

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID06857
Project Name	IoT Based Safety Gadget for Child Safety Monitoring & Notification
Maximum Marks	4 Marks

Technical Architecture:

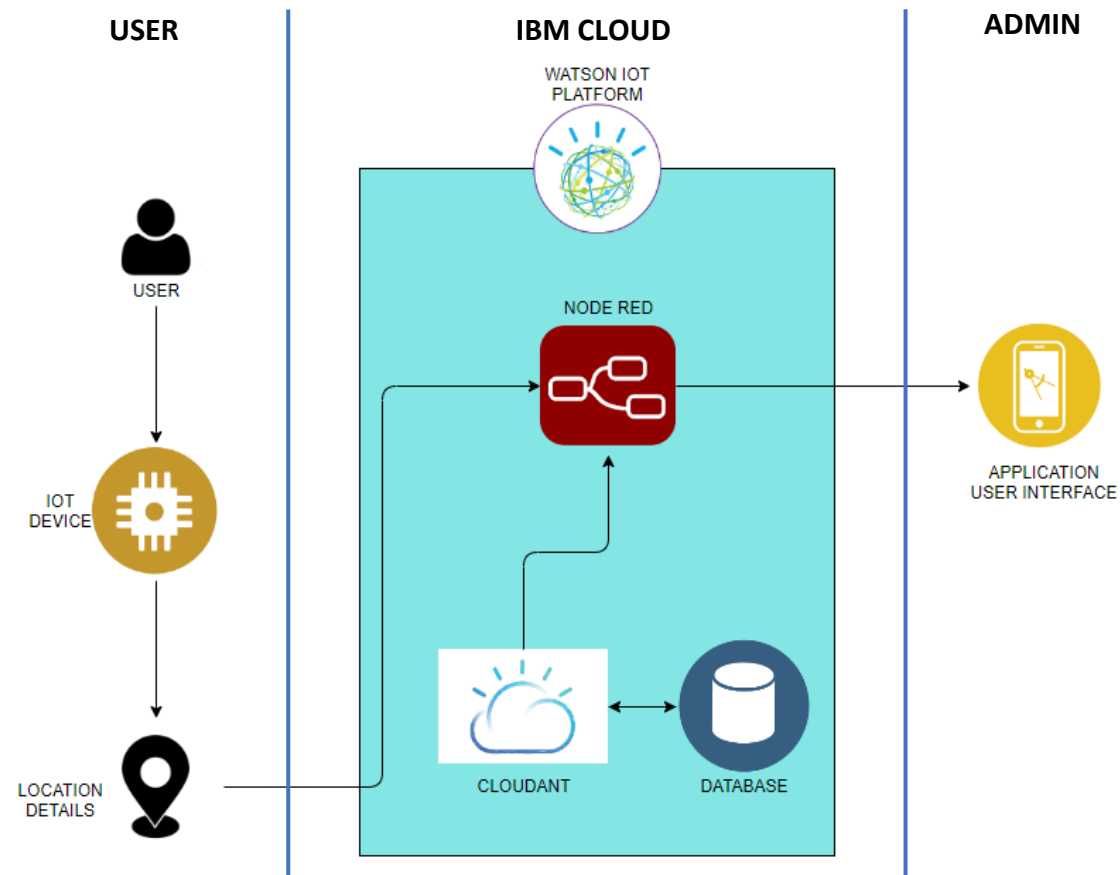


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App	Java
2.	Application Logic-1	Query Processing	Node red
3.	Application Logic-2	Data processing	IBM Watson IOT platform
4.	Application Logic-3	Deployment	Python
5.	Database	Data Type, Configurations	NoSQL
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	File storage requirements	Local File system
8.	External API-1	To get the location	Geolocation API
9.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Server Configuration:	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used is IBM Watson	Technology of Opensource framework IBM Watson
2.	Security Implementations	IBM Cloud	Watson assistant has certifications such as ISO, SOC2, US HIPAA, European Union GDPR, PCI DSS. We use security systems such as TCS/SSL, IPSEC, Third party CAs, HTTPS, Encrypted file systems, Encrypted storage systems, Key management systems, AES -256 bit.
3.	Scalable Architecture	IOT architecture consist of three pillars. (3 – tier architecture –Perception layer, Network layer, Application layer)	Technology used –IBM Watson
4.	Availability	The application is made available using load balancers, distributed servers etc.	Technology used –IBM Watson Assistant
5.	Performance	Using cloud computing instead of local storage for faster computiing	IBM Watson IOT Platform