**Implementing a OneM2M based IoT platform**

**Summary**

This project aims to deploy a oneM2M standards based server which makes possible the transfer of data from IoT devices to a central server and the execution of actuator commands given from the server and allows to process the data for further applications. OneM2M is a global initiative constituted by 8 of the world’s leading ICT standards development organizations and aims to achieve a global technical standard for interoperability concerning the architecture, and provide support to application developers, device manufacturers and machine to machine communication service providers. This will reduce the problem of heterogeneity of things or different entities of a particular setup. The main tools used for this purpose are: Mobius Server, MQTT – a lightweight network protocol based on publish-subscribe architecture used as a broker for real time data transferring from the source to the subscriber, &Cube Thyme – a gateway device platform which makes the communication between end node device and the Mobius server happen, Things Adaptation Software (TAS) – a middleware program which takes data from sensor, convert it into oneM2M defined format and sends it to the gateway and also takes actuation commands from the Thyme and convert them into the actuator accepted command format and oneM2M browser – used for better visualization of the resource tree of the IoT system.

We’ve used an ultrasonic sensor and a servo motor for testing our IoT server. We were able to retrieve and delete the distance data from ultrasonic sensor by using some REST APIs. Also we were able to control the servo motor using the same REST APIs.