

Project Design Phase-II Technology Stack

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| Date | 16 October 2022 |
| Team ID | PNT2022TMID19147 |
| Project Name | Gas Leakage Monitoring and Alerting System |

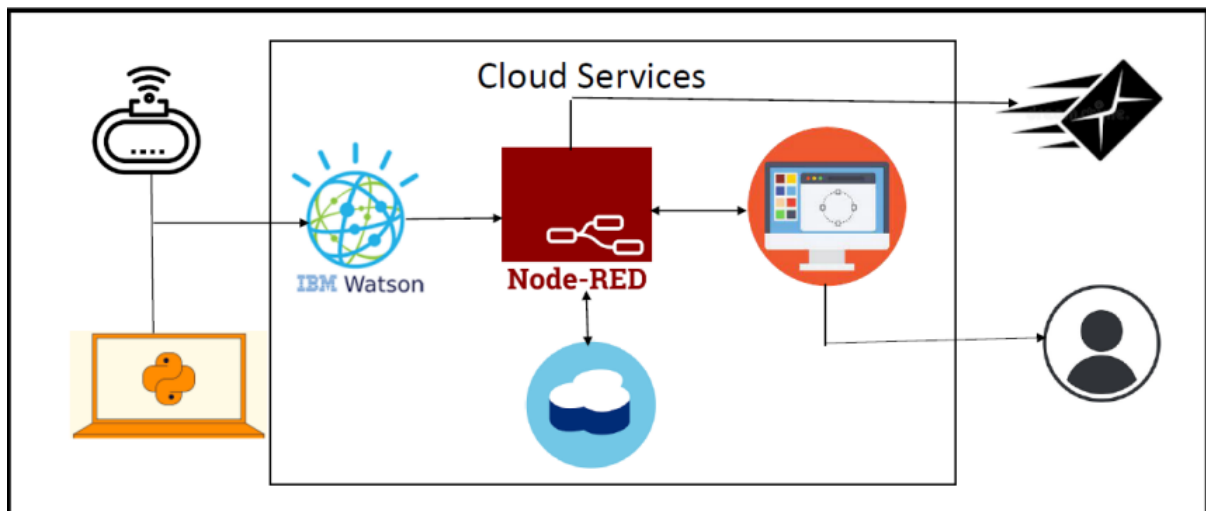


Table-1: Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|--|--------------------------|
| 1. | User Interface | Web UI | HTML,CSS,Javascript |
| 2. | Application Logic-1 | Logic for a process in the application | Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
| 5. | Database | Data Type | MySQL, NoSQL, etc. |
| 6. | Cloud Database | Database Service on Cloud | IBM Cloudant. |
| 7. | File Storage | File storage requirements | IBM Block Storage |
| 8. | External API-1 | Purpose of External API used in the application | IBM Weather API |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / CloudLocal Server Configuration: Cloud Server Configuration: | Cloud Foundry |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|-------------|--------------------------|--|--|
| 1. | Open-Source Frameworks | The open-source frameworks used | Mozilla Firefox |
| 2. | Security Implementations | The security / access controls implemented, use offirewalls etc. | IBM cloud Encryptions |
| 3. | Scalable Architecture | The scalability of architecture (3 – tier, Micro-services) | IBM cloud architecture |
| 4. | Availability | The availability of application (e.g., use of loadbalancers, distributed servers etc.) | Web application can even be used bythe workers in the industry |
| 5. | Performance | Consideration design for the performance of theapplication (number of requests per sec, use of Cache, use of CDN's) etc. | Since the web application is high efficient, it can be used by the workers irrespective of time. |