

# Kaleab Walealign

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## PROFILE

Experienced DevOps and Cloud Engineer expertise in building, managing, and optimizing Kubernetes-based infrastructures. Proficient in cloud computing, big data, CI/CD pipeline implementation and automation with a strong focus on DevOps. Demonstrated success in leading projects for top organizations. Passionate about leveraging automation, cybersecurity, and machine learning to deliver scalable and secure solutions. Adept at fostering collaboration between teams and continuously improving processes.

## WORK EXPERIENCE

### DevOps and Cloud Engineer, OpenG2P

2024 – present | Addis Ababa, Ethiopia

- I have extensive experience working with Kubernetes clusters, leveraging tools like **RKE2** to build robust and efficient environments for container orchestration and management. Using **Rancher**, I simplified cluster operations, enabling streamlined Kubernetes management and enhancing client infrastructure monitoring.
- For the **Farmer Profile Project** at **ATI (Agricultural Transformation Institute)** and the **Social Registry Project** with **EDRMC (Ethiopian Disaster Risk Management Commission)**, I collaborated closely with the clients to gather detailed functional and non-functional requirements. I architected and implemented the entire system structure, ensuring scalability, reliability, and seamless integration with existing tools. I not only engaged in detailed discussions with stakeholders but also managed the process of preparing comprehensive requirements documentation. I designed and built the full system architecture, ensuring it met both current needs and future scalability demands.
- I also implemented **horizontal scaling** on the applications to handle high traffic during data collection periods, ensuring smooth performance. Additionally, I set up **ODK** for data collection by installing and configuring the application on tablets and integrating it with the **ODK server** for seamless data transfer and processing.
- In one instance, I identified a lack of an alerting system in a client setup. To address this, I wrote custom **Alertmanager** rules, deployed them effectively, and configured email notifications, ensuring real-time updates on critical system states. Furthermore, I proposed and implemented the integration of VM metrics into **Prometheus**, enabling comprehensive monitoring of virtual machines—a capability that had been previously missing.
- To enhance data visibility and reporting, I designed dashboards using open-source tools like **Superset** and **OpenSearch**, integrating them with databases to visualize current data trends. These dashboards provided clients with actionable insights and real-time monitoring capabilities, improving decision-making processes.
- Leading a team of **DevOps engineers**, I successfully implemented **CI/CD pipelines**, automating processes such as integration, testing, and deployment to accelerate delivery cycles while maintaining reliability. I emphasized **DevSecOps principles**, ensuring automation and operational excellence were at the core of every workflow.
- My experience extends to designing and implementing advanced **load-balancing solutions** using **Nginx** and **Istio**, ensuring high availability, fault tolerance, and optimized traffic routing for microservices-based architectures.
- I also have hands-on experience developing Python-based applications, particularly with **Odoo**, and creating Dockerized images for seamless deployment in Kubernetes. To improve deployment processes further, I automated tasks to enhance efficiency and consistency across development and production environments.

## SKILLS

### DevOps

Kubernetes, Docker, Git, Jenkins, Github Action, Ansible

### Monitoring

Prometheus, Grafana, Alert Manager, Splunk

### Cloud computing platforms

AWS, GCP, Azure, On-premise

### Data Analytics

Airflow, Spark, Python, PowerBI

### BigData

Hadoop, Hive, Yarn, Hbase, Spark, Kafka (strimzi), scala, Nifi, Airflow

### DataBase

Postgres, SQL server, Druid, Hive

### Programming Language

Python, Golang, Java, JS, C# , Rust

### API

API Design & Development, Microservices Architecture, API Security and testing, API Logging and Monitoring

### Networking

Subnetting, System Administrator, DNS, Linux, Design secure network system

### Team Leader

Project management (Agile,scrum,Atlassian), Solution Architect, Problem solving

## Bigdata DevOps Engineer, Safaricom

04/2023 – 04/2024 | Addis Ababa, Ethiopia

- I have extensive experience designing and deploying comprehensive end-to-end **Big Data application ecosystems**, leveraging **Kubernetes** to orchestrate custom Docker images and manage a suite of tools. I also demonstrated advanced **Kubernetes administration** expertise, including cluster management, debugging, deployments, monitoring, and **Helm chart development**, ensuring the infrastructure was robust, scalable, and optimized for high-performance workloads.
- In one instance, I successfully executed a **full migration** of applications and databases, transitioning all **Big Data applications** from one environment to another. This complex task involved meticulous planning and execution, ensuring seamless migration with minimal downtime and no data loss. During the migration, I applied **best practices** addressing bugs from the previous environment, optimizing configurations, and ensuring that every resource was suitably modified to meet the specific needs of each application. Additionally, I implemented **PostgreSQL database streaming replication** between two different environments, creating a **master-slave replication setup**. This provided **high availability** and **fault tolerance**, ensuring data consistency and reliability across environments.
- I introduced and implemented trending and highly effective tools such as **Druid (Imply)** and **Trino** to enhance the Big Data ecosystem. These tools significantly improved query performance and real-time analytics capabilities, meeting the increasing demands of modern data processing requirements. Additionally, I modified the **Kafka application** to support diverse use cases, including one tailored for **fintech applications (e.g., M-Pesa)** and another optimized for **telecommunication systems**. These configurations supported **real-time streaming and processing**, ensuring efficient and reliable data flow for critical business operations.
- Collaborating with stakeholders and cross-functional teams, I aligned architectural designs with business objectives, streamlining deployment processes and significantly reducing operational overhead. These efforts ensured the infrastructure supported the company's growth and adaptability to future challenges.
- To enhance productivity and reliability, I implemented **CI/CD pipelines**, automating workflows and enabling rapid, reliable software delivery. This not only reduced manual intervention but also ensured the continuous integration and deployment process was robust and efficient.

## Software Engineer, Huawei

2022 – 04/2023 | Addis Ababa, Ethiopia

- I have extensive experience maintaining and troubleshooting **cloud-based VAS (Value Added Services) systems** for **Ethio Telecom**, working with a variety of services including **USSD, SMS, CRBT, IVR, and MMS**. My role involved continuous monitoring of system and server performance, identifying issues, and optimizing the overall system performance to ensure seamless service delivery. I was able to identify problems quickly and efficiently, which helped **clients resolve issues in a very short time**, significantly improving service reliability and customer satisfaction.
- I gained valuable experience working with **databases** and managing **Linux environments**, both of which were critical for the smooth operation of the telecom infrastructure. Additionally, I worked with **Telecom CRM systems**, streamlining processes and improving overall customer relationship management capabilities.
- In addition to technical tasks, I managed **client accounts**, collaborating closely with cross-functional teams to ensure that customer needs were met effectively. This involvement helped drive improvements in customer satisfaction and service reliability.
- I was also actively involved in managing **software updates and upgrades**, ensuring that systems remained up-to-date and operational functionality was maintained. I consistently performed **operations with zero data loss**, even during critical updates and migrations, ensuring that there were no disruptions to the service.

## EDUCATION

### BSc in Computer Science, Unity University

2017 – 2021 | Addis Ababa, Ethiopia

## CERTIFICATES

### DevOps with AWS

Linkedin

### Design and Analyses Secure Networked Systems

University of Colorado

### Foundations of Project Management

Google

### Technical Support Fundamentals

Google

### Linux System Administration with IBM Power System

IBM

### IBM and Coursera Introduction to Cyber Security Tools & Cyber attack

IBM