

15th International Conference on
Information Technology, Computer & Telecommunication



A complete overview of IoT protocols and layers and their architecture

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Abstract

The Internet of Things is a system in which different electronic devices, each with its own IP, communicate with each other over the Internet without the need for human presence, and at the same time can be controlled remotely through dedicated applications. Internet of Things (IoT) or Web of Things (WoT) is emerging technology and it wireless network between two or more smart objects or smart things connect via Internet. IoT classified in two type first is inside of IoT and second side is outside of IoT. In inside of IoT consider as protocols in IoT. In outside of IoT consider as sensor, actuators, etc..., those are physically possible. In inside of IoT consider as Protocols and IoT have their own protocol stack. Protocol stack have different layer like Application layer, Transport layer, Internet layer and Physical/Link layer. The judgmental role goal of IoT is to ensure effectual communication between two objects and build a sustained bond among them using different application. The application layer responsible for providing services and determining a set of protocol for message passing at the application layer. This survey understand application layer protocol like CoAP, MQTT, AMQT, XMPP and RESTFUL. Also describe some of the new protocols in application layer protocol. Which type of architecture (like request/response, client/server and publish/subscribe) and security (like DTLS, TCL/SSL and HTTPS) support in those protocols.

Keywords: Internet of Things (IoT), Application layer protocols, CoAP, MQTT, AMQT, RESTFUL, Web-socket.