

SMART LIVING FORUM, 18. NOVEMBER 2023, SOLINGEN

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# INTEROPERABILITÄT IM SMART HOME

X @kaikreuzer

Kai Kreuzer, openHAB Foundation e.V.









Quelle: <http://knx-user-forum.de>

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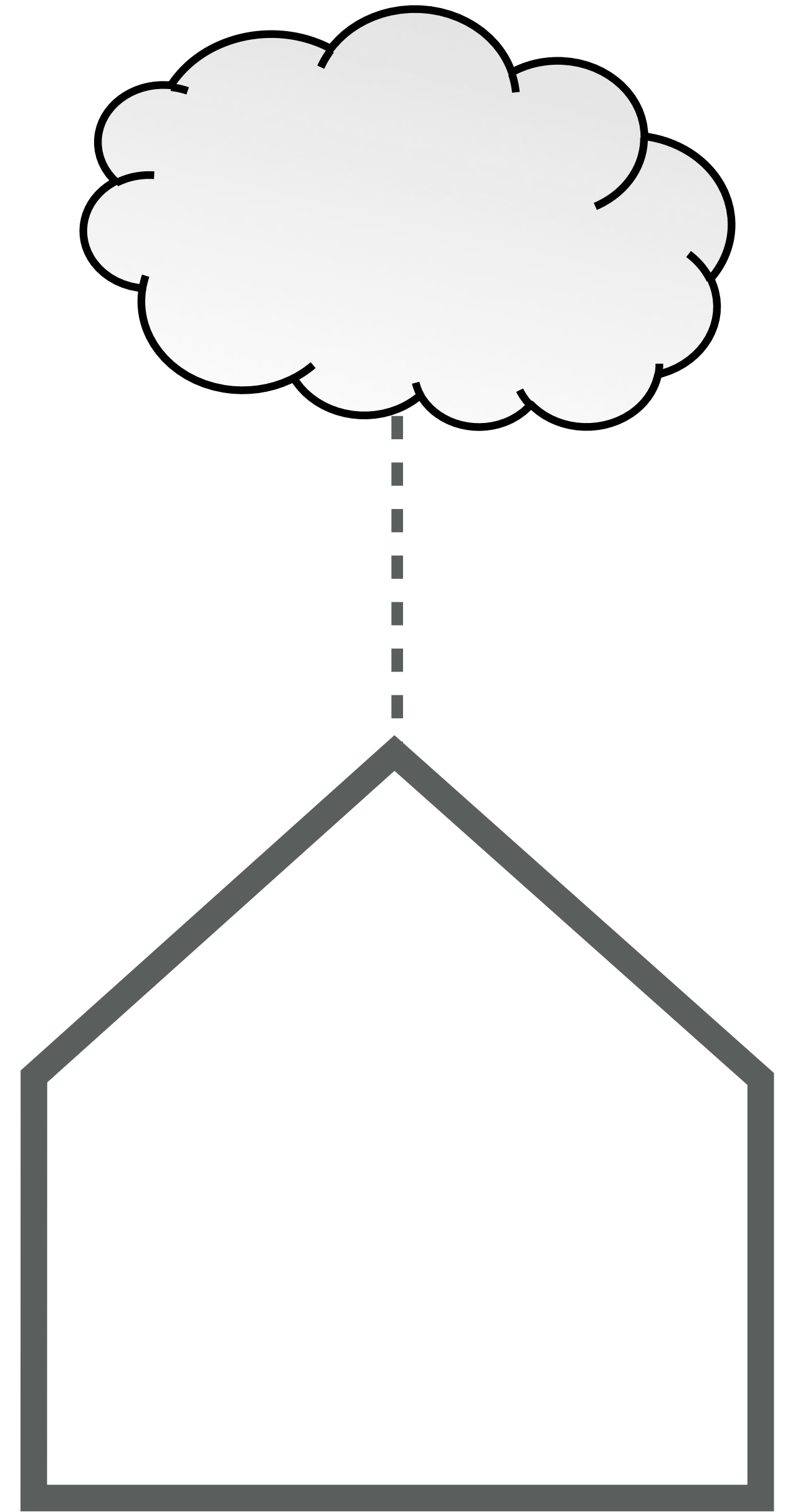
# There is NO CLOUD, just



# other people's computers

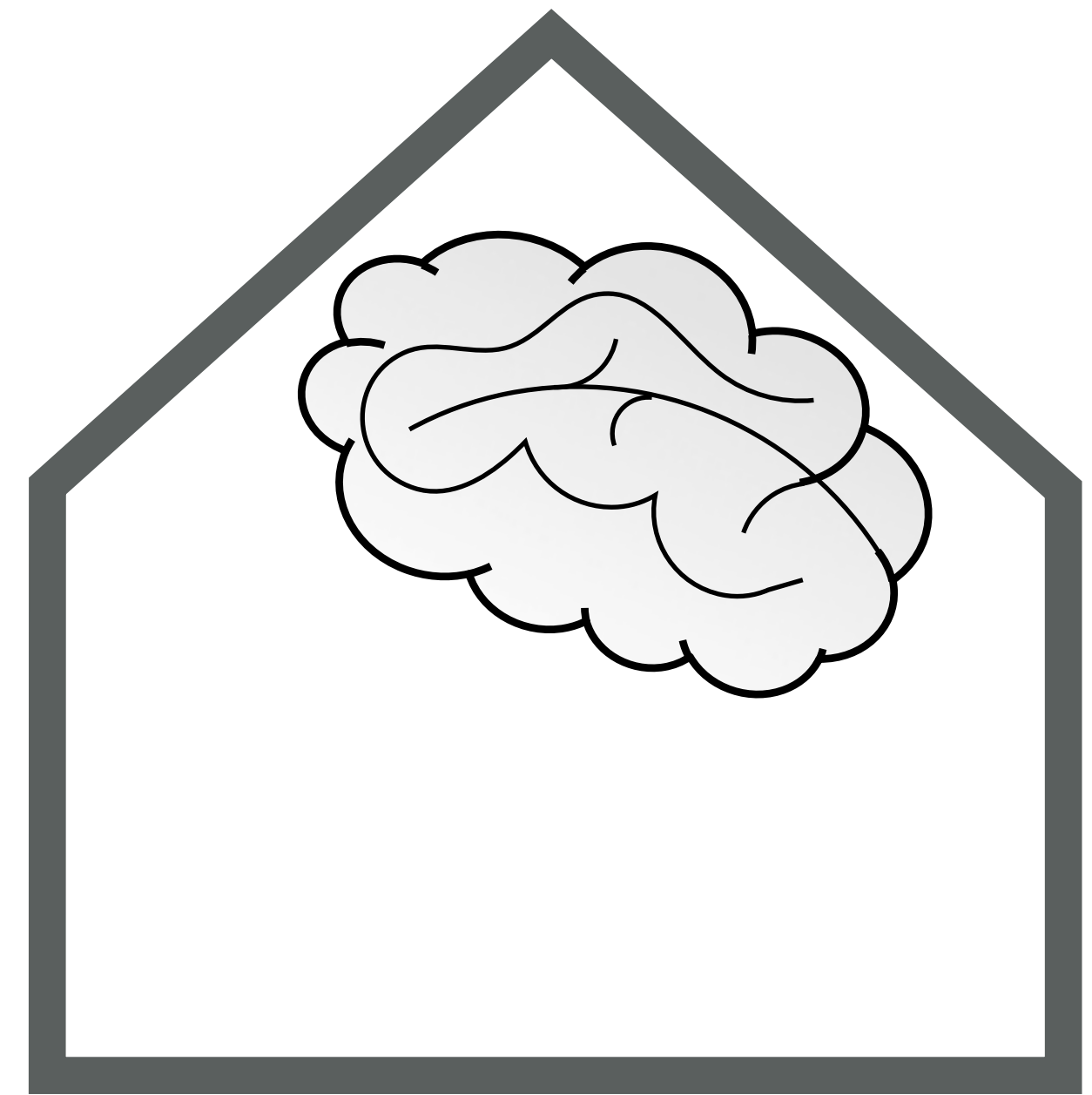


**CONNECTED  
HOME**





# SMART HOME



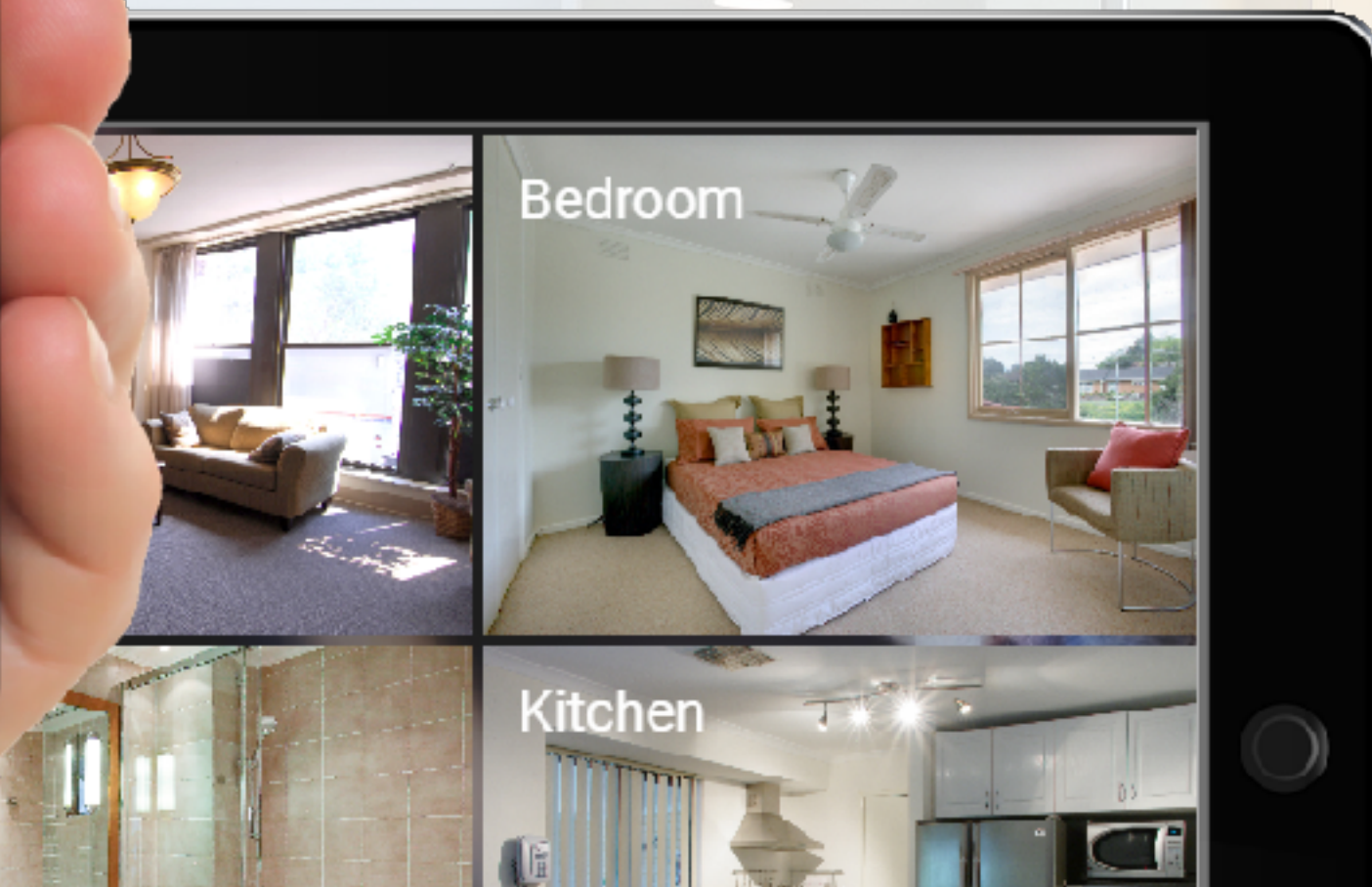
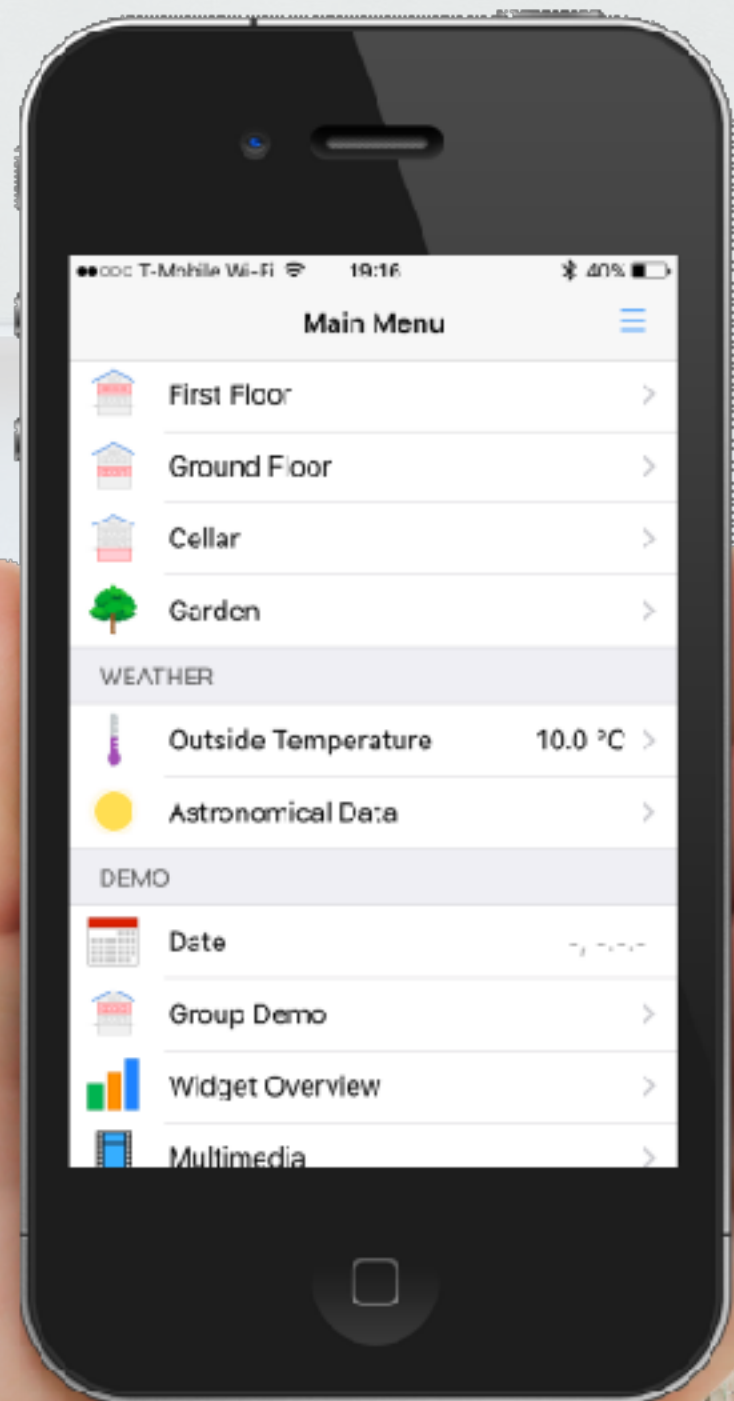






# WAS IST openHAB ?

- ▶ Open Source Software Projekt
- ▶ Fokus on Heimautomatisierung
- ▶ vereinheitlichte Benutzerschnittstelle
- ▶ übergreifende Automatisierung







# In a Nutshell, openHAB - empowering the smart home...

... has had **17,879 commits** made by **1,007 contributors** representing **1,831,441 lines of code**

... is **mostly written in Java** with an **average number of source code comments**

... has a **well established, mature codebase** maintained by a **very large development team** with **stable Y-O-Y commits**

... took an estimated **518 years of effort (COCOMO model)** starting with its **first commit in February, 2010** ending with its **most recent commit 4 days ago**

## Project Summary

openHAB is a Java-based open source project that integrates and combines a wide range of systems and technologies into a unified abstraction. On top of the unified abstraction, a set of user interfaces is available for the overarching architecture and user interfaces.

Over 200 specific add-ons provide support for various technologies and communication protocols such as Philips Hue, Amazon Echo, Chromecast, and many more. Available add-ons and support documentation: <http://docs.openhab.org/addons>

starting with its first commit in February, 2010 ending with its most recent commit 4 days ago



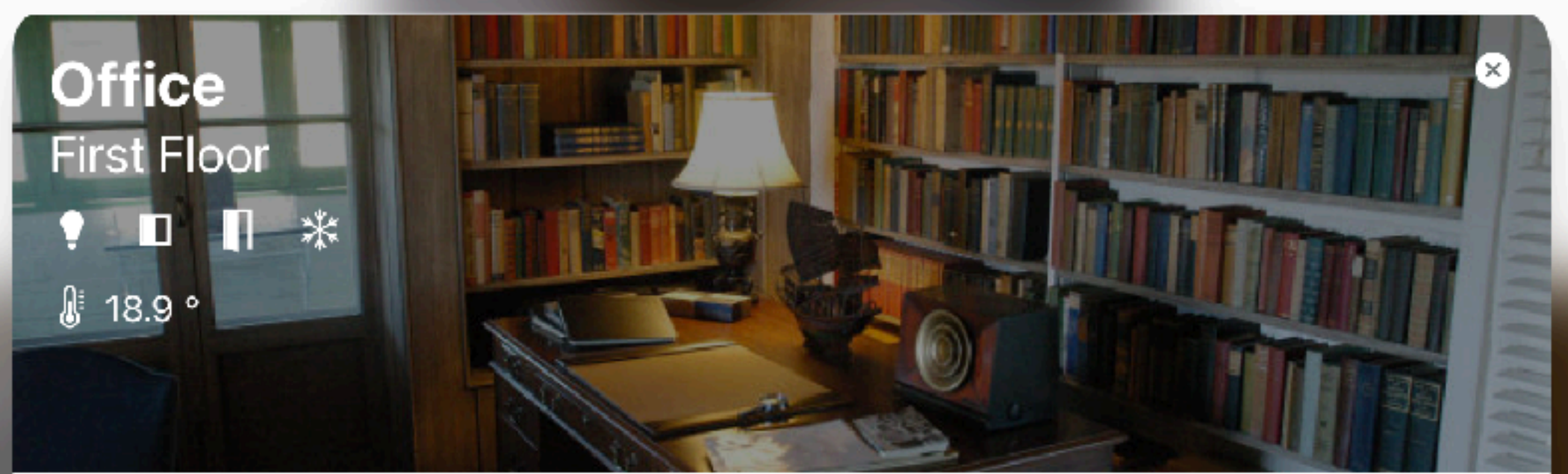
# BEISPIELINTEGRATIONEN (BINDINGS) - INSGESAM > 400 BINDINGS







- Positions >
- Floorplans >
- Charts >
- Temperatures >
- Help & About >



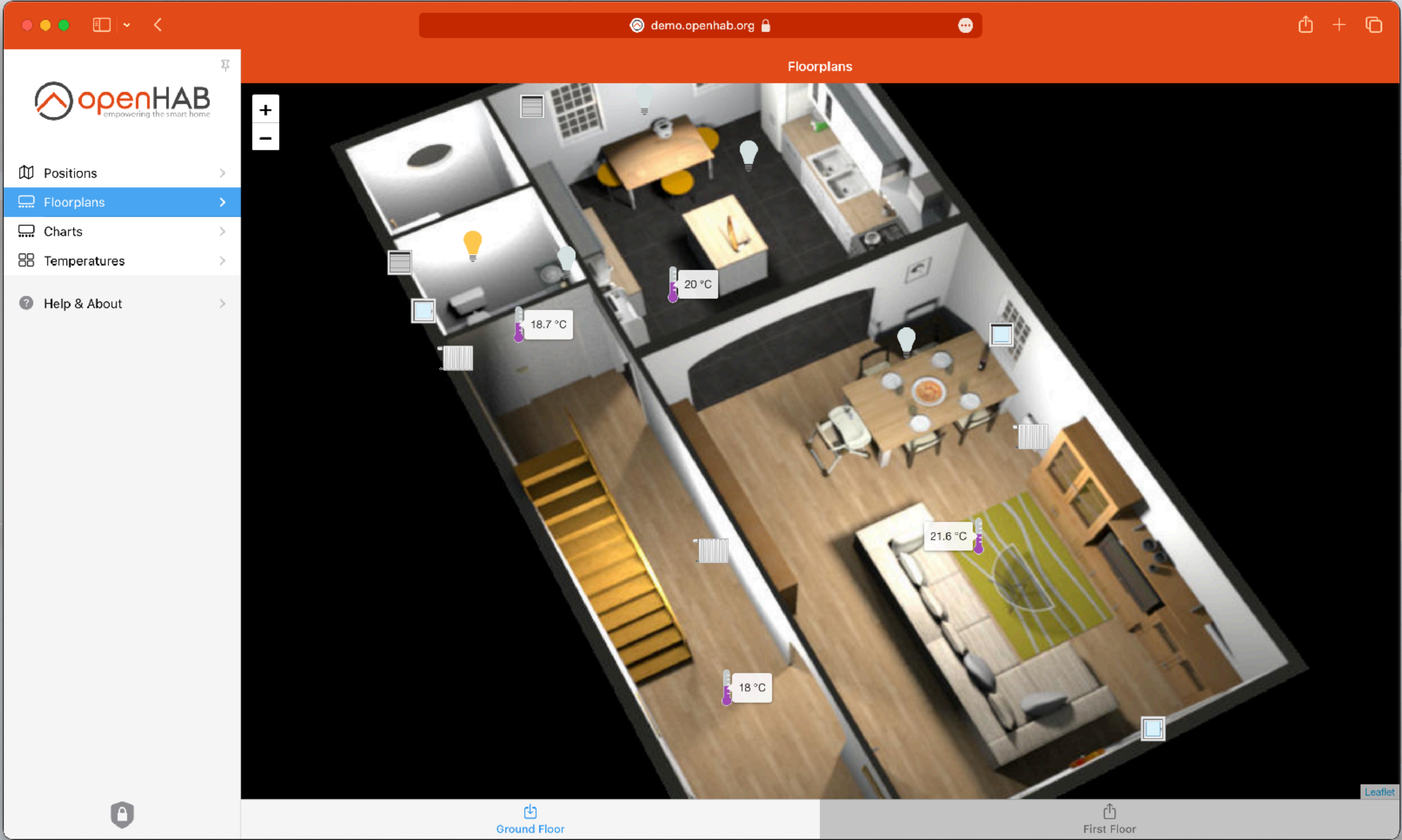
Equipment Properties

- Balcony Door open
- Balcony Door Shutters [triangle up] [square] [triangle down]
- Office Heating [toggle on]
- Office Window open
- Office Window Shutters [triangle up] [square] [triangle down]

Close





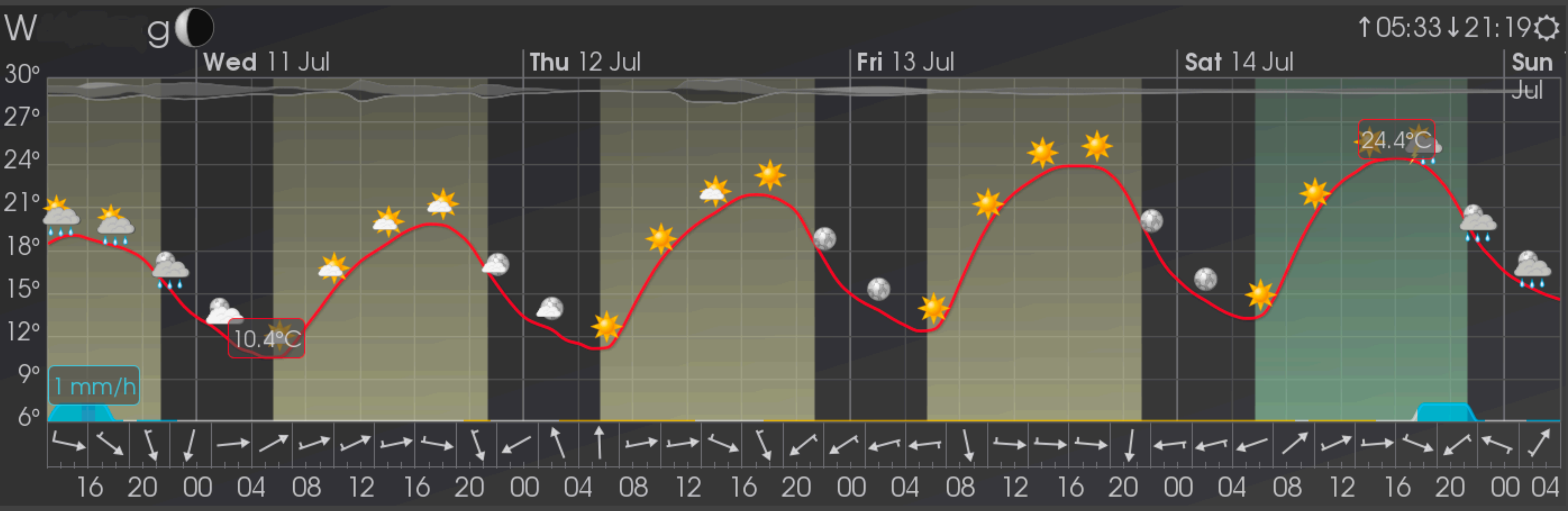






20,5 °C  
 gefühlt: 22,4 °C

13:37  
 Dienstag, 10. Juli



Max. heute	20 °C
Max. morgen	20 °C
Min. vergangene Nacht	14 °C
Min. kommende Nacht	10 °C ↘ 4

RaWeg:	14.07. (4 T.)
Biotonne:	16.07. (6 T.)
Restmüll:	23.07. (13 T.)
Papier:	02.08. (23 T.)

Name Test	16.07. (6 T.)
Test Name	03.08. (24 T.)
Max Mustermann	05.08. (26 T.)
Tom und Jerry	06.08. (27 T.)

keine Unwetterwarnung

Pollen (Eiche) heute: 0, morgen: 0 (Werte: 0 bis 3)

Abstellr. lüften? **wäre gut**

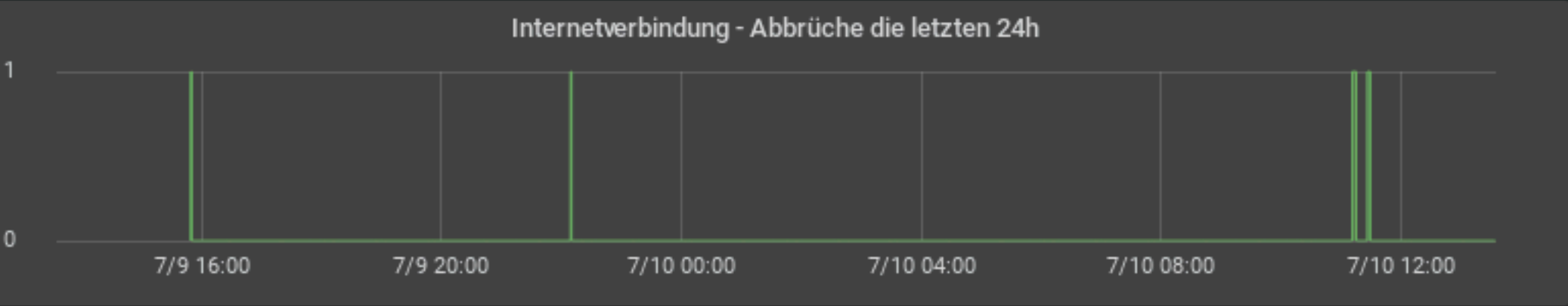
Nach Lüften: 54 %

Feuchte draußen: 56 %

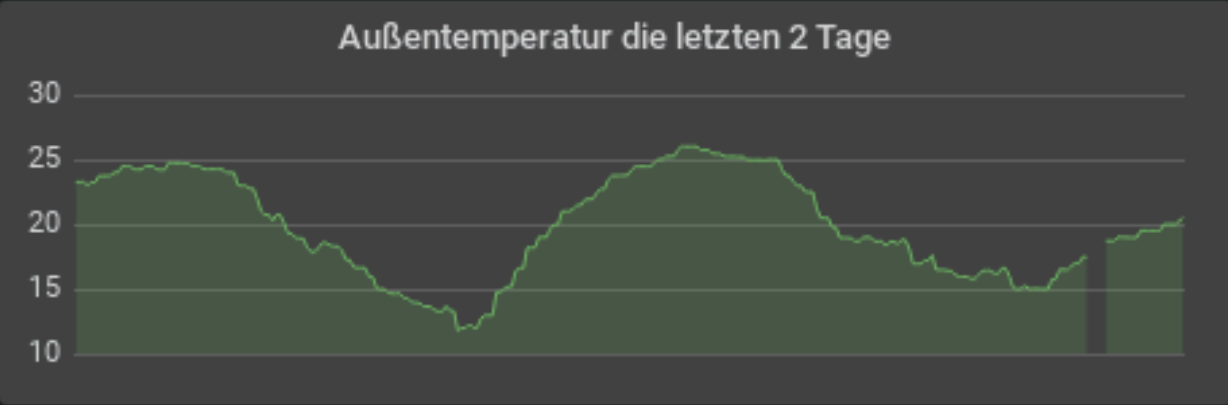
Temp. Abstellr. 21,0 °C



0123456789	09.07.18 17:21
Testname1	09.07.18 14:54
Testname2	08.07.18 14:40
0987654321	07.07.18 19:59



Steuerung Kodi  
 (Radiosender, Laut/Leise)










demo.openhab.org

Set Presence when correct pin code received Save (Ctrl-S)




Design Code

Status: **IDLE**  



Unique ID	presence_pincode
Name	Set Presence when correct pin code received 
Description	


 Reorder

### When

-  **When AlarmSystem\_PinCode was updated to 1234**   
This triggers the rule if an item state is updated (even if it does not change).
-  Add Trigger

### Then


-  **Send command ON to Presence**   
Sends a command to a specified item.

 **openHAB**  
empowering the smart home

- Positions >
- Floorplans >
- Charts >
- Temperatures >

Administration

- Settings >
- Things
- Model
- Items
- Pages
- Rules >**
- Scenes

 **demo**  
https://demo.openhab.org



demo.openhab.org

Back

openHAB  
empowering the smart home

- Positions
- Floorplans
- Charts
- Temperatures
- Administration
  - Settings
    - Things
    - Model
    - Items
    - Pages
    - Rules**
    - Scenes
    - Scripts
    - Schedule
  - Developer Tools

- Logic
- Loops
- Math
- Text
- Lists
- Color
- openHAB
  - Items & Things
  - Timers & Delays
  - Voice & Multimedia
  - Units of Measurement
  - Dates & Times
  - Ephemeris
  - Notifications
  - Persistence
  - Value Storage
  - Run & Process
  - Logging & Output
- Variables
- Functions
- Libraries

Edit Script  
application/javascript

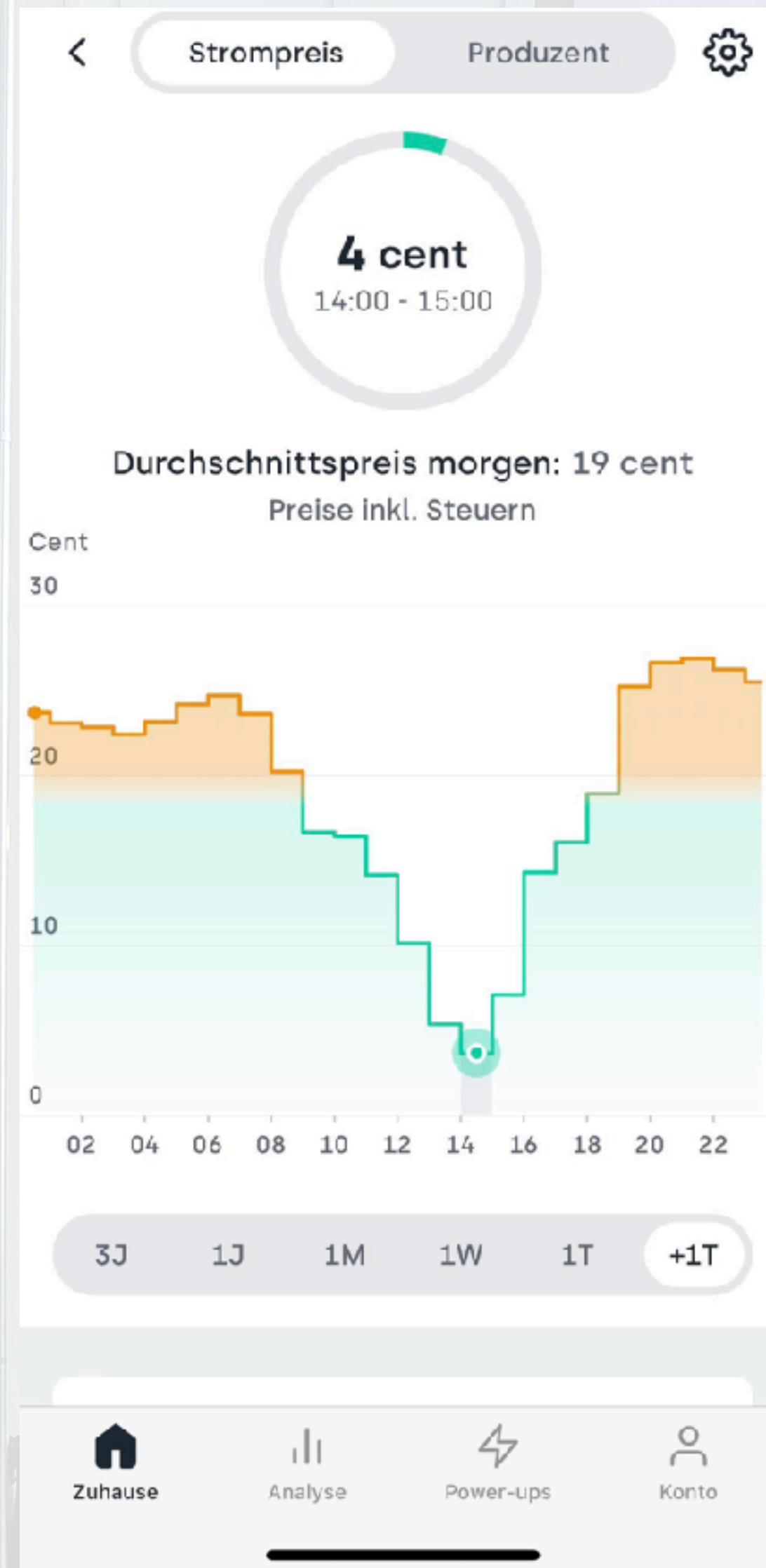
Save (Ctrl-S)

```
for each item i in list
do
  create list with
  - item AmeliaPos
  - item OliverPos
  set pos to
  - make text from list
  - create list with
  - 52 + random fraction
  - 13 + random fraction
  post update pos to i
```

Run Now (Ctrl-R) IDLE



# ANWENDUNGSSZENARIEN - ENERGIE



**260 km**  
Wird geladen  
2 Std. verbleibend

HANDYSCHLÜSSEL  
Getrennt

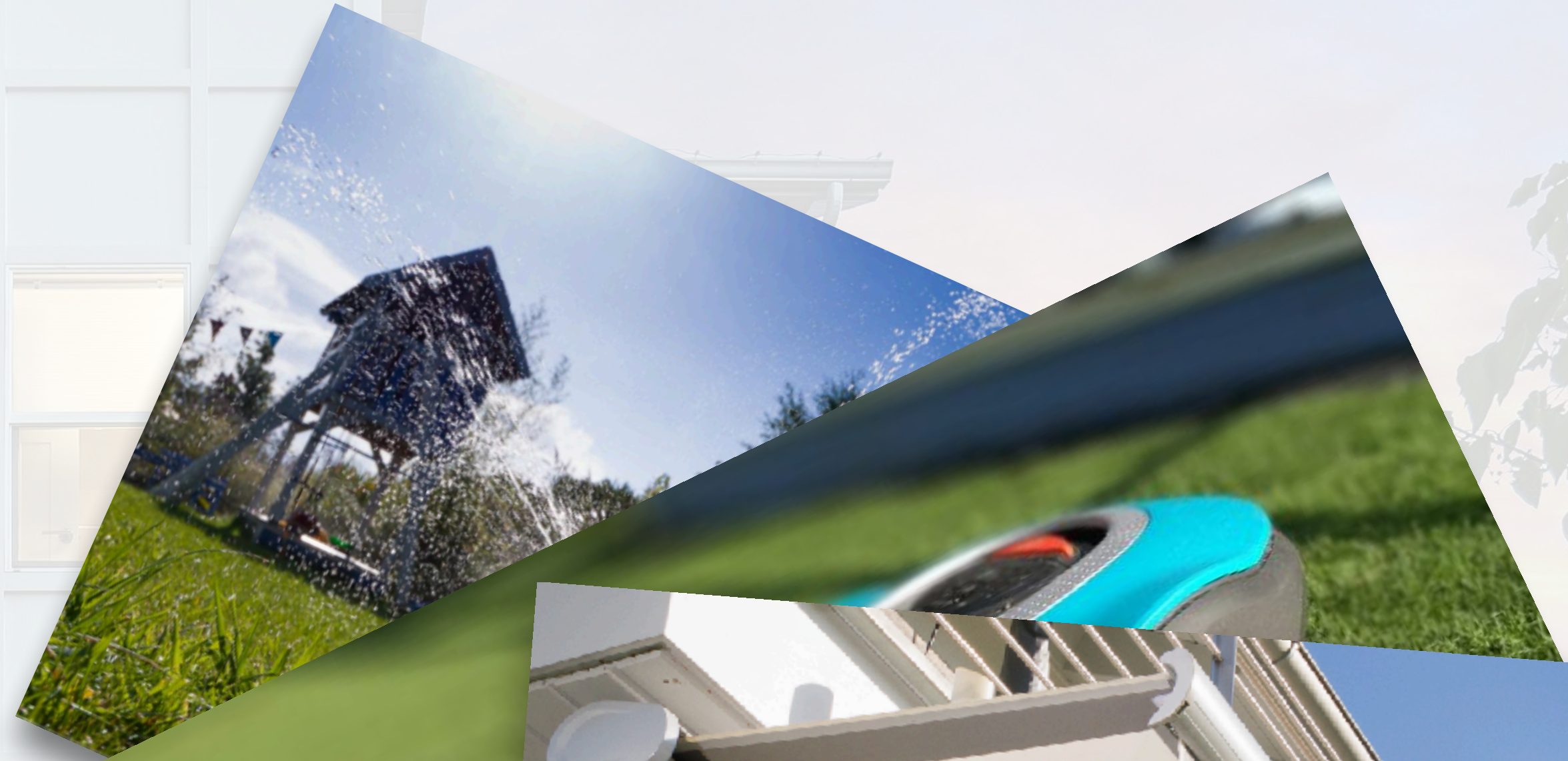
KLIMA  
Innenraum 9°C

FAHRZEUG

AUFLADEN  
68 km/hr



# ANWENDUNGSSZENARIEN – KOMFORT





# ANWENDUNGSSZENARIEN - SICHERHEIT





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**VIELEN DANK!**

X @kaikreuzer

Kai Kreuzer, openHAB Foundation e.V.