

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

Date	03 NOV 2022
Team ID	PNT2022TMID01035
Project Name	Smart Solutions For Railways
Maximum Marks	4 Marks

Technical Architecture:

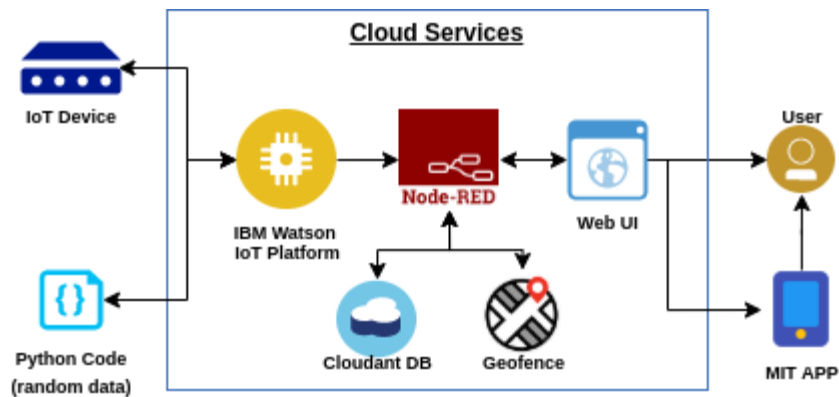


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User will be provided with a app through which he can access the resources	Python, IBM cloud
2.	Application Logic-1	IBM Watson IOT	Python
3.	Application Logic-2	Using Cloud DB to store the data	IBM Watson STT service

4.	Application Logic-3	Uses the Node red application	IBM Watson Assistant
5.	Database	Customers information is stored	MySQL
6.	Cloud Database	Google cloud storage	IBM DB2
7.	File Storage	File are stored in cloud DB	IBM Block Storage
8.	External API-1	Geofence is used to track the live location and give constant updates	IBM API
10.	Machine Learning Model	Used to detect anomalies and arguments	OPPS.
11.	Infrastructure (Server / Cloud)	IBM Cloud	Cloud Foundry, Kubernetes.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Node-Red	It allows chaining the IOTdevices
2.	Security Implementations	Security Management Service	Encryptions
3.	Scalable Architecture	3 – tier architecture	IOT devices, Cloud services, User interface
S.No	Characteristics	Description	Technology
4.	Availability	Uses opensource data base	Cloud native services
5.	Performance	Memory Cache	SRAM