Saurav Karki

DevOps Engineer

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DevOps Engineer with more than 1 year of hands-on experience in cloud-native and on premises infrastructure environments. Worked in High Availability Kubernetes clusters, networking (Ingress controllers, Envoy, MetalLB, Kubernetes Gateway API, Cloudflare, VPC, Subnets), and secure server hardening. Also Familiar with automation, CI/CD, and observability to deliver minimal-downtime, scalable, and secure systems.

TECHNICAL SKILLS

Cloud and Virtualization Technologies	AWS (EC2, EKS, S3, RDS, VPC, IAM, ECS, Aws Security Hub), Azure (Azure DevOps service, AKS, Virtual Machines, GCP (Compute Engine), Proxmox, VMware
Container & Orchestration	Docker, Docker Stack, Kubernetes (EKS, RKE2, k3s, AKS, ECS)
IAC & Automation	Terraform, Ansible, Bash, Python
Networking & Security	Ingress, Envoy Gateway, MetalLB, Cloudflare, Contour, IPsec (Libreswan)
CI/CD and GitOps	GitHub Actions, Jenkins, Gitlab CI/CD, Argo CD, FluxCD
Observability	Prometheus, Grafana, ELK, Loki, New Relic
Databases and Messaging	PostgreSQL, ScyllaDB, Mongo, Redis, Kafka, NATS
Devsecops	Trivy, SonarQube, Checkov, Falco, OWASP
Server Administration	Linux hardening, firewall (iptables, ufw, security groups), system patching, DNS/DHCP.
Web Servers & Proxies	Nginx, Traefik, HA proxy

PROFESSIONAL SUMMARY

Hamro Patro Inc, Kathmandu
DevOps Engineer Trainee — JUL 2025 – PRESENT
DevOps Engineer Intern — APR 2025 – JUL 2025

- Managed and secured **Linux-based production servers**, including **system hardening, patching, firewall configuration, monitoring,** and **OS/network** troubleshooting.
- Designed and operated highly available **Kubernetes (RKE2, K3s) clusters** supporting **30+ microservices** with **rolling updates, minimal-downtime deployments,** and **failover**.
- Implemented **ingress, routing,** and **load balancing** using **Envoy Gateway, Nginx, MetalLB**, and **Cloudflare** for secure and scalable service access.

- Explored and set up **event-driven microservices** architecture using **Kafka and NATS,** including **multi-DC NATS SuperClusters** for **fault tolerance and disaster recovery.**
- Managed distributed data systems (**ScyllaDB, PostgreSQL, Redis, Elasticsearch**), performing **replication, failover testing**, and **performance tuning**.
- Implemented GitOps workflows with **FluxCD** and built **CI/CD pipelines** for Java (**Micronaut, Spring Boot**) applications, automating build, test, containerization, and Kubernetes deployments.
- Deployed **observability** and **monitoring** stacks using **Prometheus, Grafana, ELK, Loki,** and **Uptime Kuma;** conducted load testing and capacity planning.
- Provisioned and managed cloud and infrastructure platforms including **AWS (EC2, S3), Proxmox, VMware, IPsec VPNs**, and **S3-compatible object storage.**
- Implemented **site-to-site IPsec VPNs** for secure, encrypted network connectivity between distributed data centers and remote clients.

Ultrabyte International Pvt.Ltd, Kathmandu
Office Assistant/QA —APR 03 , 2023 - AUG 16, 2024

- Performed **functional and regression testing** for web applications (CRM, MIS), identifying defects and improving system reliability.
- Collaborated with **development and operations teams** to support resolving technical issues.
- Maintained **technical documentation** and assisted in **process improvements** for operational efficiency.

EDUCATION
Amrit Campus — *Bachelors In Information Technology (BIT)*
Tribhuvan University | GPA: 3.57
JUN 2021 - JUL 2025

CERTIFICATION
DevOps Beginners to Advanced with Projects – Udemy (Imran Teli), 2024

PROJECTS
1. Production-Ready HA Kubernetes Cluster
- Designed and implemented a **multi-node RKE2 Kubernetes cluster** with **MetalLB, Envoy Gateway, and Cloudflare**, simulating real-world production traffic patterns.
- Implemented zero/minimal-downtime deployments, service-level load balancing, and secure ingress routing to ensure high availability and fault tolerance.
- Applied production networking and HA design principles aligned with large-scale microservices environments.

2. End-to-End CI/CD & DevSecOps Pipeline
- Built a secure, automated CI/CD pipeline using **Jenkins, Maven, Docker, Trivy, SonarQube, Nexus, and ArgoCD** for Java microservices.

- Integrated security scanning, quality gates, and artifact management, enforcing DevSecOps best practices in the delivery lifecycle.
- Implemented GitOps-driven continuous delivery, enabling reliable, auditable, and rollback-safe Kubernetes deployments.

3. Expense Tracker – Three-Tier Application on AWS EKS
- Designed and deployed a Dockerized React + Node.js + PostgreSQL application on Amazon EKS, using Kubernetes manifests and cloud-native networking.
- Automated infrastructure provisioning using **Terraform** (**EKS, IAM, VPC, RDS**), following infrastructure-as-code best practices.
- Configured **Ingress, custom domain**, **TLS** and **Route53 + Cloudflare** integration for secure, internet-facing access.
- Implemented monitoring and observability using **Prometheus, Grafana, and ELK,** enabling real-time visibility into application and infrastructure health.

ARTICLES

- **[medium]** [Deploying Serverless Applications with AWS Lambda and API Gateway](#)
- **[hashnode]** [Building end-to-end CI/CD Pipeline](#)
- [**hashnode**] [DevOpsifying and deploying 3 tier application into EKS](#)
- [**hashnode**] [Java Micronaut on K3s: Deployment, Domain & Observability](#)