home assistent program (tutorial)

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inleiding: in deze documentatie ga ik uitleggen hoe het werkt met home assistent en vooral wat het is en waar je het precies voor nodig hebt of voor kan gebruiken. Het belangrijkste is dat je met deze documentatie de basis van de betekenis van home assistent kent en vooral begrijpt.

Wat is home assistent:

Home assistent is een soort control systeem die ervoor zorgt dat je controle hebt over de apparaten die in jou huis geinstaleerd zijn. Het is bijvoorbeeld voor het controleren van de lampen die uit gaan of aan als iemand binnen of naar buiten gaat. Dit is eigenlijk in het kort wat home assistent eigenlijk is.

Hoe communiceert home assistent met sensoren en knoppen:

De sensoren maken de connectie via de home assistent app zelf. De informatie die uitgezocht wordt komt door verschillende apparaten en natuurlijk ook web services. Deze mogelijkheden komen door de wijde kracht van de grote van de support van home assistent op verschillende sensoren.

Hoe instaleer je home assistent op raspberry pi:

Ik heb een step by step program voorbereid waar je kan zien hoe je home assistent installeerd op je raspberry pi. Dit stappen plan is in het engels voorbereid voor betere duidelijkheid bij het instaleren.

This installation of Home Assistant Core requires the Raspberry Pi to run [Raspberry Pi OS Lite](https://www.raspberrypi.org/downloads/raspberry-pi-os/). The installation will be installed in a [Virtual Environment](https://www.home-assistant.io/docs/installation/virtualenv) with minimal overhead. Instructions assume this is a new installation of Raspberry Pi OS Lite.

You must have Python 3.8 or later installed (including the package python3-dev) which is *not* the case for Raspberry Pi OS and you will need to install Python manually.

Although these installation steps specifically mention a Raspberry Pi, you can go ahead and proceed on any Linux install as well. This guide is also referred to as the "Advanced Guide" for a virtual environment install.

Please remember to ensure you’re using an [appropriate power supply](https://www.raspberrypi.org/documentation/faqs/#pi-power) with your Pi. Mobile chargers may not be suitable, since some are designed to only provide the full power with that manufacturer’s handsets. USB ports on your computer also will not supply enough power and must not be used.

Connect to the Raspberry Pi over SSH. Default password is raspberry. You will need to enable SSH access. The Raspberry Pi website has instructions [here](https://www.raspberrypi.org/documentation/remote-access/ssh/).

ssh [pi@ipaddress](mailto:pi@ipaddress)

Bash

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Changing the default password is encouraged.

passwd

Bash

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Update the system.

sudo apt-get update

sudo apt-get upgrade -y

Bash

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Install the dependencies.

sudo apt-get install python3 python3-dev python3-venv python3-pip libffi-dev libssl-dev libjpeg-dev zlib1g-dev autoconf build-essential libopenjp2-7 libtiff5

Bash

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Add an account for Home Assistant Core called homeassistant. Since this account is only for running Home Assistant Core the extra arguments of -rm is added to create a system account and create a home directory. The arguments -G dialout,gpio,i2c adds the user to the dialout, gpio and the i2c group. The first is required for using Z-Wave and Zigbee controllers, while the second is required to communicate with Raspberry’s GPIO.

sudo useradd -rm homeassistant -G dialout,gpio,i2c

Bash

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Next we will create a directory for the installation of Home Assistant Core and change the owner to the homeassistant account.

cd /srv

sudo mkdir homeassistant

sudo chown homeassistant:homeassistant homeassistant

Bash

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Next up is to create and change to a virtual environment for Home Assistant Core. This will be done as the homeassistant account.

sudo -u homeassistant -H -s

cd /srv/homeassistant

python3.8 -m venv .

source bin/activate

Bash

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Once you have activated the virtual environment (notice the prompt change to (homeassistant) homeassistant@raspberrypi:/srv/homeassistant $) you will need to run the following command to install a required Python package.

python3 -m pip install wheel

Bash

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Once you have installed the required Python package it is now time to install Home Assistant Core!

pip3 install homeassistant

Bash

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Start Home Assistant Core for the first time. This will complete the installation for you, automatically creating the .homeassistant configuration directory in the /home/homeassistant directory, and installing any basic dependencies.

hass

Bash

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You can now reach your installation on your Raspberry Pi over the web interface on http://ipaddress:8123.

When you run the hass command for the first time, it will download, install and cache the necessary libraries/dependencies. This procedure may take anywhere between 5 to 10 minutes. During that time, you may get “site cannot be reached” error when accessing the web interface. This will only happen for the first time, and subsequent restarts will be much faster.

**Updating**

To update to the latest version of Home Assistant Core follow these simple steps:

sudo -u homeassistant -H -s

source /srv/homeassistant/bin/activate

pip3 install --upgrade homeassistant

Bash

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Once the last command executes, restart the Home Assistant Core service to apply the latest updates. Please keep in mind that some updates may take longer to start up than others. If Home Assistant Core fails to start, make sure you check the **Breaking Changes** from the [Release Notes](https://www.home-assistant.io/latest-release-notes/).

**Run a specific version**

In the event that a Home Assistant Core version doesn’t play well with your hardware setup, you can downgrade to a previous release. For example:

sudo -u homeassistant -H -s

source /srv/homeassistant/bin/activate

pip3 install homeassistant==0.XX.X

Bash

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**Run the beta version**

If you would like to test next release before anyone else, you can install the beta version released every two weeks, for example:

sudo -u homeassistant -H -s

source /srv/homeassistant/bin/activate

pip3 install --pre --upgrade homeassistant

Bash

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**Run the development version**

If you want to stay on the bleeding-edge Home Assistant Core development branch, you can upgrade to dev.

The "dev" branch is likely to be unstable. Potential consequences include loss of data and instance corruption.

For example:

sudo -u homeassistant -H -s

source /srv/homeassistant/bin/activate

pip3 install --upgrade git+<git://github.com/home-assistant/home-assistant.git@dev>

Bash

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**Activating the virtual environment**

When instructions tell you to activate the virtual environment, the following commands will do this:

sudo -u homeassistant -H -s

source /srv/homeassistant/bin/activate

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