IOT-CoAP

Project is about implementation of CoAP protocol for iot usage. CoAP stack is of standard as RFC7252. In this project mainly concentrated on software implementation for CoAP app and “observe” option. ESP8266-12 module has been used as device platform, Ubuntu for development and testing platform and Aneska CoAP client on android phone. Tried to bring out the resource discovery, led resource, UART sensor resource and device status resource.

Serving the Wi-Fi network on android phone by Wi-Fi tether with “test” as SSID and “klmnopqr” as PASSWORD. Whenever ESP8266 module comes up it joins to WI-FI network as station with DHCP host name as “iot-coap”. UART baud is at 11520.

Implemented resource list –

1) “.well-known/core” resource discovery

2) “led/on” and “led/off”

3) “uart/test” (observe able resource)

4) “device/status”

All resources support GET request with CONFIRMABLE message but “uart/test” additively support NON-CONFIRMABLE OBSERVE messages. Currently every state will be sent to client instead of only state change information and supports single client one at a time. Used Ubuntu platform for development and testing. Code is completely open for usage and modification. Please go through readme text.

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