Alok Kumar

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Experienced Principal DevOps / SRE / Platform Engineer with over 15 years of expertise delivering high-impact infrastructure and DevOps solutions across global enterprises, fast-growing startups, and regulated industries like telecom and pharma. I specialize in helping engineering organizations build scalable, secure, and cost-effective systems through hands-on execution and strategic leadership.

As a consultant, I collaborate cross-functionally—from engineers to CTOs—to ship production-grade infrastructure, modernize cloud platforms, and embed DevOps maturity across teams. Currently available for remote consulting engagements (full-time or part-time), with flexibility across EMEA and EST time zones.

SKILLS:

- **Containerization & Orchestration:** Docker, Kubernetes, EKS, ECS, AKS, LKE, Helm, Helmfile, Traefik
- **Edge & Serverless Computing:** AWS Lambda, Cloudflare Workers, CloudFront + Lambda@Edge
- **Cloud Architecture:** API Gateway, Kinesis, Kafka, Step Functions, EventBridge, VPC, Subnets, Autoscaling, Load Balancing, Multi-AZ, Multi-Region replication
- **Cloud Security & Identity:** AWS IAM, Cognito, SAML, ACL, Security Groups, Firewall, Zero Trust
- **Programming Languages & Frameworks:** Python, Django, Flask, FastAPI, Bash, JavaScript/TypeScript, Microservices
- **Infrastructure & Automation:** Terraform, Terragrunt, CloudFormation, AWS CDK, AWS SAM, AWS Chalice, Ansible, Packer
- **Observability & Monitoring:** Prometheus, Grafana, ElasticSearch, Fluentd, Kibana, CloudWatch, AppDynamics, NewRelic, PagerDuty, DataDog, Sentry
- **Databases & Messaging:** DynamoDB, MongoDB, PostgreSQL, MySQL, Redis, RabbitMQ, Percona, Percona PMM
- **CI/CD & DevOps Tools:** Github, Github Actions, AWS CodePipeline, Jenkins, Crossplane, JIRA, Confluence
- **Operating Systems & Misc:** Linux, Ubuntu, OpenStack, SDN, ONAP
- **Leadership & Strategy:** Team mentorship, cross-functional alignment, incident response, DevOps roadmaps, platform-as-a-product thinking, DevOps enablement for Agile teams, cloud cost governance, compliance automation, VP/CTO-level collaboration
- **Consulting & Communication:** Stakeholder Management, Client Advisory, Strategic Roadmaps, Client Engagement, Cross-Functional Collaboration, Technical Documentation

CONSULTING EXPERIENCE:

Contractor via Modus Create, Remote – Portugal

Enterprise Mobile Platform - DevOps Strategy & Infrastructure   *May 2024 - Present*

- Brought in to define and execute the **DevOps roadmap** for an enterprise mobile app from inception to first stable release, leading infrastructure architecture on **AWS ECS, DocumentDB, ElastiCache, and Cognito** while implementing **SAML authentication** for secure access.
- Designed and managed **CI/CD pipelines** using Terraform and GitHub Actions, optimizing performance, automating compliance, and ensuring high availability for increasing production traffic.

- Led **enterprise-wide DevOps transformations**, aligning **engineering, security, and compliance teams**, driving infrastructure modernization, cost optimization, and governance frameworks for high-performing cloud operations.

- Oversaw **incident management and proactive monitoring**, enforcing security best practices and comprehensive documentation to reduce downtime and streamline troubleshooting.

High-Traffic Web Platform – Edge Infrastructure & DevOps Enablement   *Jan 2023 - Apr 2024*

- Architected and operated a **high-traffic site** using Cloudflare Workers, optimizing **edge computing**, **security**, and **performance** while integrating Python-based serverless APIs for scalability and low-latency processing.

- Developed **security-first infrastructure**, implementing WAF policies, bot mitigation, IAM controls, and automated infrastructure provisioning in a serverless environment.

- Led **cross-functional DevOps teams**, driving automation, security hardening, and standardizing **CI/CD, Kubernetes, and cloud best practices** across multiple business units.

- Championed **comprehensive documentation** to enhance operational consistency, security compliance, and knowledge sharing across teams.

AWS Serverless & Kubernetes Platform – Microservices & Observability   *May 2020 - Dec 2022*

- Led a team in designing, developing, and operating 5+ microservices using AWS serverless tools (AWS **SAM**, **Lambda**, **DynamoDB**, API Gateway, SQS, **Kinesis**, **Cognito**, and CloudWatch), ensuring scalability, reliability, and operational efficiency.

- Architected a **scalable DynamoDB data model**, optimizing for **rapid market expansion**, improving performance, and ensuring reliability.

- Managed **MongoDB & PostgreSQL clusters**, optimizing performance and cutting **operational costs by 35%**, while implementing **observability solutions** using **PGA, EFK, PMM, and NewRelic**.

- Built **fault-tolerant Kubernetes infrastructure** across hybrid clouds, implementing **CI/CD with Helm, Helmfile & GitOps** for 50+ applications, reducing **deployment failures by 30%** and improving **team productivity by 40%**.

Contractor via Aptira Pty Ltd, *Remote – Australia*

Telecom Cloud Infrastructure – OpenStack & Kubernetes Operations   *Sep 2018 - Apr 2020*

- Managed an on-premise data center and networking infrastructure for the region's largest **telecom operator**, initially on **OpenStack** and then transitioning from **OpenStack to Kubernetes** to enhance scalability, reliability, and automation. Led the **L3 support team**, optimizing **VXLAN overlays and SDN integrations** for improved network performance and incident resolution.

- Developed a **workload migration engine**, shifting cloud resources from **public to on-prem OpenStack**, deploying and managing **core OpenStack services** (Keystone, Nova, Neutron, Cinder, Swift). Contributed **upstream** to OpenStack **Horizon and Nova** while delivering **talks at OpenStack conferences** as a subject matter expert.

OpenStack Infrastructure Operations & Automation   *Apr 2015 - Aug 2018*

- Supported day-to-day operations of on-premise infrastructure running on **OpenStack**, assisting with service monitoring, log analysis, and VM lifecycle management. Developed **Python** scripts to automate routine maintenance tasks.

- Participated in incident response and helped troubleshoot issues across compute (**Nova**), networking (**Neutron**), and storage (**Cinder**) components, ensuring system stability and uptime.

Tarams Pvt Ltd, Bengaluru | Senior Software Engineer   *Nov 2010 - Mar 2015*

- Led the **end-to-end development** of a **licensing web portal** (python/django) for a prominent **Silicon Valley APM SaaS startup**, handling core business logic and ensuring scalability and reliability during rapid customer acquisition. Spearheaded a **technology modernization roadmap**, introducing **Git, automation, containerization, and security enhancements**, improving efficiency and reducing **technical debt**.

Infosys, Chennai | Systems Engineer   *Jan 2009 - Nov 2010*

- Developed **critical banking features** for a **Tier 1 British bank** in a **Java-based application**, automating QA workflows and reducing team workload by **45%** resulting in streamlined process and accelerated project delivery.