

# BASIC KNOWLEDGE ABOUT CLOUD SERVICES

## IBM WATSON IOT PLATFORM

IBM Watson platform is a powerful web dashboard. It is flexible, scalable and it is easy to use. It provides a clear and simple UI where we can simply add, manage devices and control access to IOT services and monitor the usage. It is a fully managed cloud-hosted service that is designed simply and derive values from IOT devices.

### Device management:

Using the device management service, we can perform device actions like rebooting or updating firmware, receive device diagnostics and metadata, Perform a bulk device addition and removal.

### Responsive and scalable connectivity:

It uses the industry standard MQTT protocol to connect device and applications. MQTT is designed for efficient exchange of data to and from devices in real time.

### Secure communication:

Securely receive data from and send commands to do your devices. Do this using MQTT with TLS to secure all communication between your devices and our services.

### Data lifecycle management:

Having accessed to real time data going from our devices, You can opt to store data for a period of our choice, allowing you to have access to historical and real time data for your devices.

## NODE-RED SERVICE

Node-Red is a programming tool for wiring together hardware devices, API'S and online services in new and interesting ways. It provides a browser based editor that makes it easy to wire together flows using wide range of nodes.

### Browser based flow editing:

Node-Red provides a browser based flow editor that makes it easy to wire together flows using wide range of nodes in its palette.

Javascript functions can be created within the editor using a rich text editor.

A built in library allows you to save useful function templates or flows for reuse.

### Build on node.js:

The light weight runtime is built on node.js taking full advantages of its event driven ,non-blocking model. This make its ideal to run at the edge of the network on low-cost hardware such as raspberry pi as well as in the cloud.

### Social development:

The flows created in Node-Red are stored using JSON which can be easily imported and explored for sharing with others.

An online flow library allows you to share you best flows with the world.

## IBM CLOUDANT

IBM cloudant is a fully managed, distributed database optimized for heavy workloads and part. Growing web and mobile apps, IBM cloudant scales throughput and storage and its API and replication protocols are compatible with apache CouchDB for hybrid or multi cloud architecture.

### Serverless web app and API:

It will create a serverless web application by having static website content on github pages and implementing the application back-end, using IBM cloud applications mobile app with serverless.

It uses IBM cloud functions along with cognitive and data services to build a serverless back end for a mobile app.

### Open Hybrid Multicloud:

It shows how to pair the API and powerful replication protocol of cloudant with Apache clouchDB in a hybrid cloud environment.