Anil Kumar Reddy Konda
DevOps Engineer
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Professional Summary

Software Engineer with 4+ years of experience, with a strong focus on **DevOps** and **Site Reliability Engineering** practices. Specialized in building scalable, secure, and highly available cloud infrastructure using AWS, Kubernetes, and Terraform. Proven track record in designing robust CI/CD pipelines (GitLab CI/CD, GitHub Actions), managing microservices architectures, and automating infrastructure using Terraform, AWS CDK, and Ansible. Work has consistently aligned with SRE responsibilities—owning observability, incident response, cost optimization, and SOC 2 compliance. Proficient with monitoring and alerting tools like Prometheus, Grafana, CloudWatch, and Papertrail. Passionate about system reliability, automation, and delivering operational excellence at scale. Actively seeking DevOps/SRE roles, with a strong interest in platform engineering and cloud-scale infrastructure at companies like Splunk.

Technical Skills

- **Cloud & Infrastructure:** AWS (EC2, RDS, S3, VPC, ALB/NLB, Route 53, Security Groups), Kubernetes, Docker, Terraform, AWS CDK, CloudFormation
- **CI/CD Tools:** GitLab CI/CD, GitHub Actions, Jenkins, Tekton CI
- **Containerization & Orchestration:** Docker, Kubernetes (K8s), Helm
- **Infrastructure as Code (IaC):** Terraform, AWS CDK, Ansible, Puppet, Bash Scripting
- **Monitoring & Logging:** Prometheus, Grafana, CloudWatch, Papertrail, ELK Stack (Elasticsearch, Logstash, Kibana)
- **Version Control & Repositories:** Git, GitHub, GitLab, Bitbucket
- **Development Environments & Tools**: Linux/Unix, VS Code, Postman, Putty, WinSCP
- **Methodologies & Practices**: DevOps, Site Reliability Engineering (SRE), Agile/Scrum, GitOps, Blue-Green Deployments, IaC, Automated Monitoring & Incident Response
- **Languages & Frameworks**: Golang, Python, Ruby, Java, JavaScript, Bash, Spring Boot, Flask, FasAPI, Ruby on Rails

Work Experience

Software Developer 1 **Aug 2024 – Present**
Premium Parking Services | New Orleans, LA

- Spending most of my time designing and developing a Go-based aggregator engine that integrates with multiple third-party parking providers to sync rates, availability, and blackout dates. The system is built using AWS Lambda (Go), API Gateway, PostgreSQL (RDS), and SQS, with a Ruby on Rails micro-frontend and backend coordination.
- Architected and deployed the solution using Terraform, managing separate environments with remote state files and secrets securely injected from AWS Secrets Manager, following security best practices and IAM least-privilege.
- Building and managing CI/CD pipelines using GitLab CI and GitHub Actions, enabling consistent multi-env deployments across staging, QA, and production with rollback capabilities.
- Actively contributing to the ongoing migration from a Ruby on Rails monolith to microservices, currently helping design and implement several backend services in Go and frontends in Rails, while leading the deployment strategy using Kubernetes and Terraform.
- Managing Kubernetes workloads on EKS using Helm, and integrating Istio service mesh for traffic routing, canary rollouts, and observability.
- Developing DNS-based service discovery with PowerDNS (PDNS) and Terraform automation to handle dynamic record creation and updates.
- Working on IPv6 support by ensuring VPC subnet compatibility, endpoint reachability, and container networking adherence across the stack.
- Provisioning and managing cloud infrastructure across AWS using Terraform and AWS CDK to support services like Lambda, RDS, EC2, SQS, and private VPC endpoints.
- Implementing AWS best practices including AWS Organizations, cross-account IAM roles, Secrets Manager rotation policies, and cost optimization strategies that led to a 35% reduction in monthly AWS bills.

- Instrumenting monitoring and observability using Grafana and Prometheus, including service-level dashboards for microservices during the migration phase.
- Using Papertrail for centralized logging and alerting across Kubernetes and EC2 workloads.
- Serving as the primary on-call engineer for multiple production systems, frequently handling real-time incident response and debugging, and improving Mean Time to Resolution (MTTR).
- Leading internal initiatives to enforce SOC 2 security practices, including GuardDuty integration, AWS Security Hub alerting, and infrastructure vulnerability scans.

Student Engineer **Aug 2023 – July 2024**
University of Central Missouri | Warrensburg, MO

- Supported cloud automation and Linux server management for university applications, ensuring high availability and minimal downtime.
- Developed Python-based automation scripts for server maintenance, log parsing, and performance monitoring, reducing manual overhead and improving incident response.
- Implemented blue-green deployment strategies for on-premise environments, minimizing risk during updates and ensuring zero-downtime rollouts.
- Designed real-time dashboards using Prometheus and Grafana, integrating custom metrics via prometheus_client and visualizations via matplotlib and pandas, improving MTTR.
- Authored Terraform and Ansible playbooks to automate cloud resource provisioning and environment configuration for internal university services.
- Administered Ubuntu and CentOS systems, optimizing performance, configuring log rotation, and troubleshooting networking and disk I/O issues.
- Conducted log analysis and system performance diagnostics, identifying bottlenecks, anomalies, and potential security risks.
- Enforced best practices in Linux server security, including SSH hardening, access control, and encryption policies for sensitive systems.
- Integrated Prometheus Alertmanager with Slack/Email alerts to enable proactive monitoring and quicker on-call response.
- Collaborated with faculty and IT administrators to gain security approval for internal dashboards and system configurations.
- Documented all infrastructure as code (IaC), monitoring strategies, and automation workflows to promote consistency and handover readiness.

Associate Software Engineer **Sep 2021 – May 2023**
Xebia | India

- Migrated Ruby on Rails applications from Heroku to AWS, architecting multi-account cloud infrastructure using AWS CDK and Terraform under tight delivery timelines.
- Onboarded and deployed infrastructure for multiple client projects, transitioning them from proof-of-concept to production-ready environments.
- Developed and maintained Kubernetes clusters on Amazon EKS, incorporating Helm and auto-scaling strategies to ensure high availability and resource efficiency.
- Designed CI/CD pipelines using GitHub Actions and Jenkins, streamlining deployment workflows and reducing release cycle time.
- Created a Python-based custom CLI tool for one of the clients to monitor AWS server status, track environment updates, and provide offshore teams with health checks and actionable alerts.
- Implemented automatic DNS resolution using Route 53, enabling service discovery across environments and improving networking reliability.
- Integrated Datadog, Prometheus, and Grafana for centralized logging and real-time observability, helping teams proactively respond to system anomalies.
- Applied indexing and table sharding strategies on PostgreSQL to boost database performance and reduce query response times.

- Built and scheduled AWS Lambda functions for backups, billing optimizations, and alert-based workflows, improving cost control and operational resilience.
- Developed backend services using Golang with multi-threading to enhance throughput and parallel processing capabilities.
- Led infrastructure automation and repeatable deployments using Terraform, AWS CDK, and CloudFormation, accelerating delivery across client environments.
- Leveraged containerization with Docker and deployment on AWS ECS and EC2, enabling seamless rollouts and rollback strategies.

Full Stack Software Engineer **Oct 2020 – Aug 2021**
Synergina | India

- Helped build a software product for small manufacturers and retailers to manage their business operations more easily.
- Improved features in the existing ERP system to support inventory tracking, billing, and workflow management.
- Deployed applications on AWS EC2, ensuring they were running smoothly and available at all times.
- Set up basic CI/CD pipelines using GitHub Actions to automate updates and reduce manual work during deployments.
- Managed cloud infrastructure by configuring basic access rules and network settings in AWS.
- Supported the team during production issues by helping with manual deployments and quick fixes.

Publications

- Konda, A. K. R., Jimada, S., Cherukuri, P. A. A., & Janakirama Sarma, M. (2020). Chatbot Implementation for Enhancement of Student Understanding - A Natural Language Processing Approach IIENC-2020 Proceedings. International Virtual Conference on Integrated Intelligence Enable Networks & Computing https://doi.org/10.1007/978-981-33-6307-618
- Konda, A. K. R., Cherukuri, P. A. A., Linh N.T.D., Indukuri S., Nuthi S. (2021) Unsupervised Clustering for Optimal Locality Detection – A Data Science Approach International Journal of Hyperconnectivity and the Internet of Things (IJHIoT), vol 5, issue 2, pp. 88-98. https://doi.org/10.4018/IJHIoT.202107010
- Konda, A. K. R., Saraswathi, N. R., & Cherukuri, P. A. A. (2020). AI-based Strategic Marketing: SMAI Model Proceedings of the International Conference on Research in Management & Technovation 2020, 95–98. https://doi.org/10.15439/2020km2

Projects

- ReliAgent, Built an AI-powered SRE assistant that uses GPT-4 to simulate incident diagnosis, alert triage, and root cause analysis using mock logs, alerts, and runbooks. Designed with a CLI interface and modular backend for future integration with tools like Splunk, Prometheus, and CloudWatch. Enables natural language querying to streamline incident response workflows.
- DevEssentials, Built a cloud-based Dev Environment platform that enables users to spin up customizable development containers (e.g., VSCode, databases, APIs) on Docker or Kubernetes, with future support for visual canvas-based service configuration and one-click app scaffolding.
- Open Source Contribution (Wedaa), Actively contributing to an open-source project Wedaa, focusing on sandboxing features and FastAPI-based scaffolding inspired by tools like JHipster for quick service generation and environment setup.

Education

- Master of Science in Computer Science, University of Central Missouri, Warrensburg, MO
- Bachelor of Technology in Computer Science, CMR Institute of Technology, Hyderabad, India