

SMART LIVING FORUM, 18. NOVEMBER 2023, SOLINGEN

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# INTEROPERABILITÄT IM SMART HOME

X @kaikreuzer

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

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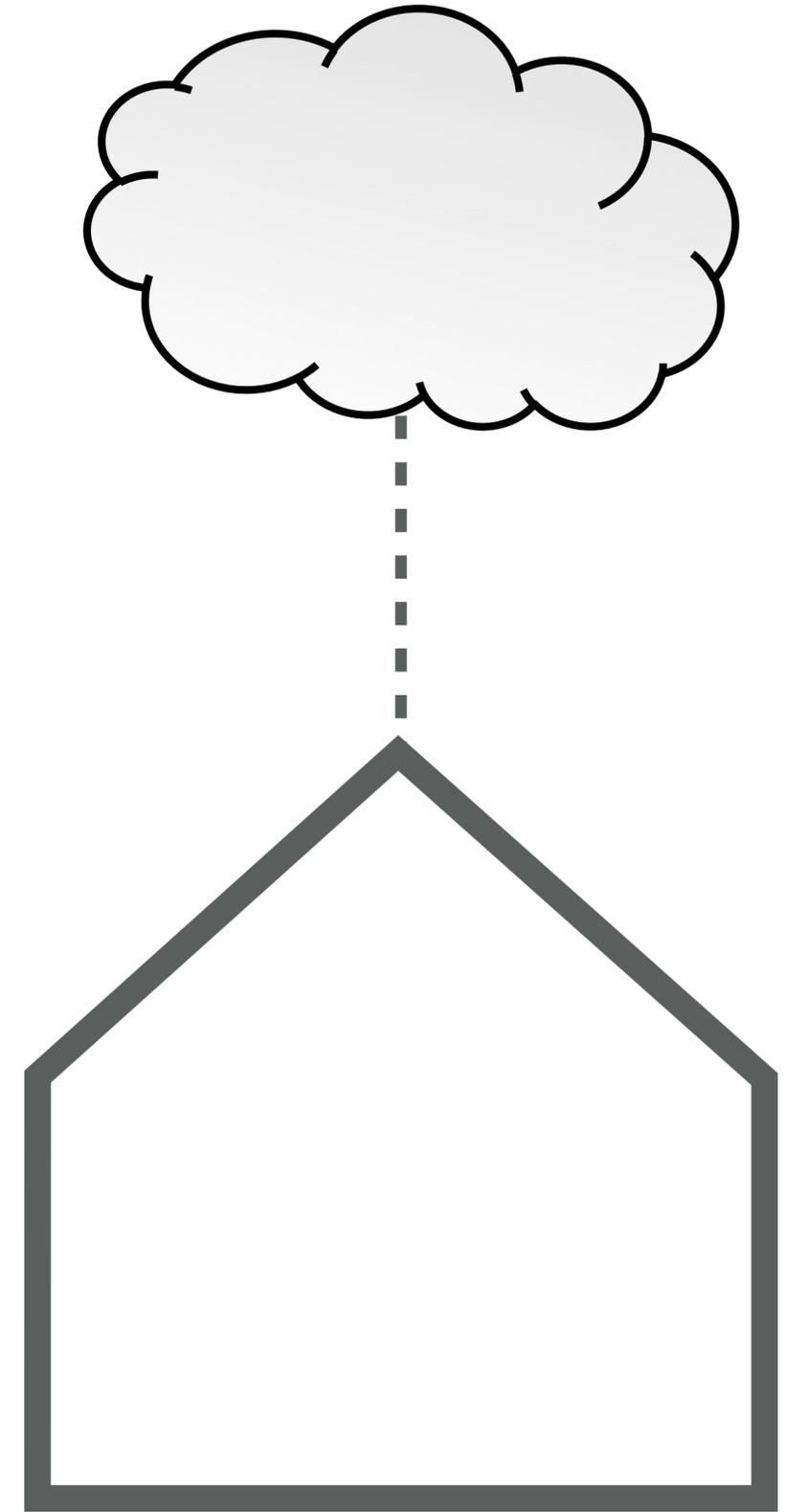


# There is NO CLOUD, just

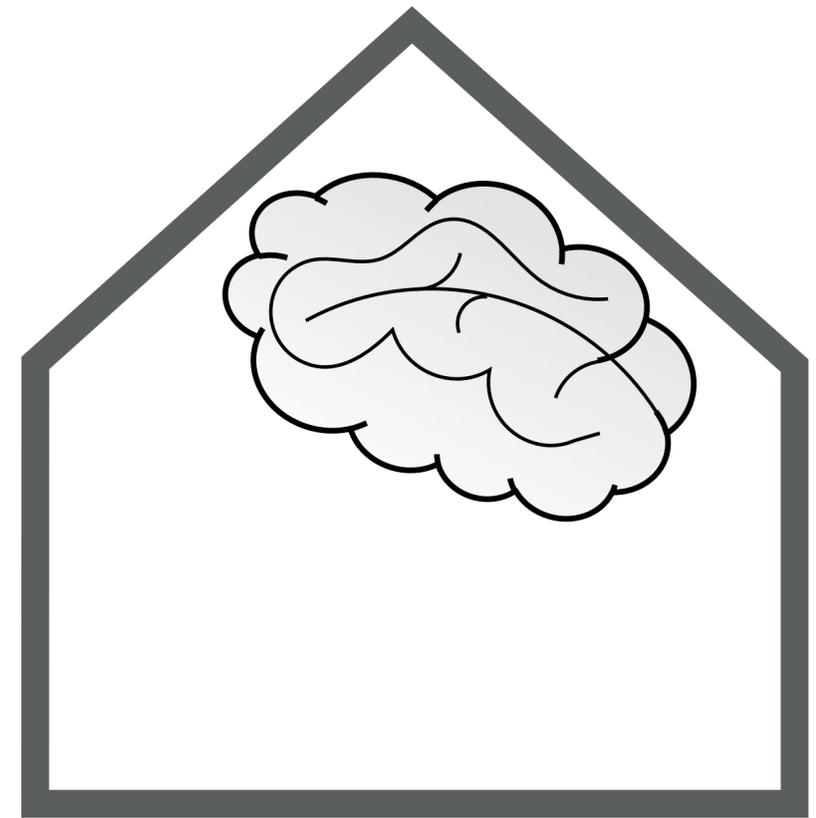


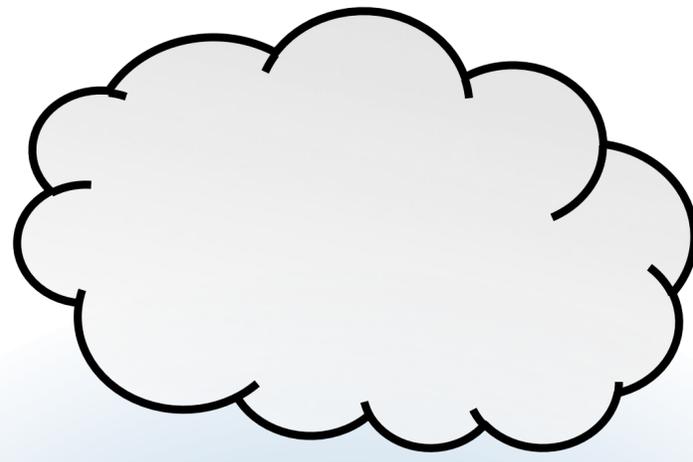
# other people's computers

**CONNECTED  
HOME**



# SMART HOME



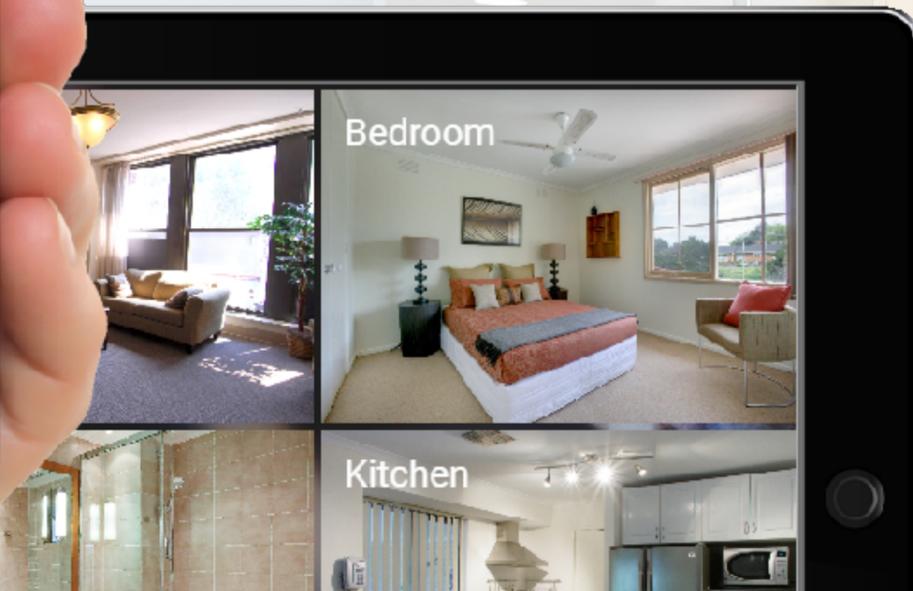
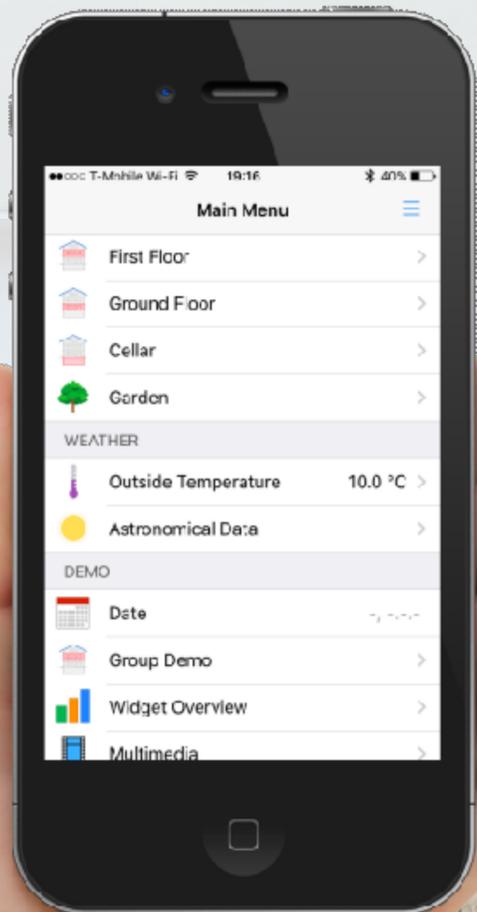


# INTRANET OF THINGS



# 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. Philips Hue, Amazon Echo, Chromecast, and many other available add-ons and support documentation are available at <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



demo.openhab.org

### Floorplans

The image shows a 3D perspective view of a house's ground floor. The layout includes a living area with a grey sofa and a green patterned rug, a dining area with a wooden table and chairs, a kitchen with a white countertop and sink, and a bedroom with a wooden desk and yellow chairs. A staircase with wooden steps is visible on the left side. Various smart home icons are overlaid on the floorplan, including light bulbs, a lightbulb with a yellow glow, and a lightbulb with a white glow. Temperature sensors are also present, with labels: 20 °C in the kitchen, 18.7 °C in the bedroom, 21.6 °C in the living area, and 18 °C in the living area. The interface includes a sidebar on the left with the openHAB logo and navigation options: Positions, Floorplans (highlighted), Charts, Temperatures, and Help & About. The top of the browser window shows the URL 'demo.openhab.org' and standard browser controls. The bottom of the interface has a 'Ground Floor' button and a 'First Floor' button, with a 'Leaflet' logo in the bottom right corner.

openHAB  
empowering the smart home

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

20 °C

18.7 °C

21.6 °C

18 °C

Ground Floor

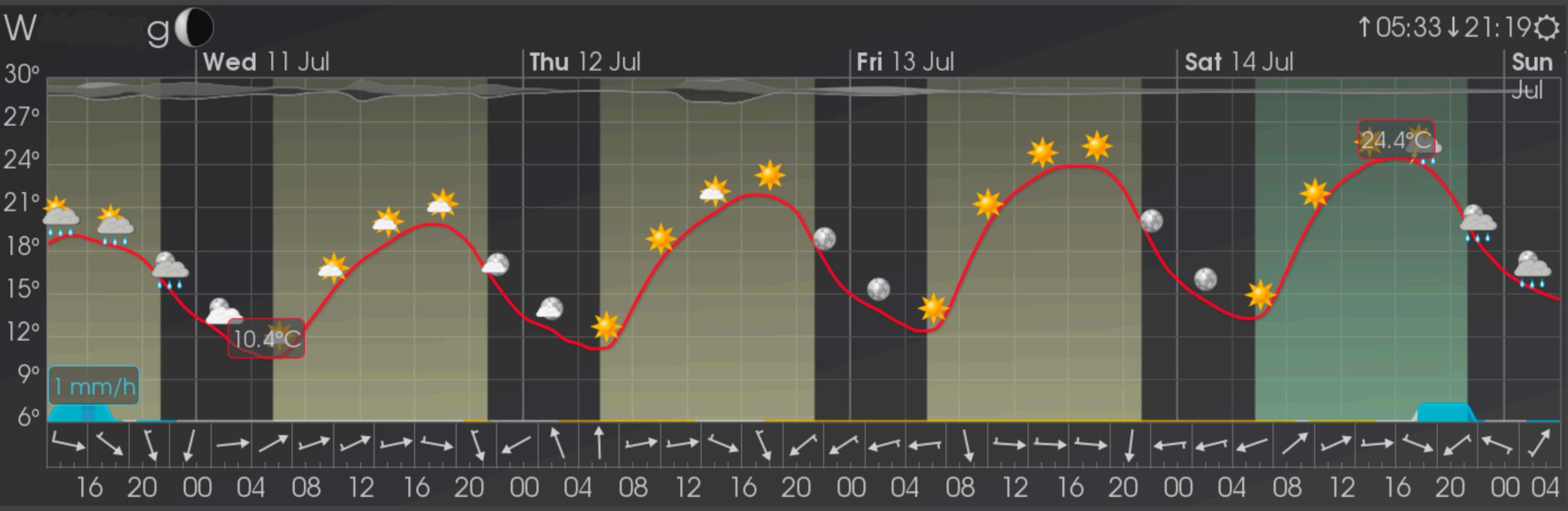
First Floor

Leaflet



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

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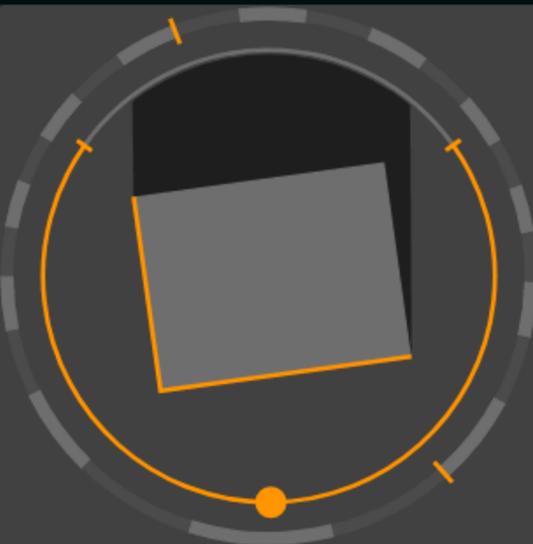
Pollen (Eiche) heute: 0, morgen: 0 (Werte: 0 bis 3)

Abstellr. lüften? **wäre gut**

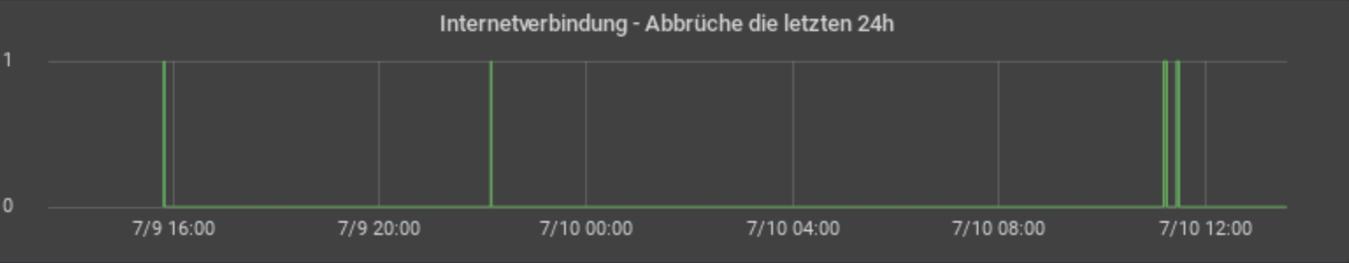
Nach Lüften: **54 %**

Feuchte draußen: **56 %**

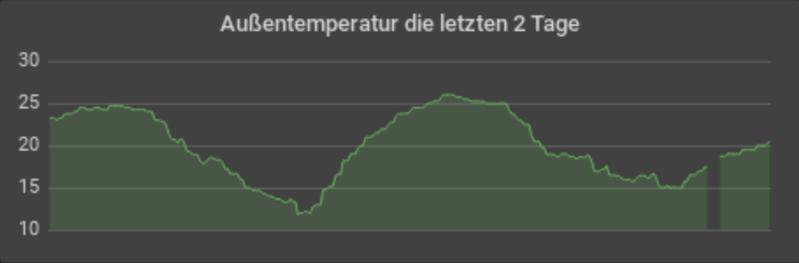
Temp. Abstellr. **21,0 °C**



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

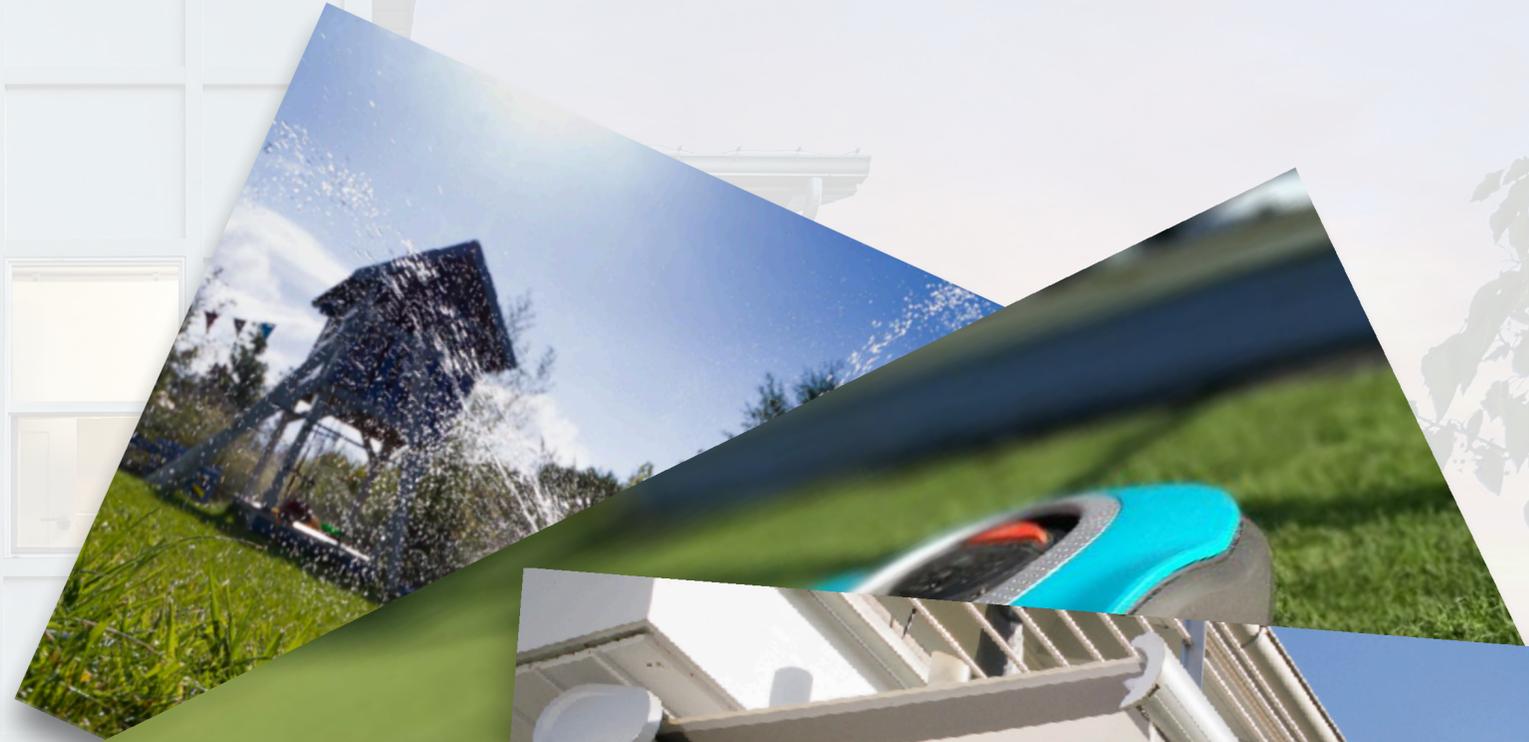
HANDYSCHLÜSSEL  
Getrennt

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.