

Saurav Karki

DevOps Engineer

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I am a BIT graduate with experience in DevOps, server management, and cloud-native infrastructure. Experienced in HA Kubernetes (RKE2, EKS, K3s, LKE, ECS), resilient networking (Envoy, MetalLB, Cloudflare, VPC, Subnets), and secure server hardening. Skilled in automation, CI/CD, and observability to deliver zero-downtime, scalable, and secure systems.

Technical Skills

Cloud and Virtualization Technologies	AWS, Linode, Proxmox, VMware
Server Administration	Linux hardening, firewall (iptables, ufw), system patching, DNS/DHCP, SSL/TLS
Container Technologies	Docker, Kubernetes
Scripting	Shell and Python
Version Control System	Git, GitHub and Gitlab
IAC & Configuration Management	Ansible , Terraform
Networking & Security	IPsec VPN (Libreswan), Cloudflare, MetalLB, Envoy Gateway
CI/CD & DevSecOps	GitHub Actions, Jenkins, FluxCD and Argo CD , SonarQube, Trivy , SEIM.
Observability	Grafana, New Relic, Prometheus, Loki.
Build & Testing	Maven, Gradle, Selenium
Web Servers & Proxies	Nginx, Apache Tomcat
Automation	N8n, kestra (Just exploring)

Professional Summary

Ultrabyte International Pvt.Ltd— Office Assistant/QA

APR 03 , 2023 - AUG 16, 2024

- Managed and automated routine office tasks to make daily operations smoother.
- Tested websites and software to ensure they worked properly (CRM, MIS systems).
- worked closely with different teams to support their day-to-day tasks and improve teamwork.

- Organized and prioritized tasks to help the office run more efficiently
- Resolved technical issues in office systems to minimize disruptions.
- Helped coordinate projects and made sure tasks were completed on time.
- Maintained accurate records and documentation of technical and administrative activities.

Hamro Patro Inc, Kathmandu — DevOps Engineer Intern/Trainee

APR 2025 – Present

- Managed and secured Linux-based servers, including system hardening, patch management, firewall configuration, and troubleshooting.
- Designed and deployed high-availability (HA) infrastructure using multi-node Kubernetes (RKE2) clusters with zero downtime and failover capabilities.
- Configured service routing and load balancing with Envoy Gateway, MetalLB, and Cloudflare, ensuring reliable and secure access to applications.
- Implemented site-to-site IPsec VPN tunnels for secure connectivity between local environments and remote data centers.
- Managed virtualization platforms (Proxmox, VMware) for automated VM provisioning and resource optimization.
- Set up and maintained ScyllaDB and PostgreSQL clusters, exploring multi-data center replication for resilience and disaster recovery.
- Gained hands-on experience with distributed systems such as Kafka and NATS, and deployed event-driven architectures with KEDA for autoscaling workloads.
- Built CI/CD pipelines for automated deployment of Java applications (Micronaut, Spring Boot) in Docker and Kubernetes.
- Deployed monitoring and observability stacks (ELK, Prometheus, Grafana, InfluxDB, Uptime Kuma, Kubernetes Dashboard) for real-time infrastructure visibility.
- Conducted load testing and capacity planning to ensure scalability for mission-critical applications.
- Collaborated with ML teams to containerize and deploy machine learning models with auto-scaling support.
- Documented infrastructure workflows and security practices, contributing to compliance and long-term maintainability.

EDUCATION

Amrit Campus — Bachelors In Information Technology (BIT)

June 2021 – July 2025
Computer Science

Courses/Certification

DevOps Beginners to Advance with Projects

Instructor: Imran Teli (Udemy)

December 2024

● Key Topics Covered:

- **Cloud Platforms:** AWS fundamentals, managing EC2, S3, EKS, RDS, Elastic Beanstalk and setting up scalable cloud infrastructure.
- **Operating Systems:** Linux command-line essentials and shell scripting for automation.
- **Automation Tools:** Worked in Ansible for infrastructure configuration and management.
- **Containerization:** Docker for creating, managing, and deploying containerized applications.
- **Orchestration:** Kubernetes for deploying and scaling microservices and managing clusters.
- **Infrastructure as Code (IaC):** Terraform for automating the provisioning and management of cloud infrastructure.
- **CI/CD Pipelines:** Maven, Jenkins, and GitHub Actions for automating build, test, and deployment processes.
- **GitOps:** Leveraging Git workflows for managing and automating application deployment.

PROJECTS

1. Production-Ready HA Kubernetes Cluster

- Designed and deployed a multi-node RKE2 Kubernetes cluster with MetalLB, Envoy Gateway, and Cloudflare integration.
- Implemented zero-downtime deployments, service-level load balancing, and secure traffic routing.
- Enabled resilient networking and high availability for mission-critical applications.

2. End-to-End CI/CD & DevSecOps Pipeline

- Built a CI/CD pipeline using Jenkins, Maven, Docker, Trivy, SonarQube, Nexus, and ArgoCD.
- Automated build, test, containerization, and deployment of Java microservices to Kubernetes.
- Ensured security, compliance, and GitOps-based continuous delivery for production-grade systems.

3. Cloud-Native Application Deployment (Wanderlust & 3-Tier Expense Tracker)

- Deployed full-stack MERN and Java applications on AWS EKS using Terraform modules, CI/CD, and GitOps.
- Implemented secure VPC networking, SSL/TLS certificates, and domain integration via Route53 and Cloudflare.
- Applied monitoring and observability using Prometheus, Grafana, and ELK for real-time infra insights.

4. DevOps of Java Micronaut Web Application

- Containerized and deployed a Java Micronaut app in k3s Kubernetes cluster with custom domain, SSL, and monitoring dashboards.
- Automated deployments and ensured scalability, resilience, and performance tracking.

5. Boardgame Listing Web App – Monitoring & Observability

- Implemented containerization, Kubernetes orchestration, CI/CD pipelines for a full-stack Spring Boot application.
- Configured Prometheus, Grafana, Node Exporter, and Blackbox Exporter for real-time metrics, monitoring, and alerts.

Other Works:

<https://sauravkarki.me>