

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

Date	15 October 2022
Team ID	PNT2022TMID28003
Project Name	Project - Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

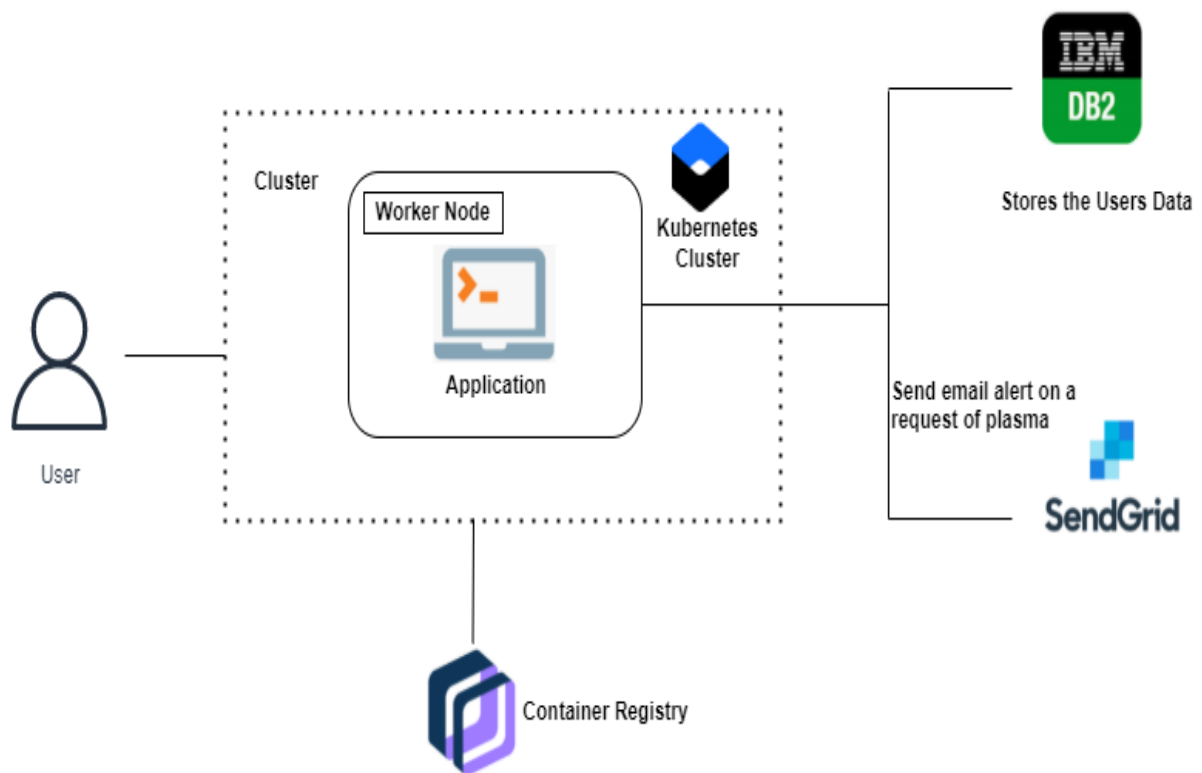


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application using Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	New User registers in the application by giving the genuine contact details which will be stored in the database.	Python flask
3.	Application Logic-2	Users login into the application by providing the username and password	Flask, IBM DB2
4.	Application Logic-3	Stats page displays the blood unit count available and the number of donors available for each blood group for which I need Plasma.	IBM Watson Assistant
5.	Database	String,Integer,Characters,Long	IBM DB2
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	External API-1	Authentication	Flask
8.	External API-2	Sending requests to donors	Sendgrid
9.	Infrastructure (Server / Cloud)	Application Deployment	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Docker, Kubernetes
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Doctor Content Trust(DCT),Transport Layer Security (TLS)
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Docker
4.	Availability	use of load balancers	Kubernetes
5.	Performance	Since Docker and Kubernetes are used the traffic load will be managed efficiently as a result of which the web application's performance would be much better	Docker and kubernetes