# *Project Design Phase 2 – Technology Architecture*

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| **Project Domain** | Cloud Application Development |
| **Project Title** | News Tracker Application |
| **Team ID** | PNT2022TMID44401 |
| **Date** | 15th 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.
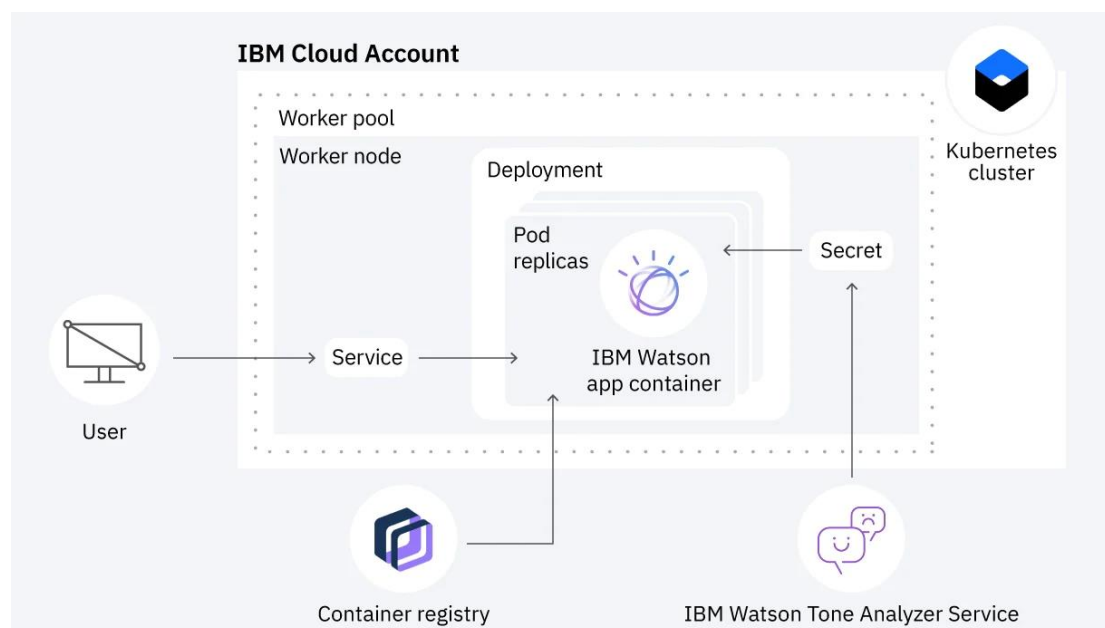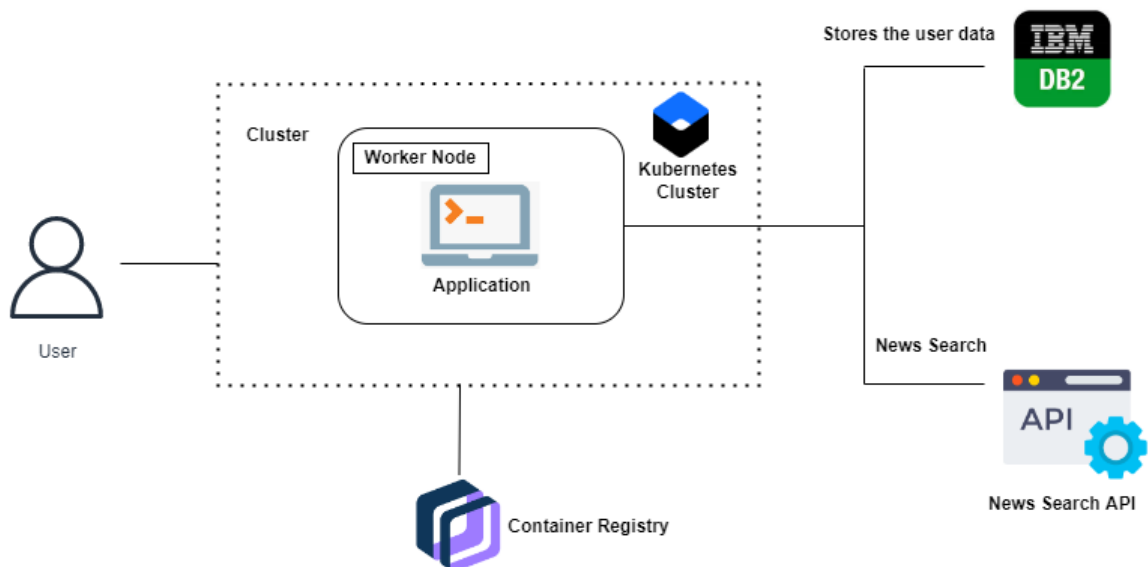
# Table-1 Components & Technologies

| S.No | Component | Description | Technology |
|------|-----------|-------------|------------|
| 1. | *User* | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript / Angular Js / React Js, 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 Filesystem |
| 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 |