Nik Ogura

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Aut viam inveniam, aut faciam (I will find a way, or I will make one)

Professional Summary

• **Principal Engineer and CIO with 25+ years of experience in distributed systems, platform engineering, and infrastructure automation** across fintech, cryptocurrency, enterprise technology, and financial services, with deep expertise in Kubernetes, multi-cloud architecture (AWS, GCP, Azure, bare-metal), and modern cloud-native systems

• **Platform Engineering and Distributed Systems Expert** specializing in multi-cloud Kubernetes infrastructure, real-time data processing systems, and cost optimization at scale—achieving 76% infrastructure cost reductions, 100x observability cost savings, and architecting platforms processing millions of cryptocurrency market data events daily across federated clusters

• **Security and Compliance Leader** with track record founding security teams, implementing enterprise WAF systems protecting global user bases, designing PCI DSS compliant payment infrastructure, achieving FedRamp authorization automation, and responding to critical security incidents including insider threat forensic recovery with zero data loss

• **Technical Innovator and Open Source Contributor** creating production-grade tools including AI-powered diagnostic systems achieving 85% MTTR reduction, self-updating binary distribution systems (listed in awesome-go), Kubernetes operators, and authentication systems—with multiple projects adopted across organizations

• **Engineering Leader and Educator** building and managing globally distributed teams across five continents, establishing engineering standards and hiring systems, and delivering technical training in security, DevOps, and software development practices throughout career

Experience

Terrace | *Chief Information Officer* | May 2024 - Present

• Re-architected flagship cryptocurrency trading platform in under 3 months, reducing latency from 600ms to microseconds and enabling 100x data capacity increase to meet market launch requirements

• Designed distributed data curation platform for cryptocurrency markets with sub-10ms change detection latency across 4.1M+ trading pairs, serving as core library adopted by 27+ services and eliminating $120k-$240k annual S3 API costs

• Implemented AI-powered security and incident response automation using Claude, achieving 24/7 automated coverage, 80% reduction in manual triage, and 50% faster MTTR through Slack-integrated diagnostic bots

• Architected federated multi-cluster observability platform processing 2M+ WAF security events daily across multiple distributed Kubernetes clusters, reducing MTTR by 85% (30 minutes to 5 minutes) and automating 60-80% of routine diagnostics

• Established engineering excellence standards including custom Golang linter for named returns, comprehensive lint configuration with zero-tolerance policy, and contract-to-hire validation system achieving near-zero regrettable hires

• Built and managed globally distributed engineering organization spanning five continents (North America, South America, Europe, Africa, India) with asynchronous-first communication and consistent quality standards

Terrace | *Director of Infrastructure and Security* | Jun 2023 - May 2024

• Architected multi-cloud hybrid Kubernetes platform spanning AWS, GCP, Azure, and bare-metal, achieving 76% cost reduction and 40% latency improvement while eliminating vendor lock-in through cloud-agnostic design

• Led forensic response to critical insider threat incident, executing complete asset recovery and system reconstruction within hours of total compromise with zero customer data loss, validating zero-trust architecture under adversarial conditions

• Achieved 100x reduction in monitoring costs by implementing self-hosted Prometheus + Thanos federation replacing commercial SaaS observability solutions while improving visibility and MTTD

• Replaced AWS NAT Gateways with EC2-based solution using iptables, eliminating $10k/month ($120k annually) in recurring costs while maintaining equivalent functionality and availability

• Designed bare-metal Talos Kubernetes clusters with LUKS full-disk encryption and custom Key Management System integrated with Hashicorp Vault, eliminating $10k-$20k monthly data egress costs through datacenter co-location

• Implemented comprehensive Infrastructure as Code with Terraform managing multiple AWS accounts plus Azure resources, establishing GitOps workflow with cross-account IAM, OIDC providers, and production security controls

Amazon Web Services | *Systems Development Engineer, Senior DevOps Consultant* | 2022 - 2023

• Automated FedRamp compliance processes for Amazon Global Accelerator Federal government cloud systems, achieving 100% automation of compliance checks and 50% faster authorization with zero compliance violations

• Developed Kubernetes Operators for Amazon WAF enabling declarative policy management, reducing WAF policy deployment time by 95% and achieving 100% Kubernetes-based management of AWS resources

Orion Labs | *Head of Infrastructure, Principal Engineer* | 2020 - 2022

• Built stand-alone, self-bootstrapping Kubernetes platform for SaaS, cloud-prem, on-prem, and air-gapped installations—customer described as "flawless" and "easiest, highest quality software installation we have ever seen"

• Solved thundering herd problem where MDM agents restarting device fleets overwhelmed AWS ALB auto-scaling, migrating to NLB with Layer 7 switching in Kubernetes ingress controllers to handle massive traffic spikes

• Built COVID epidemiological contact tracing system for Massachusetts Bay Transit Authority (MBTA) using voice bot-enabled platform with real-time location tracking and privacy-preserving historical contact identification

• Developed Voice Bot Framework enabling voice-driven automation on Orion PTT platform, creating new product capability supporting customer voice automation use cases

Scribd | *Principal DevSecOps Engineer* | 2018 - 2020

• Founded and led Scribd's first Security Team, transforming security posture and establishing security-first culture for platform serving millions of users globally

• Built scalable SIEM system from scratch handling petabytes of log data with real-time threat detection, providing self-service analytics enabling anyone in the company to answer "What's going on?" with worldwide CDN visibility

• Implemented enterprise-grade WAF using ModSecurity protecting global user base while maintaining 99.99% availability

• Created Managed Secrets system providing YAML interface on Hashicorp Vault, enabling developers to define secrets without accessing production values—released as open source with community adoption

• Designed Kubernetes clusters with native tooling connecting application workloads to Fastly CDN caches, achieving 99% cache hit rate and 50% bandwidth cost reduction

Stitch Fix | *Sr. DevOps/SRE* | 2017

• Built Identity and Access System for Algorithms & Analytics department providing secure access to all resources—system maintained 100% uptime during company's third-party SSO breach when vendor went down

• Enabled AWS IAM Role/STS credentials on developer laptops without code alteration of Amazon SDK, providing passwordless authentication with zero credential leaks

Apple | *Lead DevOps Engineer* | 2015 - 2017

• Led Apple Pay DevOps team in implementing modern administration and audit pattern, achieving first hardware ownership by Apple Pay in Apple's history through collaboration between Security, Audit, and Engineering

• Designed and implemented first automated test-driven CI/CD system for Apple Pay with dynamic environment creation per pull request, enabling rapid safe deployments with zero deployment-related outages during tenure

• Architected command and control infrastructure managing 30,000 servers worldwide, orchestrating China launch with zero downtime throughout critical 2015-2017 period

• Provided infrastructure and DevOps support for Apple Pay payment processing systems handling millions of daily transactions, maintaining PCI DSS compliant infrastructure with sub-second performance targets

• Created private OpenStack cloud from unused hardware achieving 100x acceleration of build and test cycle, overcoming datacenter space limitations and cloud usage restrictions

• Designed OpenStack deployment with security-first architecture so secure that Apple's security teams couldn't penetrate until protections were stood down—told "that was a first" at Apple

Wells Fargo | *Sr. Software Engineer* | 2014

• Built static code analysis tools using Antlr to parse Puppet DSL for Governance, Risk Management, and Compliance (GRC), enabling pre-merge compliance validation and eliminating entire class of compliance violations

Data Recognition Corporation | *Principal DevOps Engineer* | 2014 - 2015

• Designed auto-scaling Continuous Delivery environment for educational testing platform, migrating multiple applications from proprietary systems to open source and reducing deployment time from weeks to hours

• Developed and taught internal DevOps curriculum covering technology, disciplines, and cultural transformation

U.S. Bank | *Security Architect, Application Architect* | 2007 - 2014

• Solely developed and managed Web Application Firewalls for entire U.S. Bank over 5 years with team of two, achieving zero breaches while maintaining PCI DSS and OWASP Top Ten compliance—organization trusted "WAF policy for all of US Bank boiled down to: Nik says so"

• Developed Encryption Key management and distribution service saving over $1M compared to vendor bids, still in production 15+ years later supporting multiple countries with friendly UI for non-technical users

• Designed Credit Card PAN Encryption and Tokenization System for Merchant Acquiring with scalable, highly available architecture protecting millions of transactions with zero PAN data breaches

Skills

Languages: Golang, Bash, Perl, Python, Ruby, Java, Groovy, JavaScript, TypeScript

Cloud & Infrastructure: AWS, GCP, Azure, OpenStack, Terraform, Multi-cloud Architecture

Kubernetes: EKS, AKS, Rancher, Kubeadm, Talos, Operator Framework, Helm, Kustomize, Replicated

CI/CD: Jenkins, GitHub Actions, FluxCD, ArgoCD, Tekton, TeamCity, Travis, CircleCI

Databases: PostgreSQL, MySQL, Redis, Clickhouse, TimescaleDB, DynamoDB, GraphQL, Oracle

Networking: TCP/IP, DNS, Load Balancers, Proxies, Istio, Consul, Nginx, HAProxy, Envoy

Security: OpenSSL, OpenSSH, HSMs, SIEM, PKI, OIDC, SAML, JWT, Kerberos, PKCS, IPSec

Open Source Projects

Diagnostic Slackbot - AI-powered Slack bot for automated operational diagnostics using Claude Code CLI with custom MCP tools, achieving 85% MTTR reduction and 60-80% automation of routine diagnostics

Dynamic Binary Toolkit (DBT) - Self-updating signed binary distribution system that builds, tests, publishes, and updates itself in flight; listed in awesome-go

Go Mason - Tool for clean-room CI testing locally, enabling pipeline testing before pushing; listed in awesome-go

Dex SSH Connector - SSH authentication connector for Dex identity provider implementing OAuth2 Token Exchange (RFC 8693) with SSH-signed JWTs for passwordless Kubernetes authentication

Kubectl-SSH-OIDC - kubectl plugin providing passwordless authentication using SSH keys and Dex IDP with OIDC Token Exchange flow

Hasura Operator - Kubernetes Operator for declaratively managing Hasura GraphQL instances, extending K8s API for GraphQL infrastructure