Experiment no :- 10

Aim :- create a small dashboard application to be deployed on cloud. Different publisher devices can publish their information and interested application can subscribe.

Theory :-

IOT platform :-

The IoT platforms are suits of components those help to setup & manage internet connected devices. A person can remotely collect data, monitor and manage all internet connected devices from a single system.

IOT cloud platform :-
- Kaa IoT platform
- sitewhere
- Thingspeak
- DeviceHive
- zetta

Kaa - Features :-

1. manage an unlimited no of connected devices
2. set up cross - device interoperability
3. perform A/B service testing
4. perform real- time device monitoring

Analytics

MATLAB Analysis

Explore and transform data.

MATLAB Visualizations

Visualize data in MATLAB plots.

Plugins

Display data in gauges, charts, or custom plugins.

Actions

ThingTweet

Connect a device to Twitter™ and send alerts.

TweetControl

Listen to the Twitterverse and react in real time.

TimeControl

Automatically perform actions at predetermined times with ThingSpeak apps.

React

React when channel data meets certain conditions.

TalkBack

Queue up commands for your device.

ThingHTTP

Simplify device communication with web services and APIs.

sitewhere - features :-

- Run any no of IoT applications on a single site where instance
- spring delivers the core configuration framework
- Default database storage is mongoDB
- Eclipse californium for CoAP messaging

Thingspeak - features :-

- Collect data in private channels
- Share data with public channels
- Restful & MQTT APIs
- Alerts.

Device Hive - Features :-

- Directly integrate with Alexa
- Visualization dashboard of your choice
- Connect any device via REST API, websockets or MQTT.
- It comes with apache spark & spark streaming support.

zetta - features :-

- Build around Node js, REST, websockets
- Supports wide range of hacker boards.
- zetta allows you to assemble smartphone apps, device apps.

Conclusion :-

Thus, we have designed small application using Thingsspeak.