

Kalindu De Costa

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Summary

- 6+ years of platform and infrastructure engineering experience, owning production systems end-to-end
- Expertise in Kubernetes, Terraform (IaC), CI/CD, and cloud-native platform architecture

Experience

Staff Infrastructure Engineer | Shopify - Team Edge Infrastructure

June 2025 - Present

— Tech Stack: **GCP, Terraform, Rust, Cloudflare, GitHub Actions, GitOps**

- Architected a GCP-based edge with full CDN support for Shopify's routing requirements, complementing the Cloudflare edge via multi-tier Google Application Load Balancers and Rust-based Service Extensions (proxy-wasm) for improved resiliency
- Led the exploration of using GCP application load balancers for 1,000+ internal applications from Shopify's bespoke routing layer, reducing latency by 20ms (p50) and saving \$20K/month in compute costs
- Championed the effort to create isolated canary and phased deployments for tier 1 services, making rollouts safer and reducing time to mitigate production incidents from 10+ minutes down to less than 5 seconds
- Championed the implementation of location-aware routing with regional affinity for critical merchant facing applications, reducing average latency by 60ms by serving requests as close as possible to the clients

Senior Infrastructure Engineer | Shopify - Team Edge Infrastructure

May 2021 - June 2025

— Tech Stack: **Kubernetes, NGINX, Envoy, GoLang, Ruby, Python, Lua, GitOps, GCP**

- Designed and implemented Kubernetes-based routing solution, leveraging ingress-nginx for east-west and north-south traffic across 1,500+ applications and 3,000+ domains, supporting a sustained 40M RPM
- Authored robust and modular IaC using Terraform to manage GCP resources, including GKE, Cloud Storage, and Cloud Load Balancers, supporting scalable and secure infrastructure for 100s of development teams
- Owned the design and implementation of CI/CD pipelines using GitHub Actions, unifying the deployment process and greatly improving development workflow
- Deployed and configured Cloudflare as a unified edge platform for Shopify, implementing custom dynamic WAF rules, business logic through workers, and CDN delivery for millions of merchants' static assets

IIDR Data Replication Software Developer | IBM Canada

Apr 2019 - May 2021

— Tech Stack: **Java, Python, Kafka, MySQL, Oracle, zOS**

- Direct work with IBM cloud with Kubernetes / Terraform to automate operation process for CDC Cloud
- Worked largely towards the CDC for Kafka offering including Kafka Custom Processing Operator to replicate database changes as they happen and delivers them to Kafka as a target

Education

University of Toronto – Honours Bachelor of Science (B.Sc.)

- Computer Science, specializing in Software Engineering (Co-op)

Projects

Homelab – in-home mini datacenter with custom VPCs

Kubernetes, Ansible, Python / Shell

- A fully functional mini datacenter with a SFF kubernetes cluster and a SBC PI cluster for deploying services like a recursive DNS sinkhole, highly available HASS deployment and NixOS based bootstrapping for all devices