

Team ID	PNT2022TMID46901
Project Name	IOT Based Safety Gadgets for Child Safety Monitoring & Notification

BASIC KNOWLEDGE ABOUT CLOUD SERVICES

IBM WATSON IOT PLATFORM

It is a powerful web dashboard. Flexible, Scalable and easy to use. It provides a lean and simple UI where we can simply and easily add and manage devices, control access to IOT services, monitor the usage. It is fully managed cloud-hosted service that is designed to simplify and derive value from IOT devices

DEVICE MANAGEMENT:

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

RESPONSIVE, SCALABLE CONNECTIVITY:

It uses the industry-standard MQTT protocol to connect devices 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 your devices. Do this using MQTT with TLS to secure all communication and services.

DATA LIFECYCLE MANAGEMENT:

Having access to real time data coming from our devices. You can opt to store data for a period of our choice, allowing you to access real time data for your devices.

NODE RED SERVICES

Node-Red is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways. It provides a browser based editor that makes it easy to wire together flow using wide range of nodes in its palette that can be deployed to its runtime.

BROWSER-BASED FLOW EDITING:

Node-Red provides a browser based flow editor that makes it easy to wire together flow using wide range of Nodes in the palitts.

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

A built in library allow your to save useful functions templates or flow for re-use.

BUILT ON NODE-JS:

The eight height runtime is built on node-js taking full advantage of its crnt driven,non-blocking nodes.This makes its ideal to run at the edge of the network on low-cost hardware such as Rasperry Pi as well as in the cloud

SOCIAL DEVELOPMENT:

The flows created in Node-Red are stored using JS on which can easily imported and exported for sharing with others.

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

IBM CLOUDANT

IBM Cloudant is a fully managed , distributed database optimized for heavy workloads and fast. Growing web and mobile apps , IBM Cloudant is available as an IBM Cloud service with a 99.99% SLA. Cloudant itartically scales throughput and storage , and its API and replication protocols are compatible with apache couchDB for hybrid or multicloud architecture.

SERVERLESS WEB APP AND API:

It's creates a serverless web application by hosting static website on github pages and implementing the application back-end , using IBM Cloud applications.

MOBILE APP WITH SERVERLESS:

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

FIND ANOMALIES IN IOT DATA:

It sets up an IOT device and gather data in IBM watson IOT platform. It with create visualizations and use advanced ML services to analyze historical data and detect anomalies.

OPEN HYBRID MULTICLOUD:

It hour to pair the API and powerful replication protocol of cloudant with apache couchDB in a hybrid cloud environment.