

Digital Systems for Humans

Technological Challenges in IoT (DS4H-IoT)

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Install “Your own IoT Platform” (YoloT)

Using materials from:

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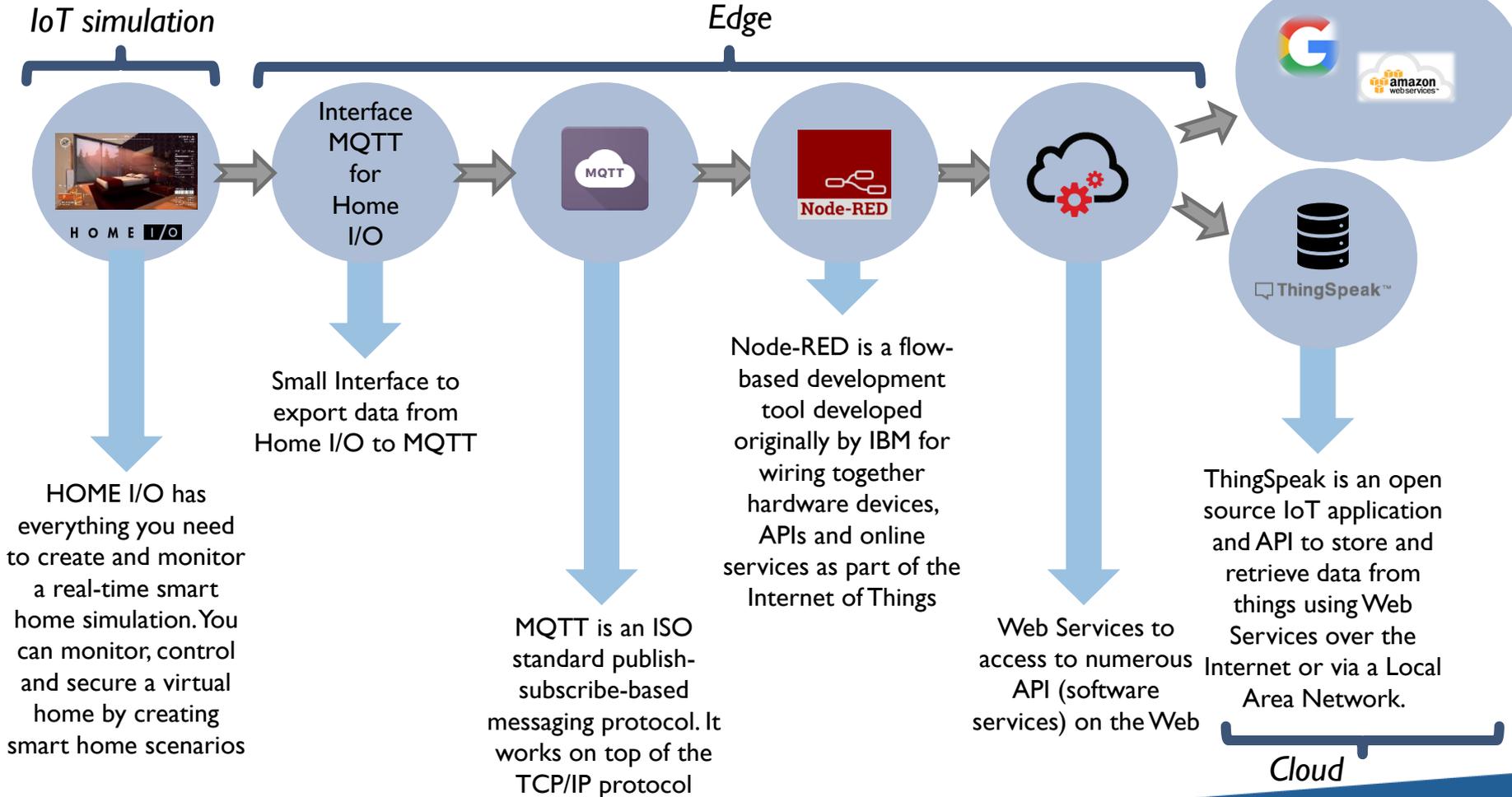


INTERNET OF THINGS FOR EUROPEAN
SMALL AND MEDIUM ENTERPRISES



Membre de UNIVERSITÉ CÔTE D'AZUR 

YOIOT ARCHITECTURE



INSTALLATION

Follow these instructions to use the demonstrator:

I. Download & Install Home I/O

- We will use Home I/O to simulate a home equipped with many connected sensors and actuators. Through this software, it will be possible to have access to simulated data (temperature, user's presence, ...) but also to act on the environment (turn on a light, control the heating, close the blinds, ...).

- To install the simulation environment, you can retrieve the software from one of the following adresse :

- <https://teachathomeio.com/telecharge-r-demo/>



INSTALLATION

2. Download & Install Node-Js

- You can go to the following page to download it for your system:
<https://nodejs.org/en/download/>

3. Download & Install Node-Red

- Now that you have the sensors and actuators of the simulator, you will be interested in the Node-RED environment that will allow us to exploit this information.
- Node-RED is based on Node. Once you have the Node.js environment on your machine, you can install Node-RED simply as an additional pack-age. You will follow the documentation available at the following address: <https://nodered.org/docs/getting-started/installation>

INSTALLATION

4. Download & Install Broker MQTT in Node-RED environment

- MQTT is a messaging protocol used in the Internet of Things. This one is based on a Publisher-Broker-Subscriber template. A Publisher sends the information to a Broker. A Subscriber will subscribe to a topic from a Broker.
- To make it easier to implement, you can start a Broker in Node-RED. But for that you must install an additional package. You can do this directly from the command line (but you will have to restart your Node-RED instance)
 - `npm install node-red-contrib-mqtt-broker`
- or from the Node-RED interface, go to the right menu and then "Manage Palette / Install". You will then type:
 - `node-red-contrib-mqtt-broker`
- By instantiating a node "mosca", for clicking on "Deploy" you will launch a MQTT Broker which will be available at the address `127.0.0.1:1883`.

INSTALLATION

5. Download HomeIO_MQTT.exe program

- http://trolen.polytech.unice.fr/cours/projet-si3/HomeIO_MQTT.zip

6. Create a Thing Speak account

- The default ThingSpeak service limit you to publish 1 data every 15 seconds. So, we installed a ThingSpeak server without that limitation.
 - Navigate to http://sparks-vm24.i3s.unice.fr:3000/users/sign_up
 - Create an account
 - Once logged in, navigate to <http://sparks-vm24.i3s.unice.fr:3000/account>
 - Write down the API key seen on this page



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