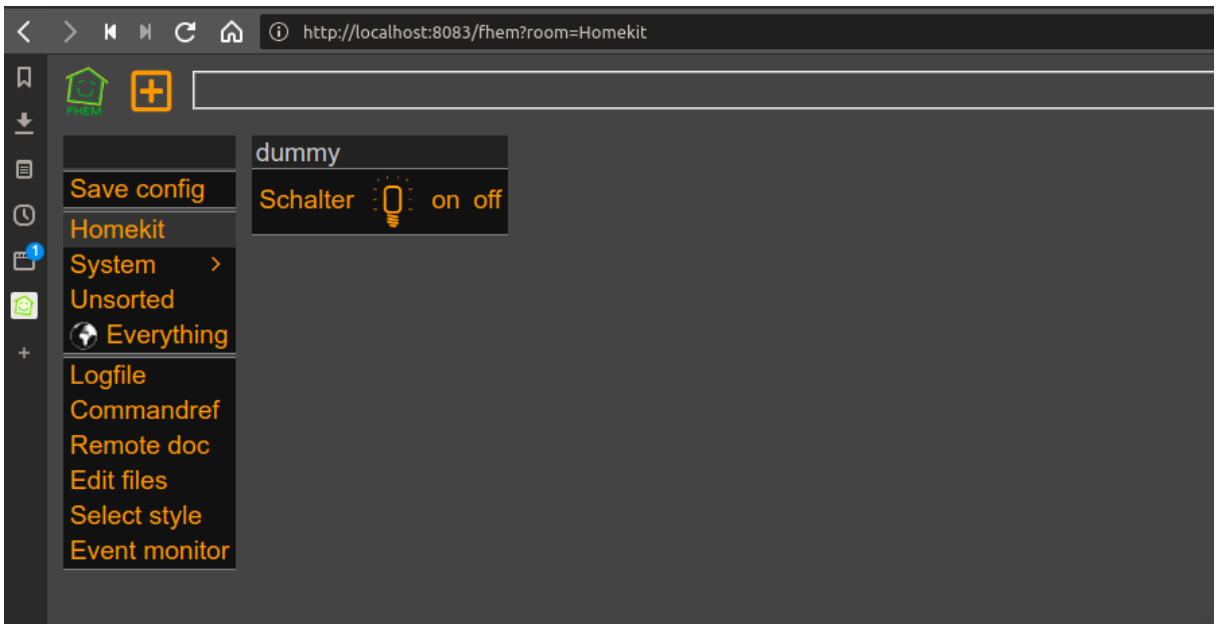
Home Automation Stack



The stack contains everything to run FHEM on a Docker host. Mosquitto is used as message broker. SIRI functions are realized with the help of a homebridge container. The complete stack runs on x86 as well as arm architectures. It is very easy to clone its complete productive environment and has a simple way to build a test system.

Todo

- deCONZ Image Container Integration
- DBLog Integration

Requirements

- docker
- docker-compose

Installation raspberrypi

Raspian Download

Download the image of your choise: Raspian Download Unzip the image and install it with:

```
sudo dd bs=4M if=2019-09-26-raspbian-buster-full.img of=/dev/mmcblk0
   conv=fsync
sync
```

Eject the card and insert it again to mount the filesystems boot & rootfs. Touch a blank file ssh to enable

```
sudo touch /media/boot/ssh
sync
umount /media/boot
umount /medua/rootfs
```

Eject the card and insert into your raspberrpi. After that power on the rpi and login with the known

```
ssh pi@raspberrypi4
```

```
pi@raspberrypi:~ $ passwd
Changing password for pi.
Current password:
New password:
Retype new password:
passwd: password updated successfully
pi@raspberrypi:~ $
```

System Update

```
sudo apt-get update
sudo apt-get dist-upgrade
```

Set timezone

```
sudo dpkg-reconfigure tzdata
```

Raspberry Config

1) Expand the root filesystem (A1 / Advanced Options)
2) Update raspi-config

   sudo raspi-config sudo reboot

Intall additional packages

```
sudo apt-get install wget git apt-transport-https vim telnet zsh zsh-autosuggestions zsh-syntax-highlighting
```

Install oh-my-zsh

```
sh -c "$(curl -fsSL https://raw.github.com/ohmyzsh/ohmyzsh/master/tools/install.sh)"
```

Install log2ram (/var/log 2 ram)

```
echo "deb http://packages.azlux.fr/debian/ buster main" | sudo tee /etc/apt/sources.list.d/azlux.list
wget -qO - https://azlux.fr/repo.gpg.key | sudo apt-key add -
apt update
apt install log2ram
```

Setup ssh key for user

```
ssh-keygen -t rsa -b 8192
```

Install .ssh/config file to ignore strictHostKeyChecking

```
vi ~/.ssh/config

Host fhemlocalhost
Hostname localhost
Port 222
User fhem
StrictHostKeyChecking no
```

Install docker & docker-compose

```
#curl -sSL https://get.docker.com | sh
#sudo systemctl enable docker
#sudo systemctl start docker
sudo apt-get install docker docker-compose
sudo usermod -aG docker pi
sudo reboot
```

git repository export and start all container

```
cd
git clone https://github.com/stormmurdoc/fhemdocker.git
cd fhemdocker
docker-compose up
```

Access the application

```
http://localhost:80
```

Container

Tasmota Admin

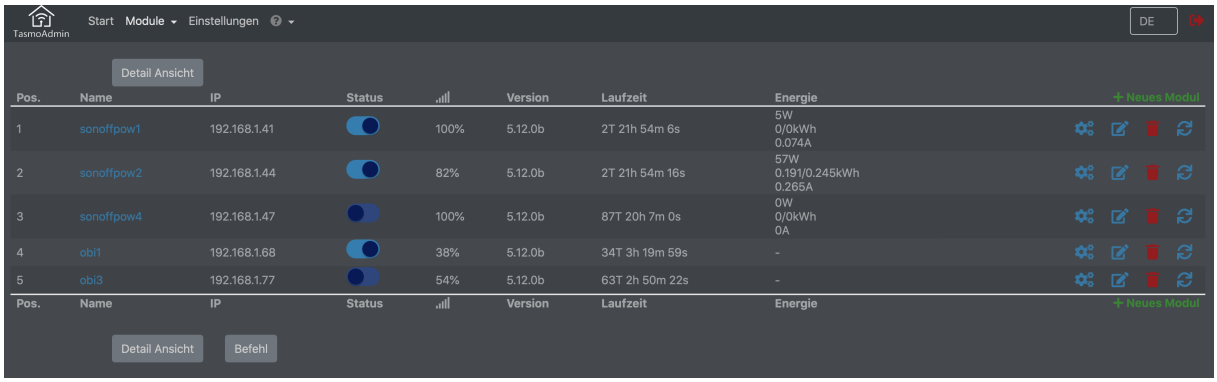


Abbildung 1: “tasmotaadmin”

Tasmota Compiler

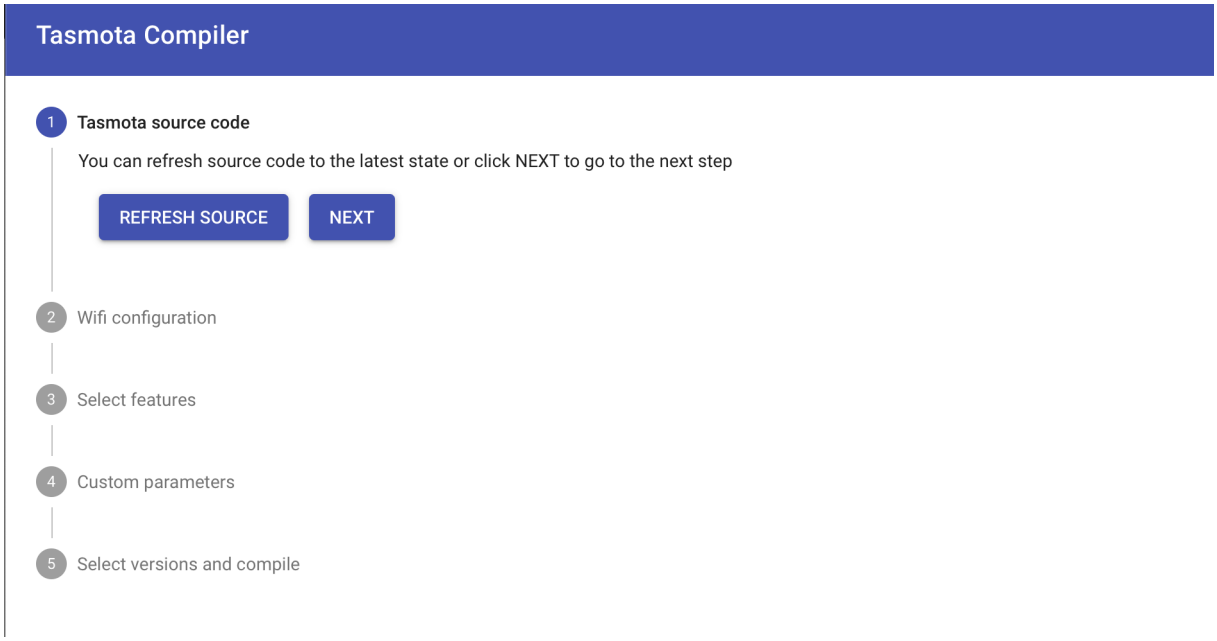


Abbildung 2: “tasmotacompiler”

Homebridge

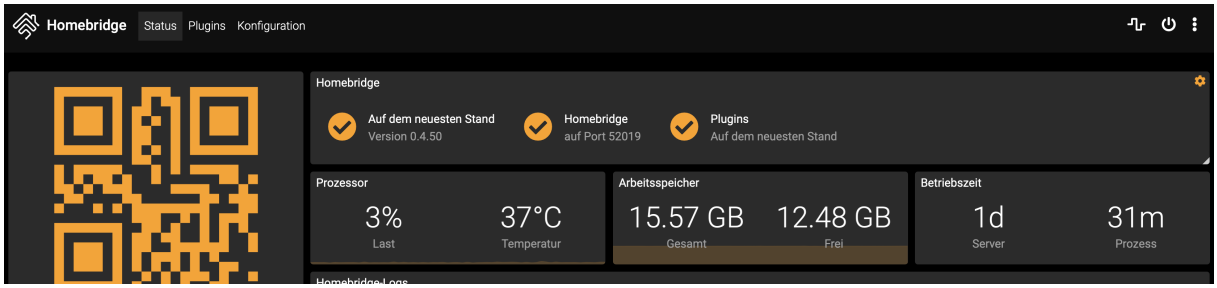


Abbildung 3: “homebridge”

Portainer

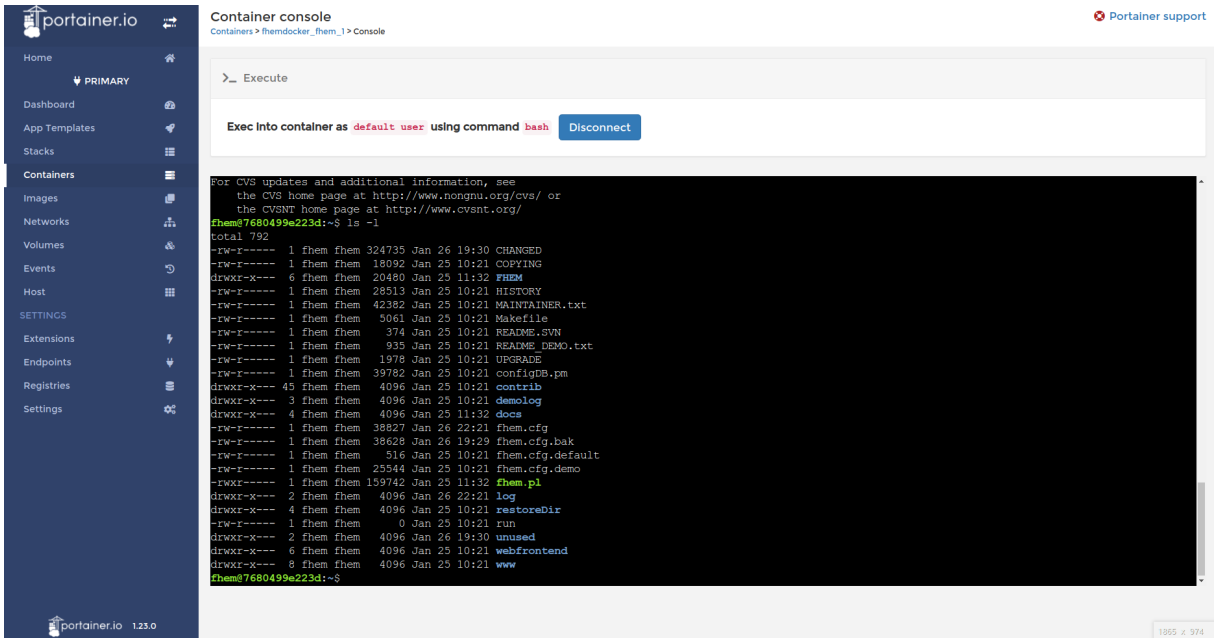


Abbildung 4: “portainer”

ctop

Description

ctop is a commandline monitoring tool for linux containers

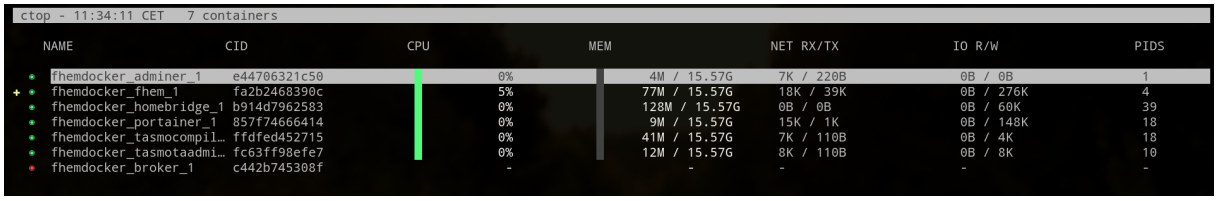


Abbildung 5: “ctop”

Installation

ctop is available in AUR, so you can install it using AUR helpers, such as YaY, in Arch Linux and its variants such as Antergos and Manjaro Linux.

Installation Linux

```
sudo wget https://github.com/bcicen/ctop/releases/download/v0.7.3/
    ctop-0.7.3-linux-amd64 -O /usr/local/bin/ctop
sudo chmod +x /usr/local/bin/ctop
```

```
sudo wget https://github.com/bcicen/ctop/releases/download/v0.7.3/
    ctop-0.7.3-linux-arm -O /usr/local/bin/ctop
sudo chmod +x /usr/local/bin/ctop
```