

# openHAB



openHAB is an alternative to [Home Assistant](#), and somewhat easier to configure. Where [Home Assistant](#) is Python/Yaml based, openHAB is Java.

Both systems has great capabilities, and differs a lot in the approach, I like UIs for config - this is a little "better" and the UI configuration is nice.

One of the parameters for choosing, can be the amount or specific support for devices, its seems to me that [Home Assistant](#) has quite a lot more that openHAB, but also that several of them lacks functionality and are difficult to actually configure/use; I never understood the "media\_player" stuff in [Home Assistant](#). Visit the [Showcase and How-tos](#) site.

OpenHAB 2 supports the new [Eclipse SmartHome APIs](#) for bindings, and additional bindings can be found at [GitHub](#)

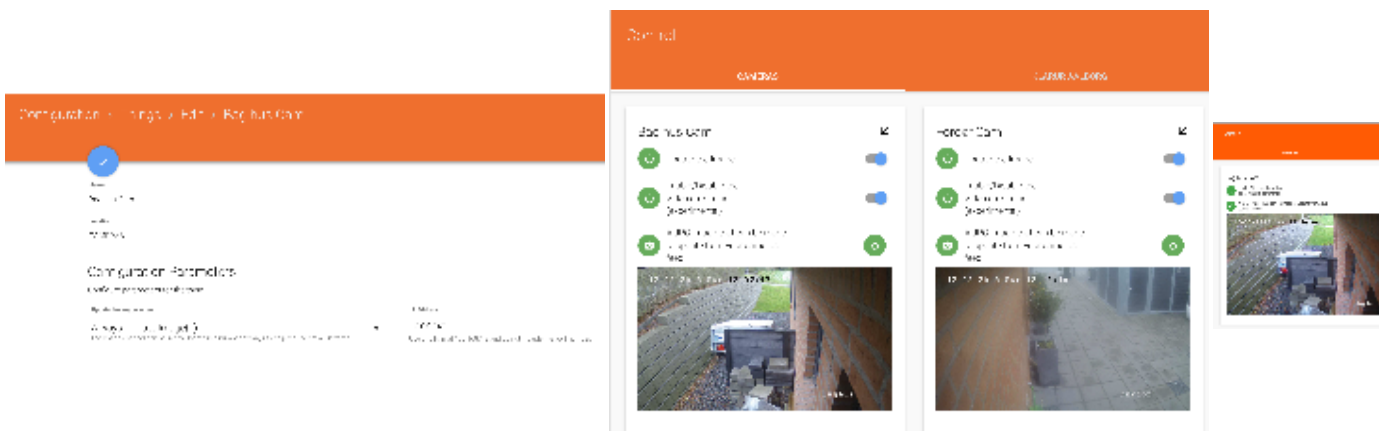
For the HAPanel in OpenHAB, theres a wide varity of widgets

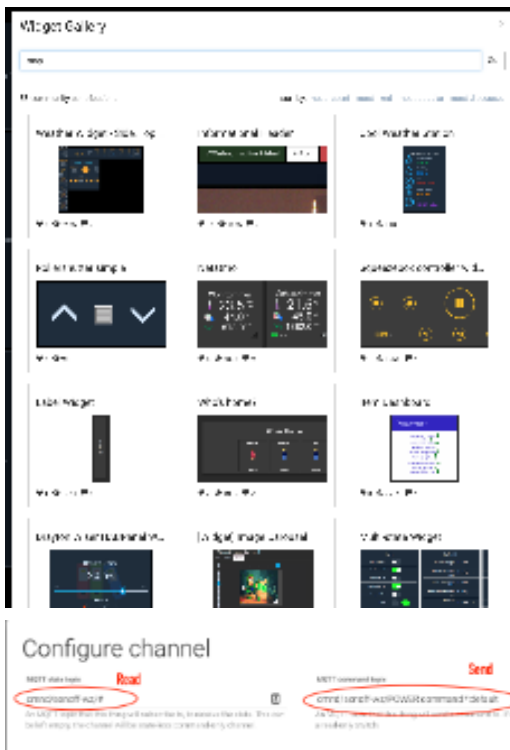
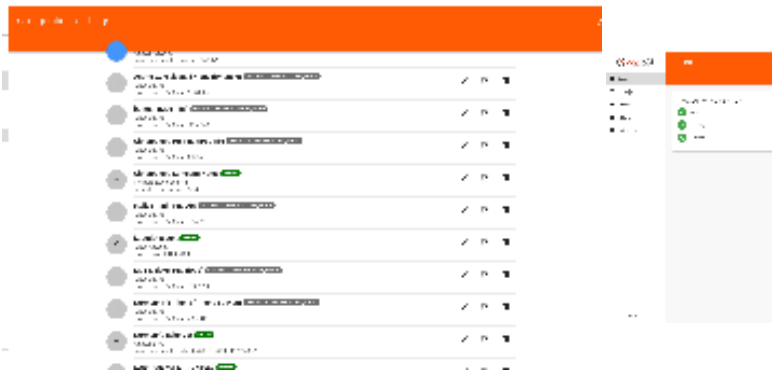
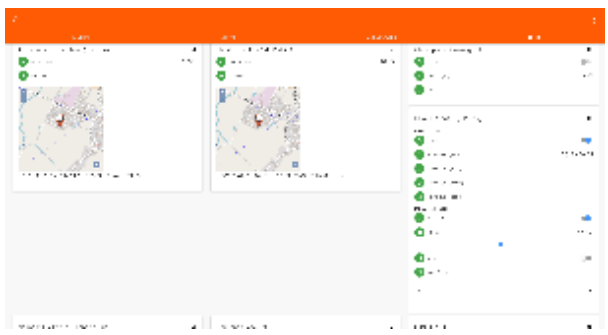
I do use [Home Assistant](#) now a days - I has a more rapid release cycle and getting a lot of UI improvements...

## Topics

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## Screenshots





**MQTT Binding**  
binding-mqtt - 2.4.0



## Docker

<https://www.openhab.org/docs/installation/docker.html>

Very easy to start and configure.

```
docker run \
  --name openhab \
  --net=host \
  -v /etc/localtime:/etc/localtime:ro \
  -v /etc/timezone:/etc/timezone:ro \
  -v /opt/openhab/conf:/openhab/conf \
  -v /opt/openhab/userdata:/openhab/userdata \
  -v /opt/openhab/addons:/openhab/addons \
  -d \
  -e USER_ID=1003 \
  -e GROUP_ID=9001 \
  --restart=always \
  openhab/openhab
```

## Backup

The easiest way is to make a cron job for backup, information on backup and restore are at <https://www.openhab.org/docs/installation/linux.html#backup-and-restore>



Also, do review the latter [openHAB Backup](#)

```
sudo apt-get install zip
sudo vi /etc/crontab

0 22 * * * /opt/openhab/bin/backup
```

If You run the backup job manually one time, the location of the backup file(s) are shown:

```
root@homeassist:/opt/openhab/bin# ./backup

#####
      openHAB 2.x.x backup script
#####

Using '/etc/openhab2' as conf folder...
Using '/var/lib/openhab2' as userdata folder...
Using '/usr/share/openhab2/runtime' as runtime folder...
Using '/var/lib/openhab2/backups' as backup folder...
Writing to '/var/lib/openhab2/backups/openhab2-backup-18_12_22-11_44_32.zip'...
Making Temporary Directory if it is not already there
Using /tmp/openhab2/backup as TempDir
Copying configuration to temporary folder...
Removing unnecessary files...
Backup Directory is inside userdata, not including in this backup!
Zipping folder...
Removing temporary files...
Success! Backup made in /var/lib/openhab2/backups/openhab2-backup-18_12_22-11_44_32.zip

root@homeassist:/usr/share/openhab2/runtime/bin#
```



A test - moving from one server to a new showed me that the backup is not "complete", as 2 things went wrong:

- The camera binding that I manually added in the "addon" folder was not in the backup
- [Things](#) binded to the camera binding was broken (after the jar file was added, bindings were fine again)
- A Thing that was disabled was not disabled after the restore (It actually seems that Disabled is "stateless" and does not survive an openHAB Restart)

## Security

Notice that OpenHAB has no security, and You need to install it in front of openHAB. Do read [Securing Communication and access to openHAB](#)

Link for setting username password: [Ngix](#) and [Apache](#)

## Things on Tabs

For each [Thing](#), there is a Location field, that represents (at least) a Tab in the Paper UI:

Configuration > Things > Edit > Bag hus Cam

✓

Name

Bag hus Cam

Location

CAMERAS

Configuration Parameters

Configure parameters for the thing.

Update the Image when:

Always Update Image(1)

The Image channel can be set to Update in a number of ways to help reduce network traffic.

IP Address

10.0.0.140

Use this format 192.168.1.2 and do not include the port number.

Control

CAMERAS

KLARUP, AALBORG

Bag hus Cam

Update the Image

Enable/Disable the Video streaming (experimental)

A JPG Image that can be made to update from your cameras feed.

12-22-2018 Sat 12:07:42

Baghus

Fordør Cam

Update the Image

Enable/Disable the Video streaming (experimental)

A JPG Image that can be made to update from your cameras feed.

12-22-2018 Sat 12:12:10

Fordør

## Camera Binding

I use <https://github.com/Skinah/IpCamera> for my HIKVisions, but only with images currently. It works okay.

[ipcamera15-12-2018.zip](#)

## MQTT Server

Install the MQTT Service - this in an Internal MQTT Broker (Server)

Embedded MQTT Broker  
misc-mqttbroker - 2.4.0

Configure the broker.

## MQTT Bindings and Channels

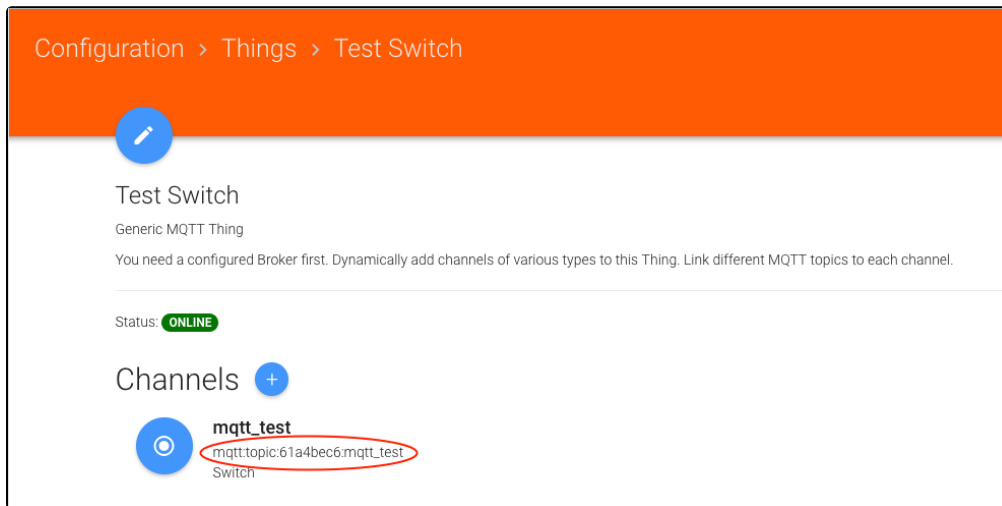
Install the MQTT Binding



## MQTT Binding

binding-mqtt - 2.4.0

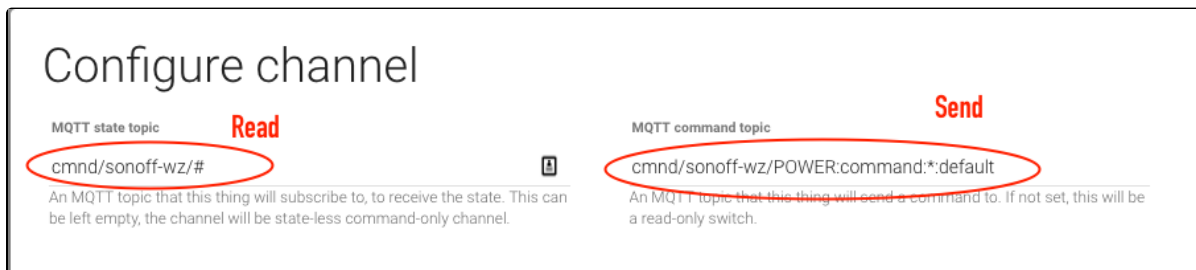
Then Create Things and Channels:



The **Thing** is the "physical" device, like a light Switch, and the Channel(s) is the properties the Light switch has - now, a switch has only On/Off, but other **Things** may have several properties, an engine can have On/Off, Temperature, Rounds Per Minute etc.

Pressing "+" for adding a channel gives the options.

Define the Channel - typically where to send the command, and where to read the state:



Notice [The Homie convention](#), when deciding MQTT Topics

For HABPanel, the Channel can be used instantly, for a [Sitemap](#) in the Basic UI, You need to link the Channel to an [Item](#) in an items file (Notice the Channel name from the screenshot above):

### mqtt.items

```
Switch mqtt_test "Test switch" {channel="mqtt.topic:61a4bec6:mqtt_test"}
```

Now we have an item that can be used on a [Sitemap](#)

## MQTT Demo Video

This shows the above configuration in action - the Basic UI in upper left, the HABPanel in lower left, an external MQTT Client in upper right and the logging in the Event logfile in lower right.

Notice that the Sitemap does not always update instantly, no clue why currently.

## Links

### Great tutorial

<https://mysmarthomeweb.wordpress.com/>

### Examples of configs for HABPanel

<https://community.openhab.org/t/examples-of-habpanel-solutions/15557/39>

### Matrix theme

<https://community.openhab.org/t/matrix-theme-for-habpanel/31100>

### Hacking Basic UI

<https://community.openhab.org/t/hacking-basicui-my-current-theme-oh2-setup-update-with-repo/45850>

### Eclipse IoT Marketplace

<https://www.openhab.org/docs/configuration/eclipseiotmarket.html>

### OpenHAB with Wavin Gulvarme

<https://www.lav-det-selv.dk/forum/aft/210932>

### Things to do with your network-connected Denon/Marantz receiver

<http://techblog.vindvej.dk/?cat=13>

### Controlling IKEA Trådfri Lights from your Pi

<https://learn.pimoroni.com/tutorial/sandyj/controlling-ikea-tradfri-lights-from-your-pi>

### My smarthome with openHAB2

<https://mysmarthomeweb.wordpress.com/>

### The Homie convention

<https://homieiot.github.io/>