Lekshmi N Kolappan

DevOps Lead/Engineer

SUMMARY

Experienced SRE/DevOps Lead and Engineer delivering high-uptime hybrid cloud solutions across AWS and Azure, specialising in Kubernetes for SaaS and regulated platforms. Proven ability to design and automate cloud infrastructure using Infrastructure as Code and to build robust CI/CD pipelines. Skilled in observability, monitoring, and Linux systems to solve complex operational challenges and build resilient, compliant systems. Adept at driving reliability, security, and scalability with modern DevOps practices and tooling.

EXPERIENCE

Lead DevOps Engineer / Site Reliability Engineer | Extreme Reach Limited | April 2022 – November 2025

- Architected secure, multi-tier AWS cloud solutions (EC2, S3, RDS, IAM, KMS, ALB, CloudWatch) delivering 99.9% uptime for enterprise applications, while providing 24/7 production troubleshooting, root-cause analysis, and L3 support for the Node.js/TypeScript application stack.
- Engineered EKS/AKS Kubernetes cluster and container runtime (CRI) management using Terraform for Infrastructure as Code (IaC), and piloted Istio service mesh on EKS for traffic management, enabling 30% faster, scalable, and reliable deployments across 5+ environments.
- Extensively used AWS CDK and Boto3 library and CloudFormation to create the infrastructure as code, also as a library module.
- Deployed Chaos Engineering framework on AWS EKS clusters to automate gameday resilience experiments targeting Kubernetes controllers; mentored 6 junior SREs and DevOps engineers (UK, US, India) on chaos-tooling best practices, experiment design, and failure-mode analysis.
- Integrated chaos engineering results in a Prometheus/Grafana observability stack via AWS Lambda-driven pipelines, achieving 60% resilience-testing coverage across global teams and dramatically reducing MTTR through enhanced incident-response readiness.
- Developed a scalable Machine Image Creation framework and automated GitHub Actions pipeline template using HashiCorp Packer to build, test, and register production-ready AWS AMIs.
- Designed and implemented a multi-cloud Infrastructure as Code (IaC) drift detection framework using GitHub Actions, monitoring services, and PagerDuty to track Azure ARM template configurations and AWS CloudFormation, decreasing drift incidents by 70% ensuring the integrity and consistency of infrastructure definitions.
- Integrated Prometheus, Grafana, and Datadog into automated monitoring pipelines with APM span traces and serverless alerting workflows built on AWS Lambda + EventBridge — cutting MTTR 35% across 10+ microservices in 8 prod environments.
- Engineered a comprehensive sanity and availability testing framework for a Node.js application with automated end-to-end health checks and uptime monitoring, and integrated SonarQube for static code analysis and quality gating, ensuring 99.9% reliability.
- Architected and rolled out an ArgoCD-based GitOps platform using the Apps-of-Apps pattern and a single central ArgoCD instance managing multiple tenant clusters (EKS and AKS); implemented ApplicationSet generators, sync waves, automated rollbacks, and custom health checks.
- Engineered enterprise-grade Open Policy Agent (OPA) + Gatekeeper policy-as-code framework using Rego to enforce resilience, security, and compliance standards (e.g., Pod Security Standards, replica/high-availability requirements, liveness/readiness probes, anti-affinity rules, and image trust policies).

Senior DevOps Engineer | ADP Inc | December 2017 - December 2021

- Extensively used AWS CDK and Boto3 library and CloudFormation to create the infrastructure as code, also as a library module.
- Utilised Terraform to manage AWS Secrets Manager for secure database secret storage, leveraging Jenkins to automate logistics workflows, which improved secrets management and enhanced system reliability.
- Optimized Kubernetes workloads across EKS with automated multi-cluster scaling and AWS SaaS integrations, reducing release cycle time by 20%.
- Assisted with refining the SDLC using Jenkins CI and ArgoCD, integrating SonarQube for automated code quality checks, shortening deployment cycles by 30% and improving release stability.
- Developed and deployed a hybrid cloud infrastructure audit and automated testing framework using Chef InSpec across AWS and GCP, increasing compliance coverage by 50% and reducing manual audit times by 40%.

Systems Analyst | NTT Digital Business Solutions | December 2015 - December 2017

- Assisted in transitioning a monolithic Node.js application to a microservices architecture by designing scalable and modular microservice architecture components.
- Implemented the container orchestration using Docker Swarm with minimized container maintenance and self-healing capability by 50%.
- Implemented a unified artifact management solution using JFrog Artifactory, enabling 80% reuse of build components across teams and cutting software delivery time by 30%.
- Designed and implemented CI/CD pipelines in Jenkins with automated build, test, QA, and deployment stages, improving release consistency and reducing deployment errors by 45%.
- Cut down the new client onboarding time to 70% by reducing turnaround time, leveraging IaC on apps such as Jira and Confluence.
- Created a Chef cookbook for Security patch automation for the production servers via Jenkins.
- Automated lifecycle management of GCP instances using Terraform and Chef, including provisioning, configuration, and decommissioning, to ensure scalable and reliable infrastructure.

NOC - Linux administrator | May 2013 - December 2015

- Set up and managed 40 Linux servers, including bare-metal and virtualized environments, achieving 99.95% uptime through monitoring and maintenance.
- Centralized the configuration management leveraging Ansible for 100+ servers.
- Automated web server content deployments via Ansible playbooks.
- Deployed 2+ software iterations per day for 2 years, which increased customer satisfaction by 25%.
- Managed the configurations of more than 40 servers using Puppet, configured Jenkins builds for continuous integration.

Systems Administrator | February 2010 - April 2013

- Installed and configured VMware ESXi server, vSphere Client, and vCenter.
- Implemented VPN and advanced firewall rule sets (iptables, ufw) for secure inter-site connectivity and remote administrative access.
- Directed bare-metal server deployment, configuration, and maintenance to support critical business workloads.
- Designed, deployed, and supported a scalable web server infrastructure serving 1,000+ internal users, increasing availability to 99.95%.

PERSONAL PROJECTS

Cloud CV | l4linux.com/portfolio/cloud-cv/ | June 2025 - September 2025

- Serves the CV through the Cloud CV project — a serverless resume website demonstrating Infrastructure as Code, CI/CD automation, and modern DevOps practices using AWS Lambda, Redis, S3, AWS CloudFront, GitHub CI/CD actions and Terraform.

HomeLab AI RAG Assistant | l4linux.com | l4linux.com/portfolio/opensource-llm-rag-stack/ | August 2025 - July 2025

- Uses Retrieval-Augmented Generation with Chroma vector database for document memory and Ollama for local LLM processing.
- Includes built-in Grafana dashboards and Prometheus metrics for tracking AI performance, health, and real-time monitoring of the entire RAG stack.

Personal Portfolio & Technical Blog | l4linux.com | May 2023 - October 2025

- Developed and deployed a portfolio website with automated GitHub Pages publication, serving 100+ monthly visitors interested in AWS EKS, Terraform, Docker, and DevOps topics.
- Automated continuous deployment using GitHub Actions, reducing manual deployment by 90% and ensuring zero downtime during updates.
- Published 30+ technical blog posts focusing on advanced SRE and DevOps practices, driving a 25% increase in professional engagement and community contributions.

Stack Quest - Knowledge Portal for SRE, DevOps, and Cloud Engineers | l4linux.com/stack-quest/ | August 2025 - October 2025

- Implements CI/CD automation via GitHub Actions to build and deploy an open-source static site for DevOps knowledge sharing on GitHub Pages.

Kubernetes GitOps Platform | l4linux.com/portfolio/kubernetes-gitops-platform/ | February 2022 - November 2025

- A production-ready AWS EKS cluster with complete GitOps automation, demonstrating Infrastructure as Code with Terraform, ArgoCD app-of-apps pattern, comprehensive monitoring stack (Prometheus, Grafana, Loki), and SRE testing tools with auto-scaling capabilities.

CERTIFICATIONS

CKA: Certified Kubernetes Administrator | Cloud Native Computing Foundation | 2020

Certified terraform associate | Hashicorp | 2021

RHCE - Red Hat Certified Engineer | Redhat Inc | 2013

INVOLVEMENT

Technical Reviewer of CentOS-High-Performance Book | Packt publication

Technical reviewer of the book "Linux for System Administrator" | Packt Publication

SKILLS

Containers and orchestration: Docker, Docker Swarm, Kubernetes, EKS, Azure Kubernetes Service (AKS), and Azure Container Instances (ACI).

Scripting: Bash, Python

Logging and monitoring: ELK, Datadog, Prometheus, Loki, Grafana.

Continuous integration/ Continuous Delivery: Jenkins, ArgoCD, CircleCI, Azure DevOps

Databases: MySQL, MariaDB, AWS Aurora, PostgreSQL, Azure Database for MySQL, Azure Database for MariaDB, Azure Database for PostgreSQL

Configuration Management: Ansible, Chef, Puppet.

DevOps Tools: Helm, Kustomize, Packr, Vault, Chef Inspec.