

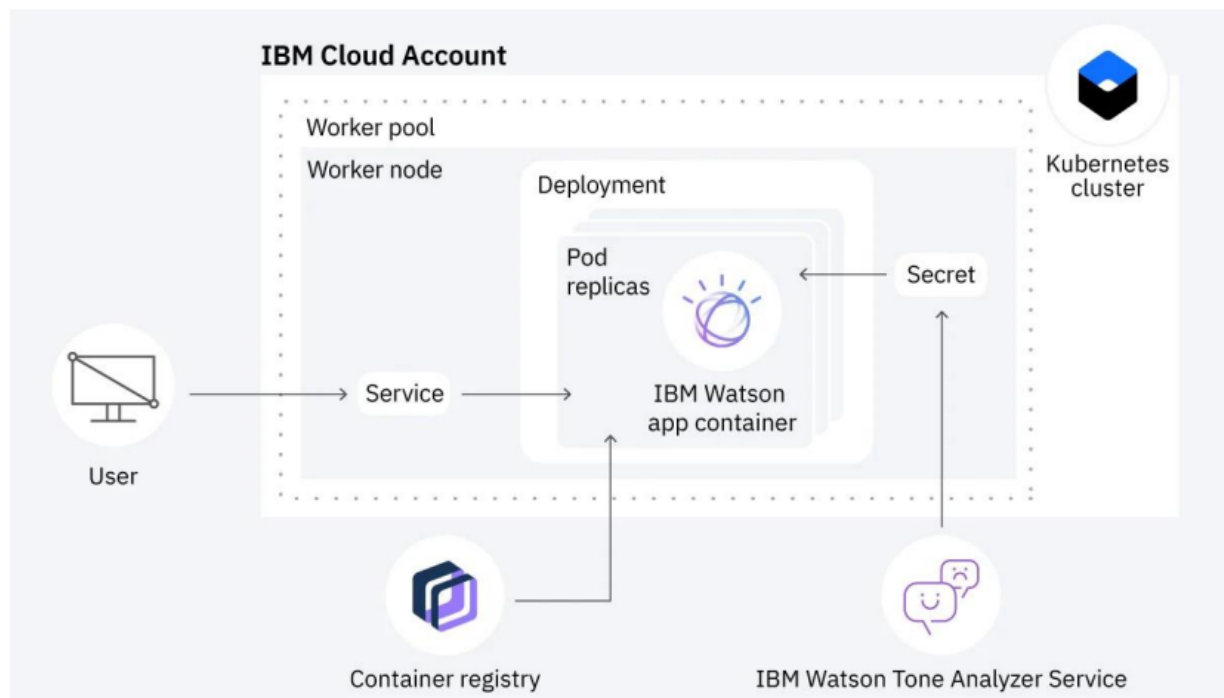
Project Design Phase 2

Technical Architecture

Project Domain	Cloud Application Development
Project Title	News Tracker Application
Team ID	PNT2022TMID22348
Date	16th Oct 2022

Technology Architecture:

Technology architecture deals with the deployment of application components on technology components. A standard set of predefined technology components is provided to represent servers, network, workstations, and so on.



TECHNICAL ARCHITECTURE DIAGRAM

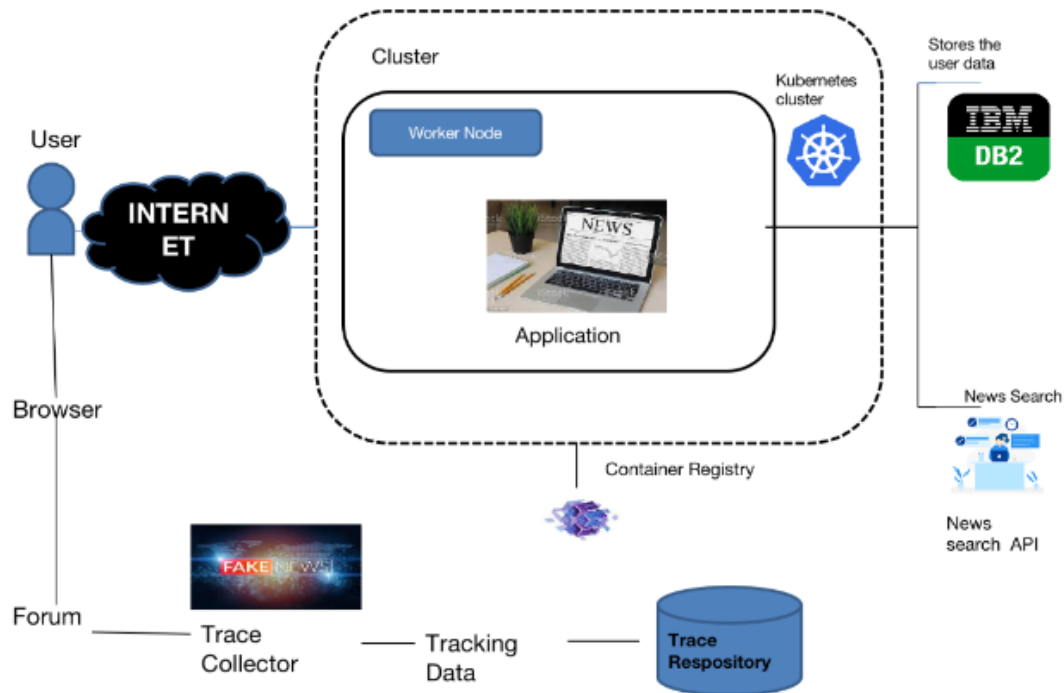


Table-1 Components & Technologies

S.No	Component	Description	Technology
1.	User	How user interacts with application	e.g. Web UI, Mobile App, Chatbot etc. HTML, CSS, JavaScript , python, flask
2.	Cluster	Consist of work node, Application, Kubernetes cluster.	Docker hub, IBM Cloud, Kubernetes
3.	Work node	Deployment of application image to the cloud	IBM Cloud, IBM Cloud Container Registry
4.	Kubernetes Cluster	Interactive browser-based training for deploying and operating a cluster on IBM Cloud	IBM Kubernetes

5.	Container Registry	Data Type, Configurations etc.	IBM Cloud Container Registry.
6.	Stores the user data	Database Service on Cloud	IBM DB2
7.	News search	User action on searching news articles	IBM Block Storage or Other Storage Service or Local File system
8.	News Search API	Purpose of External API used in the application	IBM News Search API, etc.

Table-2 Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	IBM DB2, IBM Cloud, IBM Cloud Container Registry, Docker hub, IBM Cloud Kubernetes
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g.SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	IBM DB2, IBM Cloud, IBM Cloud Container Registry
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Docker hub, IBM Cloud Kubernetes
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	HTML, CSS, JavaScript / Angular Js / React Js , IBM News Search API

