

Hailemichael Atrsaw Tibebe

DevOps Engineer | SRE | Platform Engineer

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Professional Summary

DevOps Engineer with **4+ years of production experience** managing **12+ Kubernetes clusters**, **30+ microservices**, and **12+ production environments** across **6 cloud providers** (AWS, Azure, GCP, Digital Ocean, Infomaniak, Exoscale). Achieved **99.9% uptime** for systems serving **20k+ daily active users**. Proven track record of delivering measurable impact: reduced deployment times **from 45 to 8 minutes** (84% improvement), cut service onboarding time by **80%**, decreased infrastructure operations by **70%** through automation, and achieved **35% cloud cost reduction**. Expert in **Infrastructure as Code (Terraform/Terragrunt)**, Kubernetes orchestration, CI/CD automation, enterprise observability, and zero-trust security. Engineered custom platforms managing **50+ nodes** and backup orchestrators protecting **30+ PostgreSQL instances** with **99.99% success rate**. Created reusable infrastructure libraries adopted by **10+ engineering teams**.

Core Technical Skills

Cloud Platforms

AWS: Compute (EC2, ECS Fargate, EKS, Lambda), Storage (S3, ECR), Database (RDS), Networking (VPC, Route 53, Site-to-Site VPN, ELB, ASG), Messaging (SQS, SNS), Security (IAM, Secrets Manager)

Azure: Compute (VM, Container Apps, AKS, Functions), Storage (Blob Storage, ACR), Database (PostgreSQL Flexible Server), Networking (VNet, Traffic Manager, Application Gateway), Messaging (Service Bus), Security (Microsoft Entra ID, Key Vault)

GCP: Compute (Compute Engine, GKE, Cloud Run), Storage (Cloud Storage, Artifact Registry), Database (Cloud SQL, BigQuery), Data Streaming (Datastream), Identity (Firebase), Monitoring (Cloud Logging, Cloud Monitoring), Security (IAM, Secret Manager, reCaptcha)

Others: Digital Ocean, Infomaniak, Exoscale, Hetzner

Containerization & Orchestration: Docker, Kubernetes (EKS, AKS, GKE, self-hosted RKE2), Helm, Docker Compose

Infrastructure as Code: Terraform, Terragrunt, Ansible, Packer

CI/CD: GitLab CI, GitHub Actions, Azure DevOps

Observability & Monitoring: Prometheus, Grafana, Loki, Mimir, CloudWatch, Azure Monitor, Sentry

Programming: Python (FastAPI, Litestar, Django Rest Framework, Mesop), Bash

Security & Secrets Management: Teleport, HashiCorp Vault, Infisical, 1Password

Networking: Site-to-Site VPN, Ingress Nginx, Traefik, Load Balancers, VPC Design

Professional Experience

DevOps Engineer | Exponent

July 2023 - Present (2.9 years)

- Infrastructure Management:** Designed and provisioned multi-cloud infrastructure (AWS, Azure, GCP, Digital Ocean, Infomaniak, Exoscale) using Terraform and Terragrunt, maintaining 12+ production and staging environments with high consistency across 6 cloud providers.
- Kubernetes Expertise:** Orchestrated 12+ managed (EKS, AKS, GKE) and self-hosted (RKE2) clusters, implementing Kyverno for policy enforcement and Cert-Manager for automated TLS management across multi-cloud environments.
- CI/CD Pipeline Design:** Developed robust GitLab CI and GitHub Actions pipelines featuring automated linting, security best-practice validation, unit testing, multi-stage builds and deployment, reducing deployment time from 45 to 8 minutes.
- Observability & Reliability:** Deployed and managed a full-scale observability stack (Grafana, Prometheus, Loki, Mimir) monitoring 30+ services and 100+ metrics; established SLIs/SLOs achieving 99.9% uptime and led on-call rotations, responding to production incidents and conducting post-mortem analyses.
- Cloud-Native Tooling:** Implemented automated CNPG database backups for 30+ PostgreSQL instances, centralized secret management via Infisical, and zero-trust access control through Teleport.
- Automation:** Built internal CLI tools to streamline SRE tasks, reducing common operations time by 70%, and integrated Renovate bot for automated dependency management across 20+ repositories.

DevOps Engineer | Tefer (Contracted by Stableduel)

February 2022 - July 2023

- Architected Cloud Solutions:** Designed and scaled AWS and Azure infrastructure handling 20k daily active users and 3k+ concurrent requests using IaC patterns.
- CI/CD Modernization:** Built and maintained enterprise CI/CD pipelines in Azure DevOps, implementing secure secret injection and optimized build stages.
- Cost & Efficiency Optimization:** Implemented rigorous lifecycle policies for ECR/ACR and S3/Blob storage, reducing monthly cloud expenditures by 35%.
- Data Protection:** Standardized database scheduled backup strategies (onsite and offsite) to ensure business continuity.

Backend | Cloud Developer | Tefer (Contracted by Stableduel)

March 2021 - February 2022

- API Development:** Engineered high-performance REST APIs using Python (Django Rest Framework, FastAPI) and implemented real-time communication via WebSockets.
- Systems Engineering:** Developed multi-stage optimized Docker images and managed background task processing using Celery and Redis.
- Cloud Foundations:** Provisioned AWS infrastructure (ECS Fargate, RDS, SQS, SNS) using Terraform, laying the groundwork for automated scaling.

Featured Projects

Multi-Cloud K8s Provisioner

Problem Solved: Overcame the lack of managed Kubernetes services on niche cloud providers by engineering a custom solution to achieve automated lifecycle management and horizontal cluster autoscaling.

Tools Used: Python, RKE2, Terraform, Terragrunt, Cloud-Init, Packer, Envoy, Ansible

Impact: Built automation framework provisioning self-hosted RKE2 clusters using custom CRDs and Terraform, managing 8 production clusters and 50+ nodes with 95% reduction in manual deployment effort.

Cloud-Native Database Backup Orchestrator

Problem Solved: Addressed the need for a non-invasive, decentralized backup mechanism for diverse CNPG workloads running on Kubernetes.

Tools Used: Python, Kubernetes API, S3-Compatible Storage (MinIO/AWS S3), Poetry.

Impact: Built K8s-native backup automation using resource annotations to auto-discover and backup 30+ database instances with 99.99% success rate, supporting multi-cloud retention and offsite synchronization without manual configuration.

Enterprise Site-to-Site VPN

Problem Solved: Resolved complex secure connectivity requirements for third-party clients needing isolated access to internal Kubernetes services without compromising the primary network.

Tools Used: StrongSwan (IPsec), Terragrunt, OpenStack, Bash.

Impact: Architected a multi-tenant VPN relay system using a unique two-hop IPsec tunnel (`Customer <-> Relay VM <-> K8s Pod`), supporting 8 concurrent client connections. Ensured network isolation and unique NAT-T port mapping for multiple providers while centralizing traffic management.

Versatile Helm Chart

Problem Solved: Eliminated "configuration drift" and duplicated Helm code across dozens of microservices.

Tools Used: Helm, Kubernetes, YAML.

Impact: Created a versatile "Standard Library" Helm chart that supports both `Deployment` and `StatefulSet` via simple value toggles, adopted by 60+ microservices. Included pre-configured patterns for Ingress Nginx, Traefik, Cert-Manager, and horizontal autoscaling, reducing new service onboarding time by 80%.

Error Tracking Proxy

Problem Solved: Optimized error tracking and security by abstracting project-specific DSNs and providing a unified entry point for error reporting.

Tools Used: FastAPI, Python, Docker.

Impact: Built a centralized middleware proxy that routes application errors to appropriate Sentry projects while managing sensitive project tokens at the gateway level, improving security and event filtering.

Infrastructure Libraries (Terraform Modules & GitLab CI Templates)

Problem Solved: Standardized organizational security and deployment patterns to ensure consistent quality across all engineering teams.

Tools Used: Terraform, Terragrunt, GitLab CI, GitHub Actions.

Impact: Developed a versioned library of 20+ reusable IaC modules and CI templates adopted across 10 engineering teams. Standardized everything from VPC peering and EKS cluster hardening to automated multi-stage Docker builds and linter enforcement.

Additional Deployment Projects

- Healthcare Analytics Platform:** Hybrid Azure infrastructure utilizing Azure Container Apps, PostgreSQL Flexible Server, Data Lake Gen2, and automated deployment of ClickHouse, Apache Superset, and workflow automation for centralized health data analytics.
- Case Management Platform:** Full-stack GCP deployment with Cloud Run microservices, Firebase authentication, Datastream-to-BigQuery pipeline, and enterprise-grade monitoring and security policies.
- Enterprise Service Platform:** AWS-based monorepo with ECS Fargate services, RDS PostgreSQL, Site-to-Site VPN, SQS event processing, and automated GitHub Actions deployment pipelines.
- Conversational AI Platform:** DigitalOcean App Platform deployment with managed PostgreSQL clusters, VPC networking, container registry, and secret management.

Education

- Bachelor of Science in Electrical and Computer Engineering** (*Computer Engineering Focus*) - Jimma University, 2021
- AWS Cloud Computing** - ALX Africa, 2022

Certifications

- AWS Certified Solutions Architect - Associate** - [View Certificate](#)
- AWS Certified Cloud Practitioner** - [View Certificate](#)