device	Command Line 13 entities	DLNA Digital Media Renderer 2 devices	Fast.com 1 service
Google Cast 1 device	HACS 6 services	Home Assistant Supervisor 10 services	Intent Script 10 services
Internet Printing Protocol (IPP) 1 device	Meteorologisk institutt (Met.no) 1 service	Mobile App 6 devices	MQTT 1 entry
Raspberry Pi Power Supply Checker 1 entity	Samsung Smart TV 1 device	Season 1 service	Shell Command 1 entry
Shelly 13 devices <small>Failed setup, will retry</small>	Sun 1 service	Synology DSM 4 devices	System Monitor 1 service
UPnP UPnP/IGD 1 device	UptimeRobot 6 services	Workday 1 service	

Developer tools

Settings

In Infrastructure

Device info

HL-L2375DW by Brother  
Firmware: 1.74  
Serial number:  
MAC: C8:94:02:3D:9A:93

Diagnostic

Black toner remaining 3%  
Drum page counter 3.939 pages  
Drum remaining lifetime 68%  
Drum remaining pages 8.061 pages  
Duplex unit page cou... 3.220 pages  
Page counter 3.939 pages  
Status toner low  
+1 disabled entity

Activity

No activity found.

brother.

Automations

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

Scenes

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

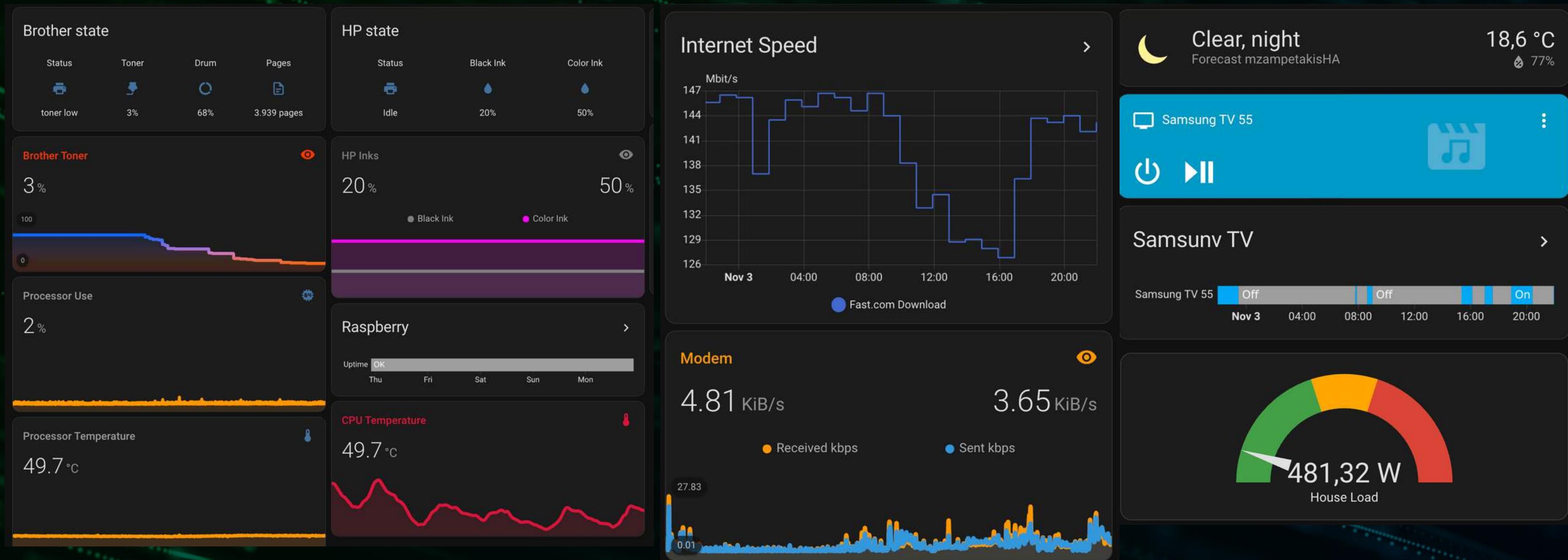
Scripts

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

Add to dashboard

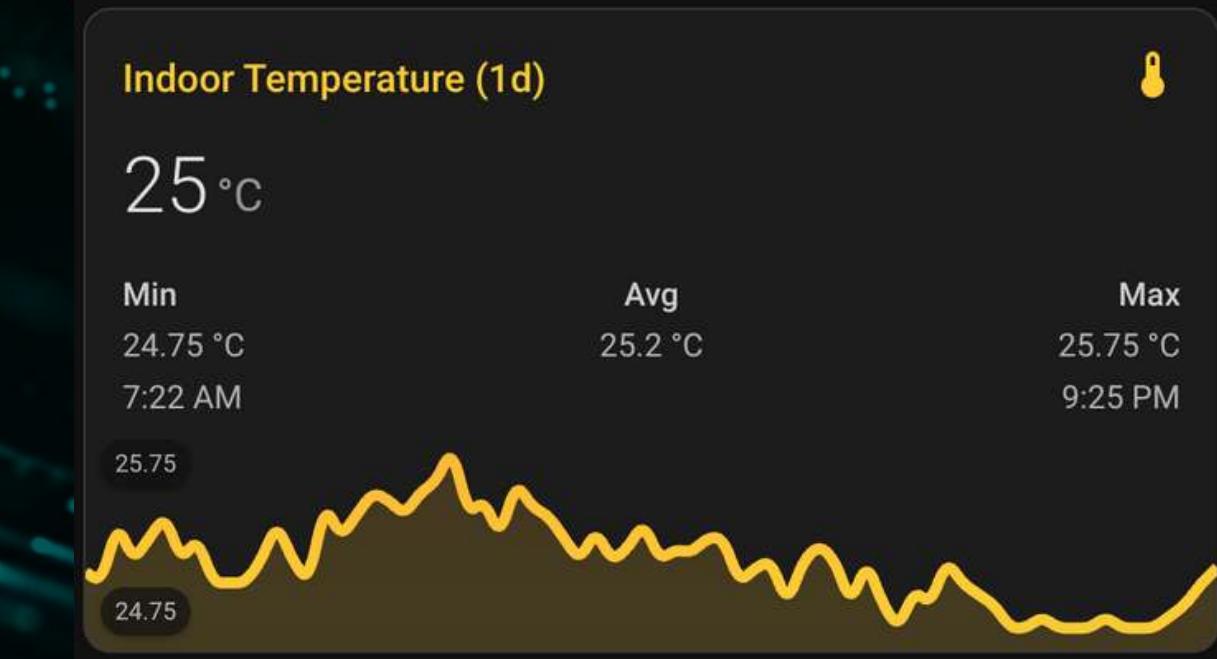
# HOME ASSISTANT

MONITORING



# HOME ASSISTANT

MONITORING



# HOME ASSISTANT

MONITORING

ACTING

ALERTING

AUTOMATING

# HOME ASSISTANT

ACTING

## Router 3

Status

WiFi

On

## Kitchen roller shutter

27%



↑  
■  
↓

Central Heating

Idle

20 °C

25 °C

- +

# HOME ASSISTANT

MONITORING

ACTING

ALERTING

AUTOMATING

# HOME ASSISTANT

ALERTING

- Dashboard / Notifications
  - Sensors' health & battery
  - Hosted services (NAS, printers)
  - Other services (web)
  - Internet status & speed
  - Temperature
  - Presense

# HOME ASSISTANT

MONITORING

ACTING

ALERTING

AUTOMATING

# HOME ASSISTANT

AUTOMATING

← New automation



## When

A trigger is a specific event happening in or around your home, for example: 'When the sun sets'. Any trigger added here will start your automation.

+ 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 Michalis Zampetakis is home'. You can use building blocks to create more complex conditions.

+ Add condition



## Then do

All actions added here will be performed in sequence when the automation runs. An action usually controls one of your areas, devices, or entities, for example: 'Turn on the lights'. You can use building blocks to create more complex sequences of actions.

+ Add action



# HOME ASSISTANT

AUTOMATING

← On Double click Toggle Plug

Traces ⋮

When

Button double clicked

= ⋮

+ 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 Michalis Zampetakis is home'. You can use building blocks to create more complex conditions.

+ Add condition

Then do

Toggle ShellyFlowerPlug

= ⋮

+ Add action

# HOME ASSISTANT

AUTOMATING

← When MZ camera turns on turn on to red light bulb 1



Traces



When



mbp Camera In Use turned on

= :

+ 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 Michalis Zampetakis is home'. You can use building blocks to create more complex conditions.

+ Add condition

Then do



Scene 'Activate' on Turn on light bulb 1 to red

= :

+ Add action

# HOME ASSISTANT

AUTOMATING

← On motion when night at home open one Light on Traces ⋮

When

Shelly Motion Motion started detecting motion = ⋮

+ Add trigger

And if (optional)

Current Shelly Motion Illuminance illuminance = ⋮

^ & If 1 condition matches = ⋮

If the time is after 22:00 and before 08:00 = ⋮

+ Add condition

+ Add condition

Then do

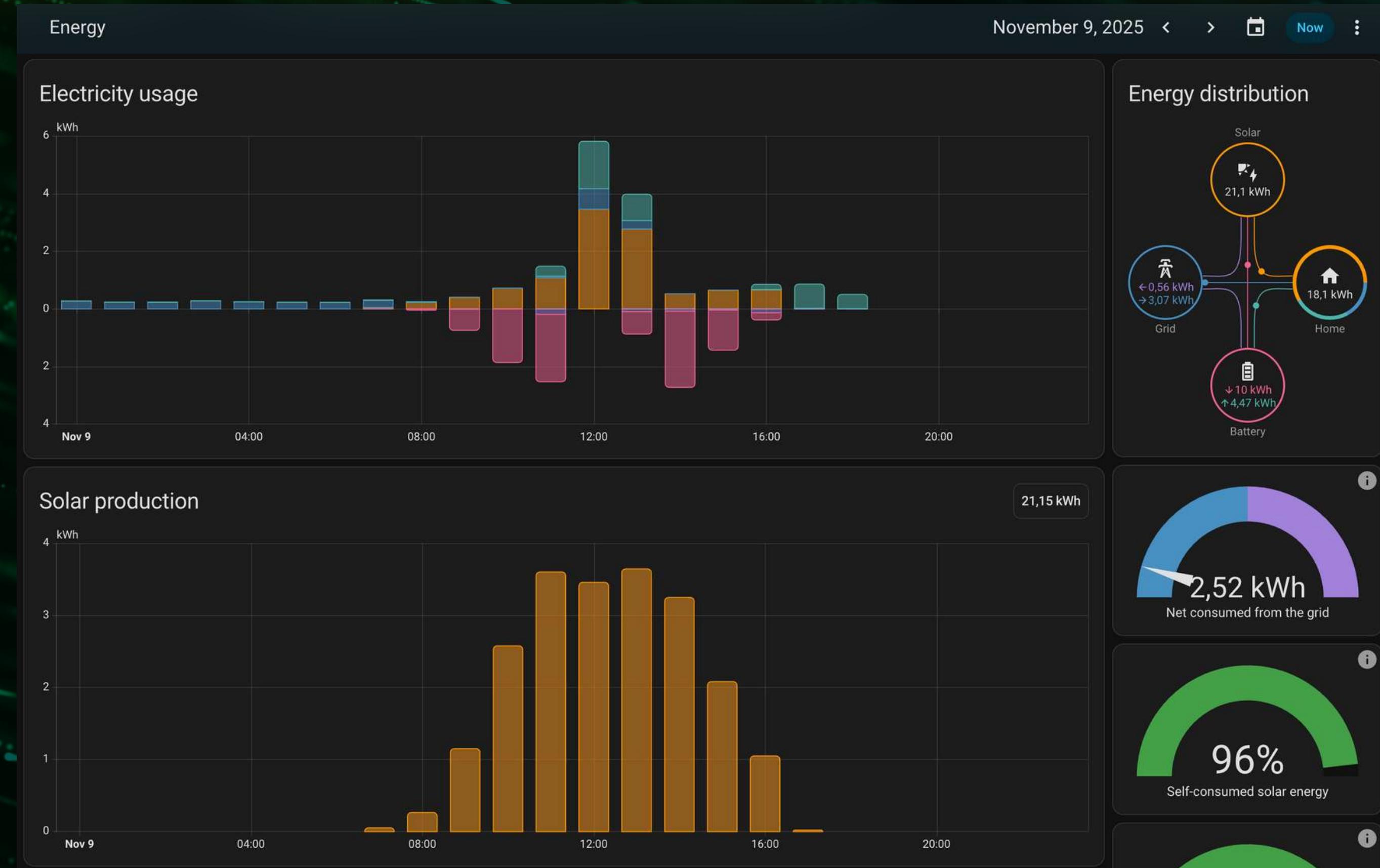
Turn on Shelly Bulb 1 = ⋮

Delay for 1:00 = ⋮

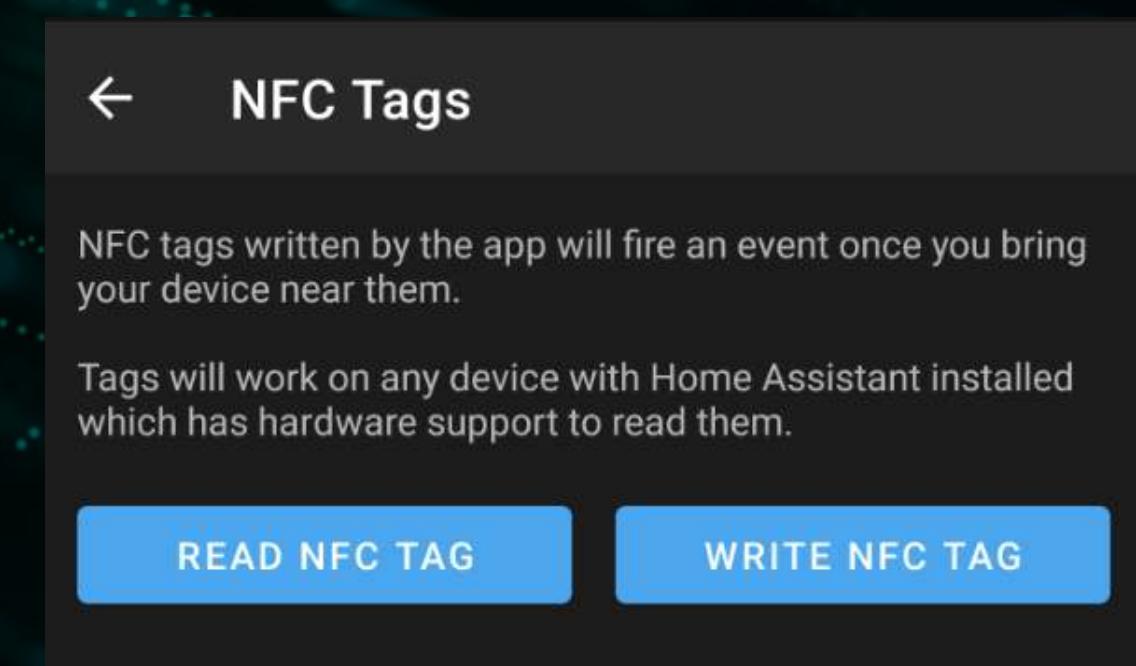
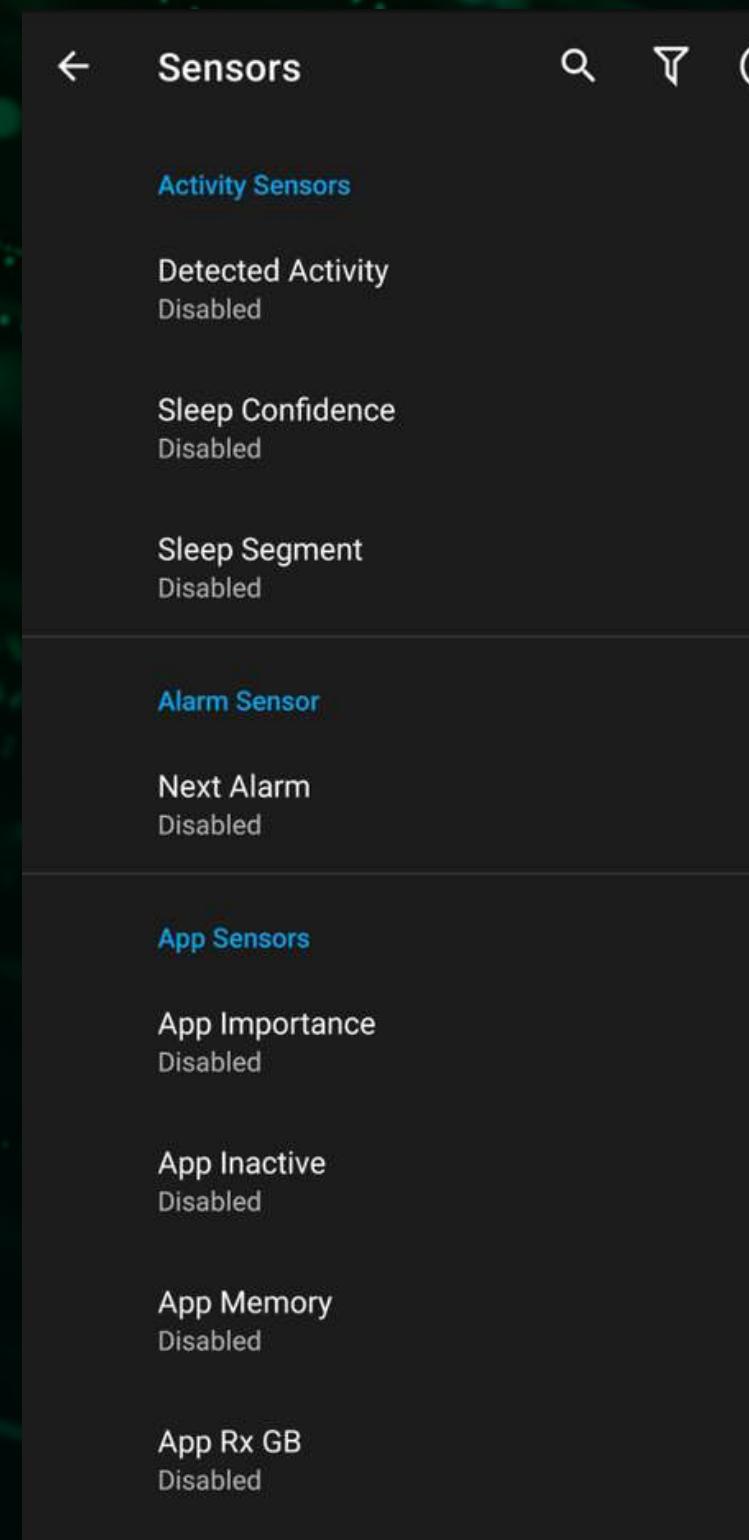
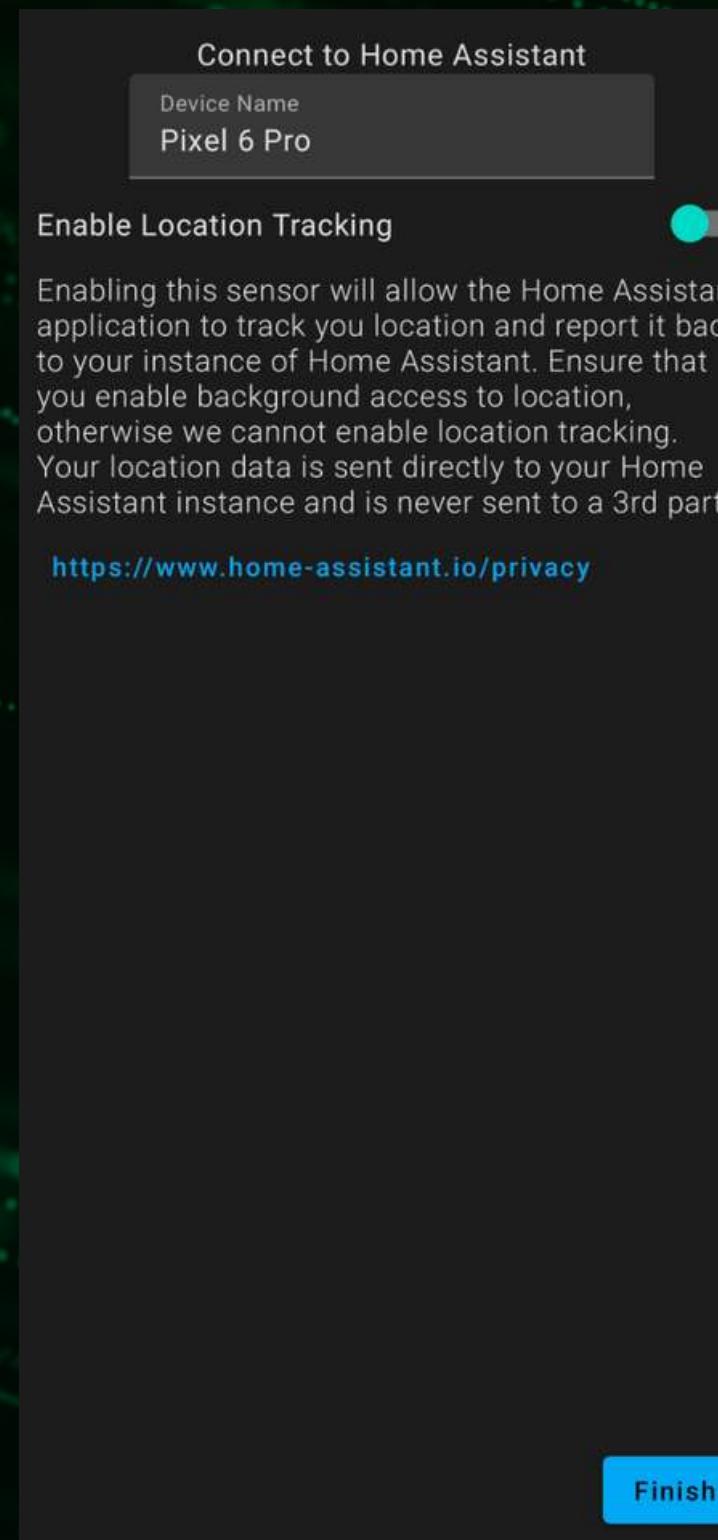
Turn off Shelly Bulb 1 = ⋮

+ Add action

# HOME ASSISTANT - ENERGY



# HOME ASSISTANT – COMPANION



# HOME ASSISTANT – ADDONS

## Official add-ons

 Assist Microphone Use Assist with local microphone	 CEC Scanner Scan for HDMI CEC devices	 deCONZ Control a Zigbee network with ConBee or RaspBee by dresden elektronik	 DHCP server [deprecated] A simple DHCP server	 Dnsmasq A simple DNS server	 Duck DNS Free Dynamic DNS (DynDNS or DDNS) service with Let's Encrypt support
 File editor Simple browser-based file editor for Home Assistant	 Git pull Simple git pull to update the local configuration	 Let's Encrypt Manage certificate from Let's Encrypt	 MariaDB A SQL database server	 Matter Server Matter WebSocket Server for Home Assistant Matter support.	 Mosquitto broker An Open Source MQTT broker
 NGINX Home Assistant SSL proxy An SSL/TLS proxy	 OpenThread Border Router OpenThread Border Router add-on	 openWakeWord openWakeWord using the Wyoming protocol	 Piper Text-to-speech with Piper	 RPC Shutdown Shutdown Windows machines remotely	 Samba share Expose Home Assistant folders with SMB/CIFS
 Silicon Labs Flasher Silicon Labs firmware flasher add-on	 Silicon Labs Multiprotocol [deprecated] Zigbee and OpenThread multiprotocol add-on	 Speech-to-Phrase Fast and personalized local speech-to-text	 TellStick [deprecated] TellStick and TellStick Duo service	 Terminal & SSH Allow logging in remotely to Home Assistant using SSH	 VLC Turn your device into a Media Player with VLC
 Whisper Speech-to-text with Whisper	 Z-Wave JS Control a Z-Wave network with Home Assistant Z-Wave JS				

## ESPHome

 ESPHome Device Builder Build your own smart home devices using ESPHome, no programming experience required	 ESPHome Device Builder (beta) Beta version of ESPHome Device Builder	 ESPHome Device Builder (dev) Development version of ESPHome Device Builder
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## evcc

 evcc EV Charge Controller!	 evcc (nightly) Nightly version of EV Charge Controller!
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## Home Assistant Community Add-ons

 AdGuard Home Network-wide ads & trackers blocking DNS server	 Advanced SSH & Web Terminal A supercharged SSH & Web Terminal access to your Home Assistant	 AirCast AirPlay capabilities for your Chromecast devices.	 AirSonos AirPlay capabilities for your Sonos (and UPnP) devices.	 AppDaemon Python Apps and Dashboard using AppDaemon 4.x for Home Assistant	 Bazzarr Download and manage subtitles for Sonarr and Radarr
 Bookstack Simple & Free Wiki Software	 chrony A local NTP (Network Time Protocol) server for cameras etc.	 EMQX The most scalable open-source MQTT broker for IoT. An alternative for the	 Example Example add-on by Community Home Assistant Add-ons	 Folding@home Fighting disease with a world wide distributed super computer (Not	 FTP A secure and fast FTP server for Home Assistant
 Glances A cross-platform system monitoring tool	 Grafana The open platform for beautiful analytics and monitoring	 Grocy ERP beyond your fridge! A groceries & household management solution for	 InfluxDB Scalable datastore for metrics, events, and real-time analytics	 JupyterLab Create documents containing live code, equations, visualizations, and	 Lidarr Looks and smells like Sonarr but made for music
 Log Viewer Browser-based log utility for Home Assistant	 motionEye Simple, elegant and feature-rich CCTV/NVR for your cameras	 MQTT IO Expose GPIO modules and digital sensors via MQTT for remote control	 Network UPS Tools Manage battery backup (UPS) devices	 Nginx Proxy Manager Manage Nginx proxy hosts with a simple, powerful interface	 Node-RED Flow-based programming for the Internet of Things

# NETWORK

## Public

- Access internet services
- Devices connected to internet
- Access remotely
- Easy upgrades

# NETWORK

## Air Gapped

- Security
- Privacy

# SECURITY

- Critical Integrations (alarm, locks)
- Location access
- DDOS
- Compromised sensor/actuator

# PITFALLS

- Test Automations
- What if Internet fails?
- Power outage?
- Device fails?
- Sensor or actuator fails?

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# THANK YOU

Michalis Zampetakis