

# Learn about Home Assistant - Your home automation platform!

Home Assistant is an open source home automation platform that runs on Python 3.x, designed to be easily deployed on any computer from Raspberry Pi to network storage devices (NAS) and even a Docker container to deploy on other systems easily.

IoT - Internet of Things or Everything connected, you must have heard these concepts many times in recent years. And it is undeniable that IoT devices are becoming more and more popular. Typical in IoT is smarthome, smart houses. By the end of 2017, 26.5% of US households have adopted smart home technology in their homes, and this number is expected to double this year. In Vietnam, you can know two smart home solutions, Bkav Smarthome and Lumi.

SmartHome or Smart House is the technology term used to refer to homes with appliances, lights, heaters, televisions, computers, audio & video systems, security camera systems, yard systems. garden, . capable of connecting to each other and can be remotely scheduled time, from any room in the house as well as any location in the world, via phone, Internet . As a result, smart houses give owners a sense of security, comfort, convenience, more energy saving the way they want.

To get a smarthome you need to have a platform to do it. Imagine a smart home is like a computer, if you do not have an operating system installed, it is just a computer, you need to install an operating system like Windows, Linux or macOS to be able to use it. The only difference is that the smart home platform is more diverse, depending on the company developed, it has different characteristics.

Today, TipsMake.com will introduce you to a fairly famous home automation platform, which is loved by the community and used quite a lot, which is Home Assistant.

## What is the Home Assistant?

Home Assistant is an open source home automation platform that runs on Python 3.x, designed to be easily deployed on any computer from Raspberry Pi to network storage devices (NAS) and even a Docker container to deploy on other systems easily.

The Home Assistant integrates with a large number of open source and commercial products, allowing you to link devices and data together, such as IFTTT (if this then that - a tool to automate operations), weather information or Amazon Echo, to control indoor hardware, door lock to electric lights.

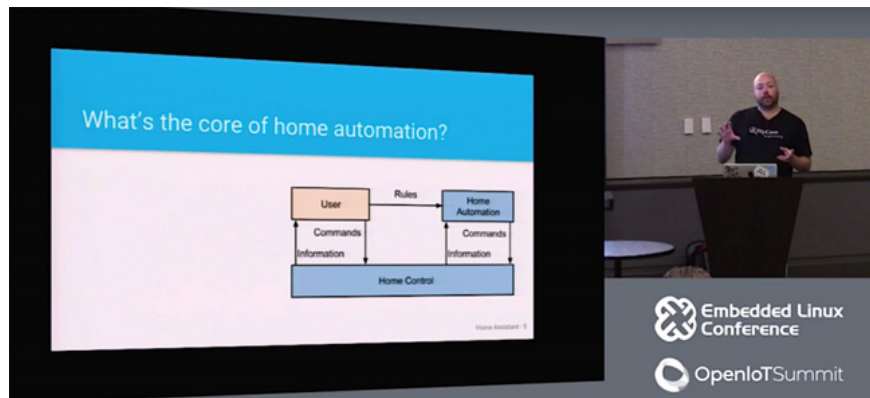
Some home automation platforms only support Python as an extension, but the Home Assistant can run on any device or service that can run Python 3, from desktop computers to Raspberry Pi. The Home Assistant project was launched in 2013, initiated by Paulus Schoutsen. Currently, this project has attracted 20 active people and

released updates twice a week.

## Some characteristics of Home Assistant

Like most automated systems, Home Assistant provides client versions on phones and computers to control smart home devices remotely. It is different from most commercial products that there is no central device, so there is no built-in radio. You can add the radio you want using USB.

The Home Assistant also does not have cloud computing components. Schoutsen argues that removing these components will help improve security, privacy, privacy and higher stability.



*Paulus Schoutsen lectures on home automation at OpenIoT Summit*

Because the Home Assistant is not completely different from other IoT frameworks, it is easy to connect to different platforms from Nest to Arduino or Kodi.

There is a strong point of the Home Assistant brought by Python: The system expansion is easy. Python is a dynamic language, which allows for the flexibility that Java programmers crave. With Python it's easy to test and create test templates for each new part on an existing installation without permanently affecting other components. Especially with the new version of Python that MicroPython has just launched for embedded systems, like the Arduino and ESP8266, it will become the common language for all IoT levels, from sensor to automation to Integration with third party services.

The Home Assistant is an event-based program that combines the state of the entity tracking status - all selected devices and the people you want to track. Each entity has an identifier, status condition and attributes. Properties are status descriptions, such as color, brightness levels on Philips Hue smart light bulbs.

For example, to integrate Philips Hue into the system, you need to use light components, can turn on the light and know how to read the state of the lamp (on or off). Home Assistant provides components for all supported devices, services, or easy access to component groups such as lighting, heat, switches, and garage doors. The setup process is also easy thanks to the ability to detect components and scan the network. If there is a supported device, setting it is almost an automated process.

## Features of Home Assistant

## Monitoring

The Home Assistant will monitor the status of all devices in your home on your behalf, as long as the devices are on the list supported by Home Assistant.

Up to the time of writing (12/01/2018) this platform supports 938 devices from Nest, IFTTT, Google, Hue, MQTT, Wemo, KODI, Plex, IKEA, vera, Arduino, Adobe, Amazon, Apple , Asus, Cisco, D-Link, Facebook, Huawei, LG, Microsoft, . Among them are very famous names like Amazon Echo, Facebook Messenger, Google Cast, Google Assistant, MPC-HC video viewing software , Kodi, LG Netcast TV, Apple smartTV, Samsung smart TV, Philips Hue Light smart light system, Adobe door lock system, MQTT, Vera, Tesla, .

You can find the full list of these devices on the platform's home page.

## Control

Control all devices from a single, phone-friendly interface. In particular, this platform does not store any user data on the server, thus ensuring a high level of privacy.

## Automation

Set up advanced rules to control equipment and turn your home into a dreamy paradise.

Do you want:

1. The lights turn on automatically when the sun goes down and then you're at home?
2. The light went on when someone came home and it was dark?
3. Reduce the brightness of lights when you watch movies on Chromecast?
4. Get notified when lights turn on while you're not at home?

## Home Assistant demo

If you want to tinker with this home automation platform, you can go here <https://home-assistant.io/docs/> . It includes the entire Home Assistant guide, from settings on operating systems, platforms, basic configuration, advanced configuration, scripts, tools, remote controls, .

Hopefully in the future, we can have more Vietnameseized documents on Home Assistant, a very interesting home automation platform.

See more:

1. 12 'must-have' devices for smart houses
2. Concept of e-Government
3. 20 great applications from micro-Raspberry Pi computers
4. How to run, Raspberry Pi emulator on computer?

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