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Aim :-

Create a small dashboard application to be developed on cloud. Different Publisher devices can publish their information & interested application can subscribe.

Theory :- IOT Platforms

The IOT Platforms are suites of components those help to setup & manage the internet connected devices. A person can remotely collect data, monitor and manage all internet connected devices from a single system. There are a bunch of IOT Platforms available online but building an IoT solution for a company is all depend on IOT platform host & support quality.

IOT cloud Platforms :-

1. Kaa IOT Platform
2. Sirewhere : Open Platform for the Internet of Things
3. Thingspeak : An open IOT platform with MATLAB analytics
4. Devicehive : IOT Made Easy

5. Zetta : API-First Internet of Things Platform.

Kaa - Features :-

1. Manage an unlimited number of connected devices.
2. Setup cross-device interoperability.
3. Perform A/B service testing.
4. Perform real-time device monitoring.
5. Perform remote devices provisioning & configuration.
6. Collect & analyze sensor data.
7. Analyze user behaviour deliver targeted notifications.
8. Create cloud services for smart products.

Sitewhere - Features :-

1. Run any number of IoT applications on a single site where instance.
2. Spring delivers the core configuration framework.
3. Connect devices with MQTT, AMQP, Stomp, & other protocols.
4. Add devices through self-registration, REST Services, or in batches.
5. Integrates with third-party integration frameworks such as Mule AnyPoint.

6. Default database storage is MongoDB
7. Eclipse Californium for CoAP messaging.
8. InfluxDB for event data storage
9. Grafana to visualize site where data.
10. HBase for non-relational data store.

ThingSpeak - Features :-

1. Collect data in private channels
2. Share data with public channels
3. RESTful and MQTT APIs
4. MATLAB analytics & visualizations
5. Alerts
6. Event Scheduling
7. App Integrations
8. World Wide Community

DeviceHive - Features :-

1. Directly integrate with Alexa
2. Visualization dashboard of your choice.
3. Customize DeviceHive behaviour by running your custom javascript code.
4. It supports the Big data Solutions such as Elasticsearch, Apache Spark, Cassandra & Kafka for real time &

Batch Processing

5. Connect any device via REST API, WebSockets or MQTT.

6. It comes with Apache Spark & Spark Streaming Support.

7. Supports libraries written in various programming languages, including Android & iOS libraries.

8. It allows running batch analytics & Machine Learning on top of your device data.

Zetta - Features :-

1. Built around Node.js, REST, WebSockets, & a flow-based "reactive programming".

2. Supports wide range of hacker boards.

3. Zetta allows you to assemble Smartphone apps, device apps, & cloud apps.

ThingsSpeak Apps :-

- MATLAB Analysis
- MATLAB Visualization
- Plugins
- ThingTweet
- TweetControl
- TimeControl
- React
- TalkBack
- ThingHTTP

Conclusion :-

Thus we have designed small application using ThingsSpeak.