Developing an IoT System FIWARE based from the scratch

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Project manager, FIWARE developer, IoT Lover
Telecommunication Engineer (electronic & computer)

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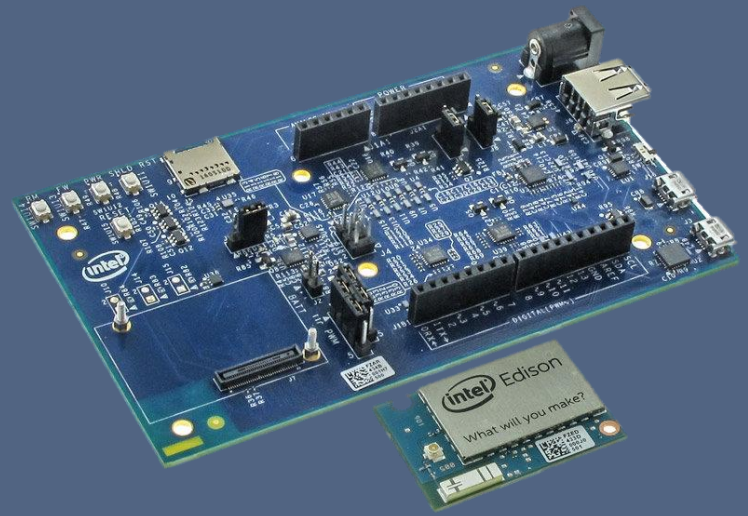
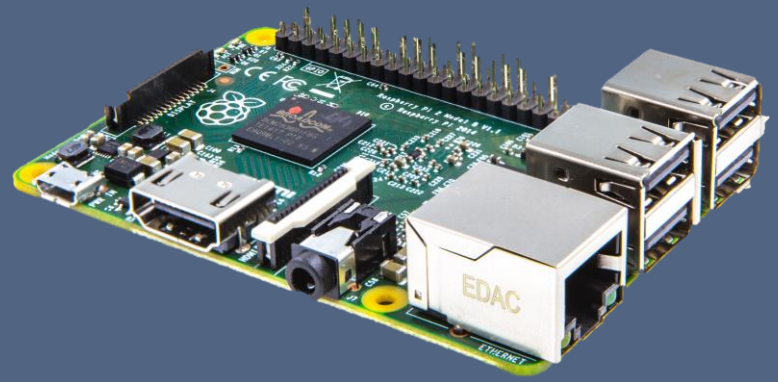
Objective

Connect 2 devices using different IoT Protocols to a cloud



Intel Edison
Ultra lightwieght 2.0 (UL2.0)

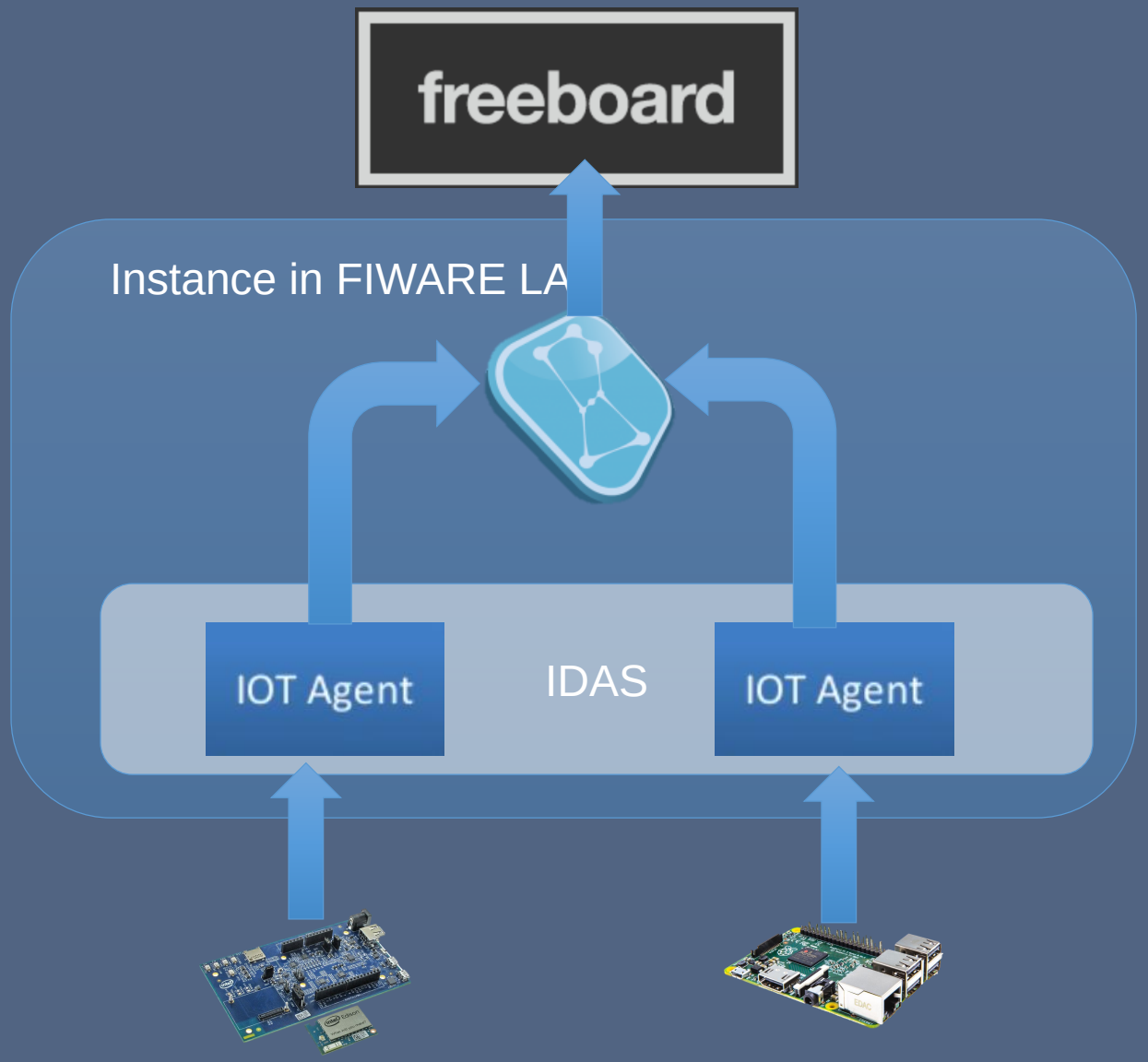


Raspberry Pi
Lightweight Machine to Machine (LWM2M)

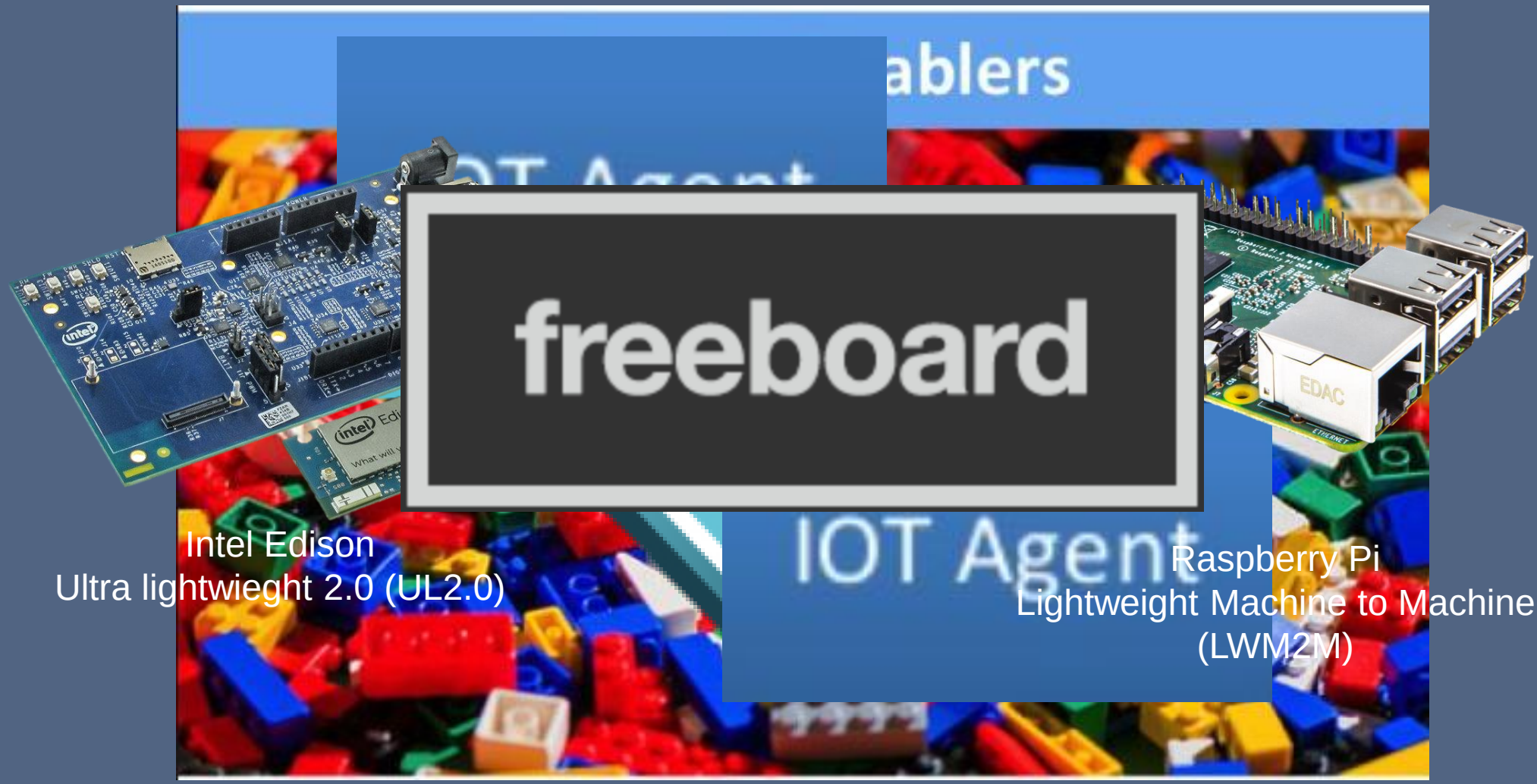
Tools

- A Cloud. In our case: FIWARE LAB
- FIWARE Generic Enblers
  - Orion Context Broker
  - IDAS (LWM2M & UL2.0) iot Agents
- Dashboard for represent data
  - Freeboard

Architecture



Theory: What is this again..?



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Steps

1. Instance in FIWARE LAB: Creation of an instance, configuration of security groups, static IP allocation
2. Instance configuration: access via ssh, docker installation
3. Configuring the architecture with docker-compose
    1. The docker-compose.yml
    2. Configuring the containers (orion, mongo, iotagent#1, iotagent#2)
4. Configuring the devices
    1. Configuring the intel edison to use UL2.0 and its sensors
    2. Configuring the raspberry to use LWM2M with waakama
5. Connecting the devices to the cloud and see the real time changes
6. Data visualization via Freeboard.io

DONT GET LOST!
IF YOU HAVE DOUBTS, STOP ME!

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