TECHNOLOGY STACK AND WEB HOSTING Requirements

**SDG3 India Dashboard**

# Technology Stack

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| **Component** | **Technology** |
| Operating System | Ubuntu v20.04 |
| Front-end Language | JavaScript vES2015, HTML v5.0, CSS v3.0 |
| Visualization Library | ECharts v5.4.0, Leaflet v1.9.3 |
| Front-end Framework | AngularJS v17.0.2 |
| Back-end Language | Node.js v18.1.0, PHP v7.4 |
| Back-end Framework | Express v4.16.2, Laravel v8.11.2 |
| Database Tool | Mongo DB v5.0, Redis v7.0 |
| Server Type | Apache v2.4\*, Docker v20.10.7, Docker composer v1.27.0 |

Data is imported using Comma Separated Value (CSV files).

# Web Hosting Requirements

The system should be deployed in the web. It is compatible with the commonly used internet browsers including Google Chrome, Mozilla Firefox, Internet Explorer and Apple Safari. Following are the requirements to deploy the system in web:

* Reliable and scalable web/application server Apache.
* Database server to host the database MongoDB.
* Cloud infrastructure such as AWS, Other cloud service.
* Operating system Ubuntu and other software components to host the system.
* Version control system to manage code such as GitLab.
* SSL/TLS certificate to secure data transmission between users and the web server.
* Public IP and domain.
* Firewall to protect the network and systems from unauthorized access and attacks.
* Scripts to take regular backups and a robust disaster recovery plan.
* Stable internet connection.

The system can be deployed in the cloud on the Virtual Machines (VMs). Each VM has the following specifications:

Processor 8 vCPU

Memory 8 GB (Staging VMs) and 16 GB (Production VMs)

Storage 300 GB SSD (Staging VMs) and 500 GB SSD (Production VMs)

Internet Connection 100 mbps recommended

Web servers should be protected by the firewall. A public IP and dedicated domain is be needed. A web master should be assigned the task of managing, trouble shooting and maintaining the web server. There should be adequate uptime of the web server. A decent internet connection is required for the web server to manage the expected network traffic.

*Note: The above specifications are recommended requirements, though the system can be deployed on lower specification web-based instance with options of elastic storage and processor. Port 80 is be required only during the development process.*

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