

# Synchronization of Servients

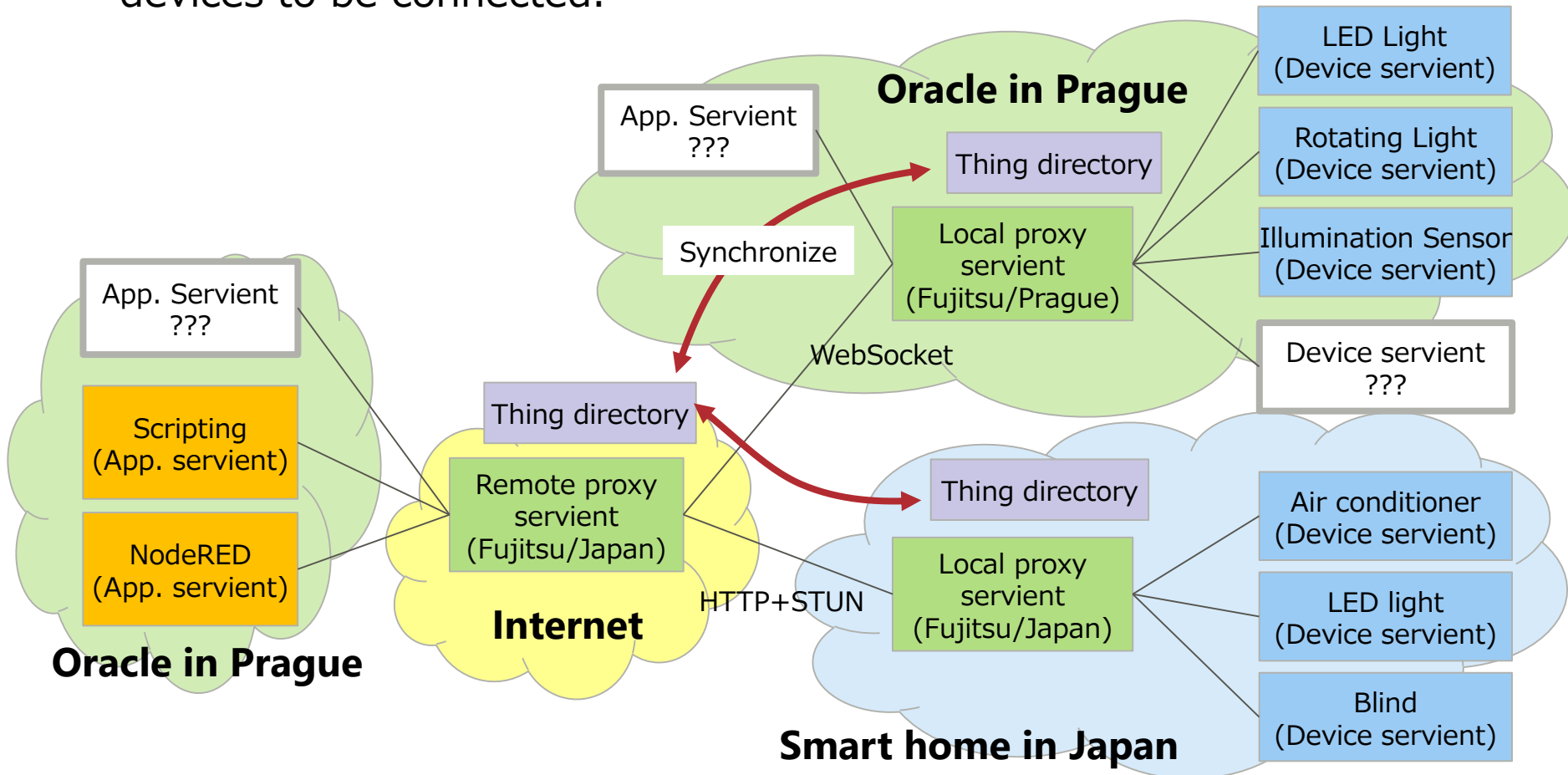
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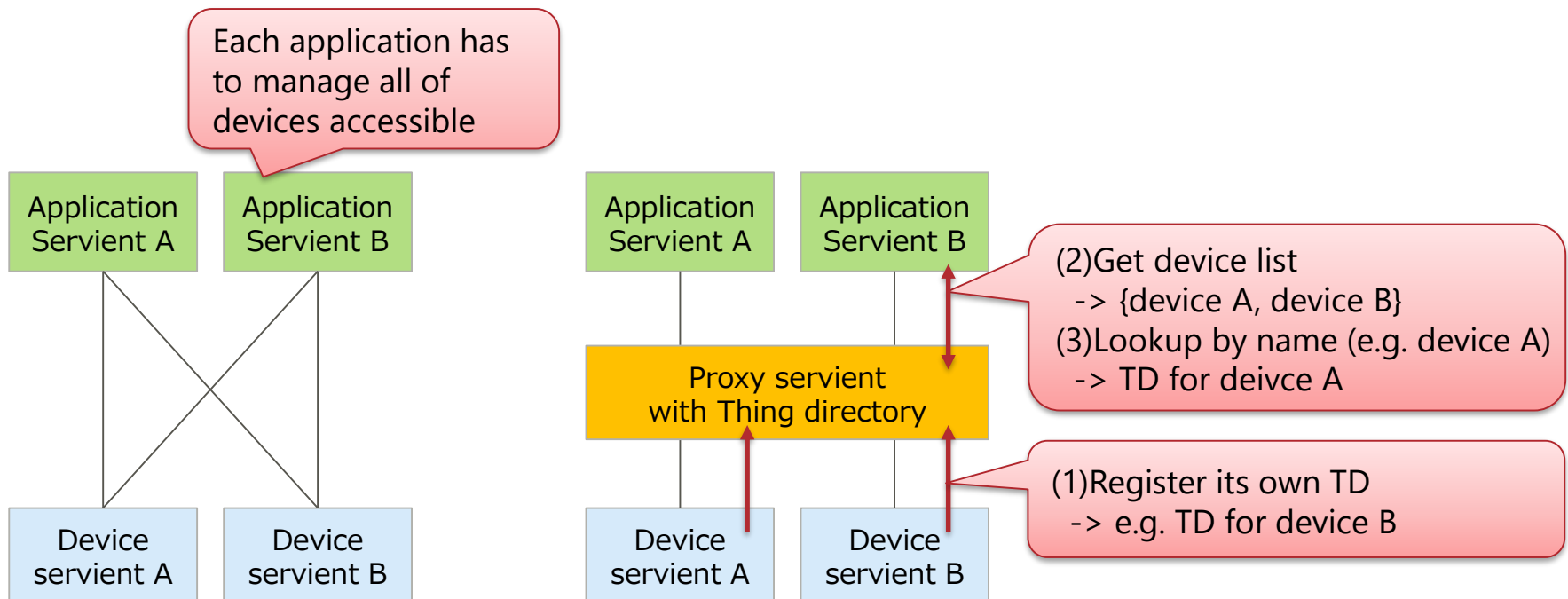
# Plugfest architecture in Prague

- Proxy servants coordinate applications and devices.
  - Participants' applications and device can connect to our proxies.
  - Proxy servant has own thing directory to register and manage the devices to be connected.



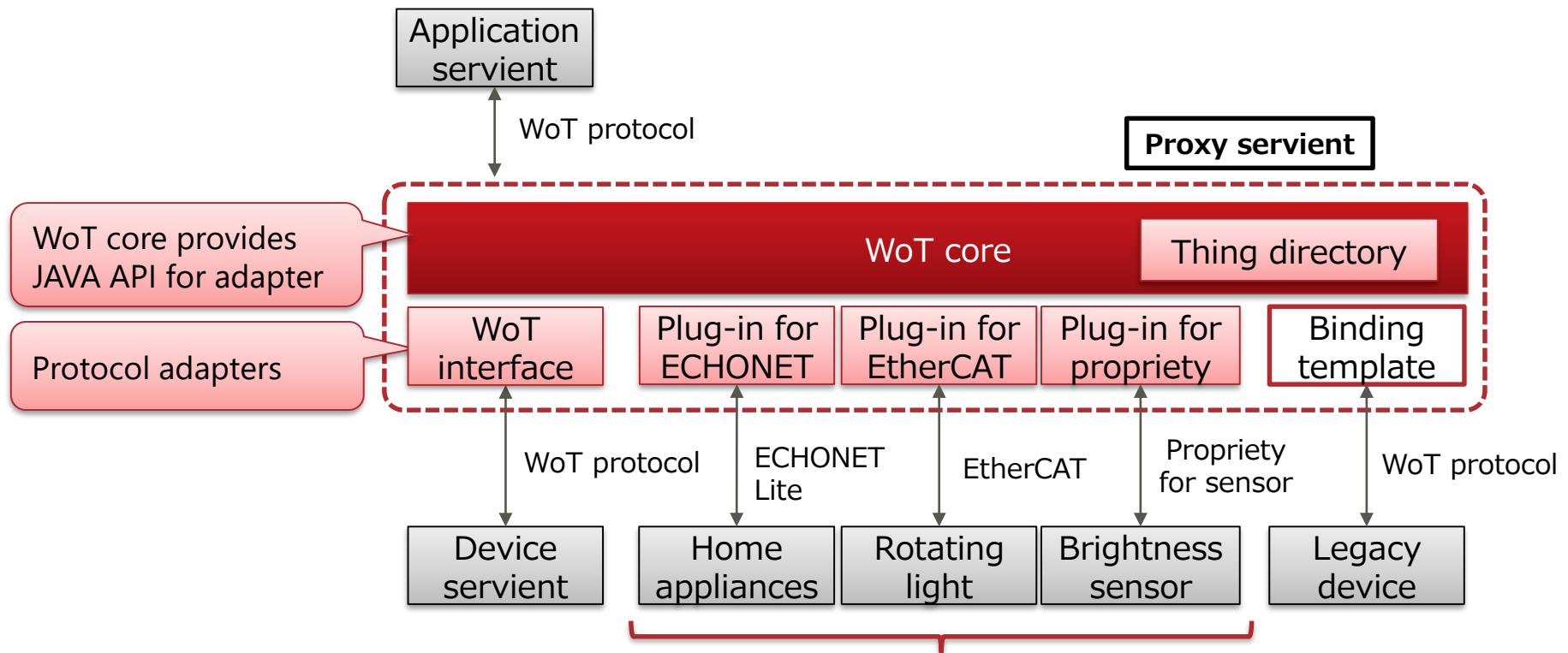
# Role of proxy servient

- Proxy servient manage TDs and coordinate connection between application and device.
  - Device servient registers its own TD to the directory
  - Application servient gets TDs of devices from the directory
    - proxy servients provide lookup function to get device list and to search by name.



# Proxy servient architecture

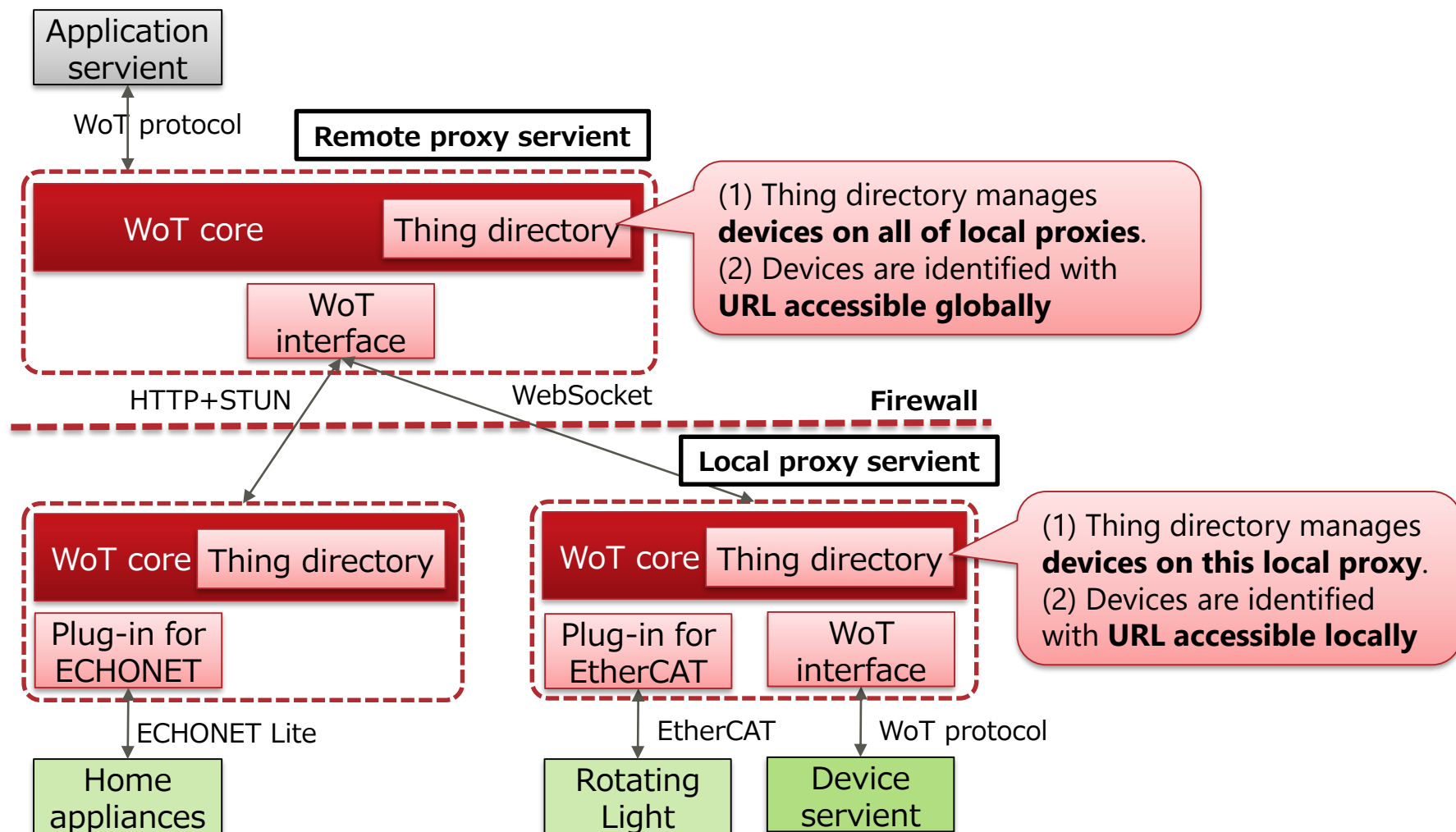
- Proxy servient has a function of converting legacy protocols to WoT
  - WoT core has a similar interface to Scripting API
    - Create/Delete thing. Read/Write property, and Event handling with subscription.
  - Protocol adaptors can be plugged in to Proxy servient using WoT core API over OSGi



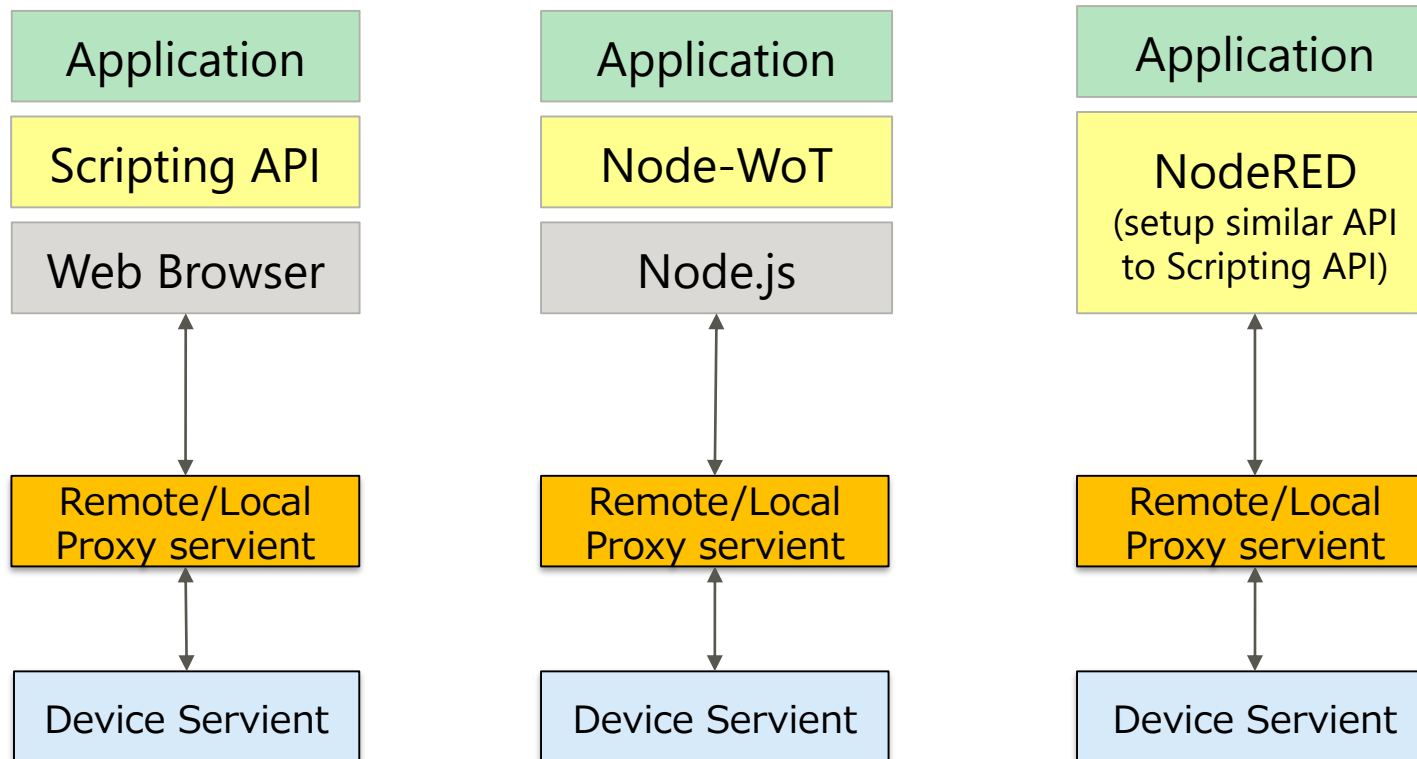
These devices are converted to WoT interface using WoT core API

# Integrated architecture

- Sequence diagrams corresponding to this architecture in preparation.md on github

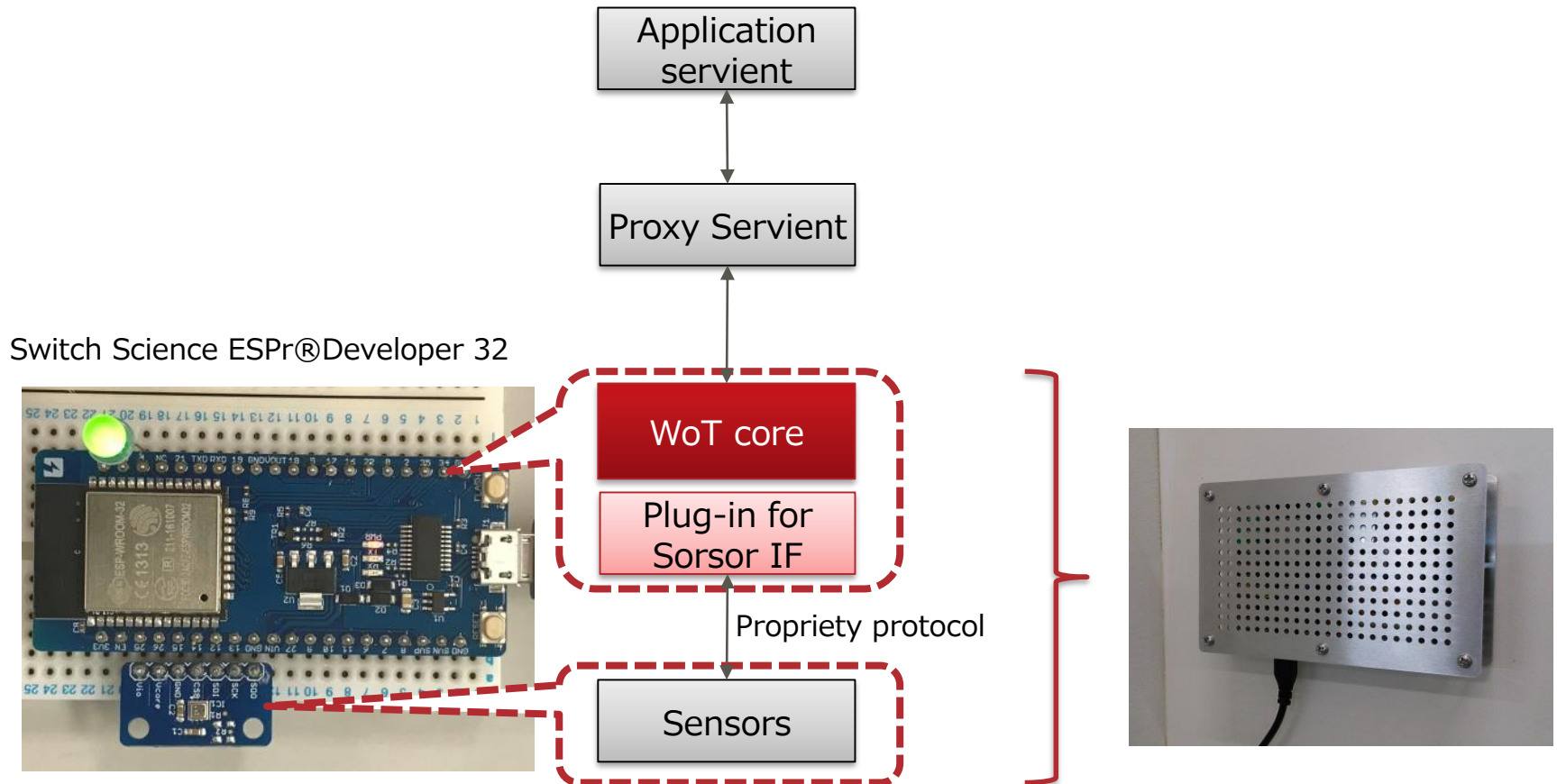


- Some integration patterns in this plugfest
  - On browser, on node.js and on NodeRED



# Device servient

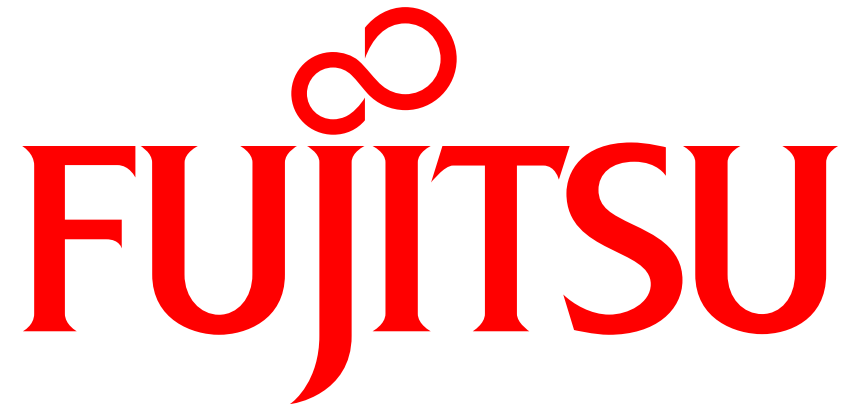
- Compact WoT core is required for devices Servients
  - Implemented device servient on Wi-Fi module with temperature and dust sensor



Wi-Fi + Bluetooth  
ESP32, SRAM 520kB, FEROM 4MB  
I/O : GPIO, I2C, UART, SPI, ...

- Many possible integration patterns with combinations of servients for use cases
  - Some variations have been shown in the plugfest
  - Need to clarify these combinations for the next
- Proposal for Architecture documents
  - Experiences of implementation will be useful for developers in future
    - Role and interface of Thing directory
    - Role and interface of proxy servient
    - Building blocks variation of application, proxy, and device servients
    - Inter-servient interface and sequence diagrams
  - Architecture for large scale system, for example, connected with over 1 million devices





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