

Biz4Solutions readily available IoT framework for Water Technology Companies

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Summary

Biz4Solutions provides a readily available framework to build new IoT application; the framework has already built specifically for water technology companies and we have already leveraged it for multiple applications in the same vertical successfully. All we have to do to build new products in this space is reuse this framework and configure and customize it according to the requirements. We have seen and implemented it multiple times for water technologies, which enabled us to provide very cost effective solution and quick to market.

What is IoT?

IoT (Internet of Things) is a technology concept and/or an architecture which is an aggregation of already available technologies. IoT architecture can also be called as event-driven model. We have also realized that this IoT ecosystem has business applications in areas of Water Technologies.

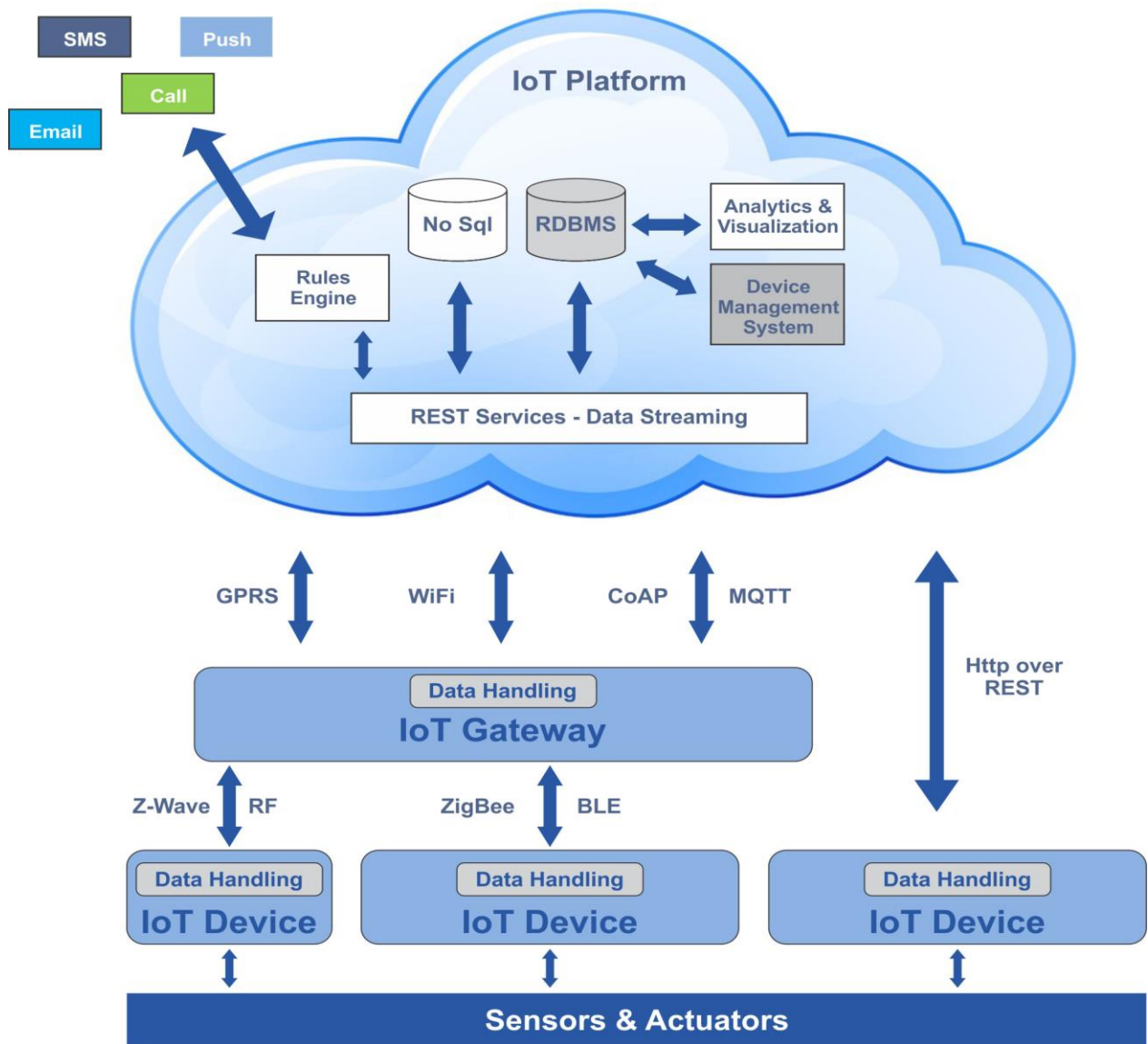
Starting from bottom level, the data flow gets generated from any “thing” through sensors/meters that are being sent out to the cloud through communication gateway for analysis, which turns out to be useful information. IoT has evolved from the convergence of wireless technologies, Bluetooth meters, micro- electromechanical systems and the Internet.

Building blocks of IoT

A thing, in the Internet-of-Thing can be an equipment, meter, person any object that can generate data through a built-in sensor, or any other natural or man-made object that can be assigned an IP address and provided with the ability to transfer data over a network.

Sensors

A sensor is a transducer, whose purpose is to sniff a wide variety of information ranging from Location, Weather/Environment conditions, Grid parameters, bacteria meter, water purifier, thermometer, Movement on assembly lines and generate output as a data to send via wireless technology. The sensors in the IoT are called as a node that will collect information and sent to the outside world, through communication protocols – Bluetooth, BLE, ZigBee, Z-wave, Wi-Fi or through wired communication.



IoT Gateway

Gateway acts as a bridge between these IoT objects and the internet. Gateways can connect to the IoT devices that communicate via specific protocols, store and parse the information and then send them over to cloud servers for processing and analytics. IoT gateways not only abstract the medium of communication but also provide the secure channel required for the transmission of this data. Gateways usually run Real-Time Operation Systems (RTOS) or a form of Linux to drive their systems. Hardware and software level encryption is built right into the gateway to provide a secure channel for communication.

Cloud platform and Data Analytics

The protocols that support cloud platform are – GPRS, Wi-Fi, CoAP, MQTT, Websocket, RESTful, etc. Cloud computing is the only platform to support the massive and unpredictable data. Cloud will empower IoT by providing elastic computing power, storage and networking. The massive data generated from IoT can be analyzed in the cloud with big data solutions to gain insights and patterns of usage and behaviour of machines and humans. This business intelligence in turn allows us to predict forthcoming growth in data demand and deploy additional resources accordingly.

These patterns are then analyzed, and if found irrelevant, then accordingly the information is sent to the user, to control & monitor their devices (ranging from room thermostat to jet engines & assembly lines) from remote locations. These apps push the important information on your hand-held devices & help to send commands to your Smart Devices.

However, the communication flow can also be in reverse manner when user/ manufacturer want to actuate any object.

- User/manufacturer will give some input in the form of SMS, Push, Email, Call, etc.
- That information is forwarded to the internet i.e. Cloud
- The cloud then process the information identifies the particular object through the IP address and pushes the information through the communication protocols to the Gateway.
- Gateway will trigger the actuator that will be responsible for controlling and moving the system or object.

Hence, this is “How an IoT ecosystem works”... If you are interested to be the one building such automotive network of objects, Biz4Solutions is the leading provider in this space and have experience of five years in this cutting edge technology.

About Biz4Solutions

We at Biz4solutions specialize in building successful mobile and web apps! We create apps that people will use as well as apps that make money. We build the kind of apps that people move to their home screen!!

FOR MORE INFORMATION

To find out how Biz4Solutions can help you be successful every day, please visit us at www.biz4solutions.com.

Biz4Solutions Focuses On Water Treatment & Chemicals Professionals

We are a software company focused exclusively on mobile and responsive web solutions. Our sharp focus enables us to harness best of these technologies to deliver optimal solutions to address even the toughest challenges faced by our clients.

Our motto is to be the power behind your idea – We help Water treatment and chemical organizations transform their ideas into products. Biz4Solutions has partnered with numerous clients to make their vision a reality. We have successfully taken some very challenging ideas from concept to reality.