

# Nik Ogura

***Viam inveniam, aut faciam.***

*(I will find a way, or I will make one)*

## Professional History

### **Terrace: 2023 - Present Chief Information Officer**

- Hired as Director of Cloud Infrastructure and Security
- Architected a multi-cloud, hybrid Kubernetes platform spanning various cloud providers and on-premises systems. Migrated from GCP to AWS and On Premesis.
- Protected company intellectual property during a critical turnover period, swiftly restoring systems within hours.
- Drove Observability initiatives in Engineering Management by designing scalable monitoring systems, resulting in a 100x reduction in monitoring costs.
- Elevated to CIO and Head of Engineering, overseeing the global team in re-architecting Terrace's core product for DeFi, CeFi, and Cryptocurrency trading, integrating Fintech, Blockchain, Observability, and Security on Kubernetes.
- Launched Terrace's flagship product in less than 3 months from assumption of new duties by re-architecting the entire platform from the database to the front-end to meet business requirements around scale and latency. Brought latencies of > 600ms down to in some cases *microseconds* and scaled the data handling capabilities of the product by over 100x.

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

- Automated processes to secure and maintain Amazon Global Accelerator systems for FedRamp compliance.
- Provided internal Security Consulting for Amazon Global Accelerator, holding certifications as AWS Solutions Architect and Hashicorp Vault Professional.
- Developed Kubernetes Operators for Amazon Web Application Firewall implementation.

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

- Led a team managing Infrastructure/DevOps/SRE responsibilities on AWS, Azure, and On-Prem systems.
- Designed and implemented a Kubernetes platform enabling secure voice communications in cloud, on-prem, and air-gapped installations.
- Developed contract tracing systems for public transportation during Covid outbreak.
- Built a Framework for Voice Bots using Orion Platform on Kubernetes.
- Established engineering standards and conducted technology training for all employees.

### **Scribd: 2018 - 2020 Principal DevSecOps Engineer, Sr. DevOps/SRE**

- Founded and led Scribd's Security Team
- Developed a scalable SIEM system to monitor and secure Scribd's global CDN for customer data protection
- Implemented a Web Application Firewall to safeguard Scribd's services and network
- Created an easy-to-use YAML interface on Hashicorp Vault 'Managed Secrets' for efficient management of sensitive information, now an Open Source project
- Designed Kubernetes clusters and native tooling that connected application workloads to Fastly CDN caches for tracking cache expiration of precompiled javascript code at a global scale
- Established an Identity and Access System with PKI to defend internal networks and Kubernetes clusters from unauthorized access

## **Stitch Fix: 2017 - 2017 Sr. DevOps/SRE**

- Developed an Identity and Access System for the Algorithms & Analytics department to access all resources in the stack securely and reliably.
- Created an AWS IAM Role based development allowing seamless code execution between local machines and EC2 nodes.
- Built a cloud-based system for interactive containers, enabling Data Scientists to run code near their data seamlessly as if it were local.

## **Apple: 2015 - 2017 Lead DevOps Engineer**

- Led Apple Pay DevOps team in implementing a modern administration and audit pattern, fostering collaboration between Security, Audit, and Engineering which led to full hardware ownership by Apple Pay. This was a first in Apple's history.
- Designed and implemented the first automated test-driven CI/CD system for Apple Pay at Apple.
- Architected the command and control architecture for global Apple Pay launch in China, managing 30k servers worldwide.
- Created a private OpenStack cloud to accelerate Apple Pay's build and test cycle by 100x, overcoming infrastructure limitations and cloud usage restrictions.
- Developed a container-based system enabling end-to-end integration testing of Apple Pay platform on any laptop, a pioneering achievement within Apple.

## **Data Recognition Corporation: 2014 - 2015 Principal DevOps Consultant**

- Created auto-scaling Continuous Delivery System for educational testing.
- Successfully migrated applications from proprietary systems to fully Open Source platforms.
- Developed and delivered internal training curriculum covering DevOps technology, disciplines, and cultural concepts.

## **Wells Fargo: 2014 DevOps Consultant, Sr. Software Engineer**

- Led the development, testing, and delivery of applications and middleware.
- Developed modules for continuous integration/continuous delivery of multiple applications across various technologies and operating systems.

## **U.S. Bank: 2007 - 2014 Security Architect, Application Architect, Sr. Systems Engineer / SRE**

- Worked as a Security Architect for Corporate Payment Systems, providing consultation on Threat Modeling, Penetration Testing, and Security Remediation.
- Solely developed and managed Web Application Firewalls (WAF) for the entire U.S. Bank over 5 years while concurrently serving as Security Architect.
- Provided consultancy and training on Automated Testing, including developing training materials and teaching classes through the organization's internal development platform.
- Managed Payment Systems' reliability engineering (SRE), ensuring PCI DSS compliance, and implemented Observability, Monitoring, and Alerting systems. Established Encryption and Tokenization mechanisms for PAN data in Merchant Acquiring systems.
- Developed an Encryption Key management and distribution service utilized by numerous users across various countries.
- Engineered systems for Code Signing, Continuous Integration, and Artifact Storage.

## **Plain Black: 2006 - 2007 Software Engineer**

- Developed software for WebGUI Content Management System.
- Handled customer service for both paid and open source community customers.

## Universal Talkware: 2000 Lead Systems Engineer

- Established Network Operations Center and internal tools.
- Managed On-Premise / Bare Metal Servers and Datacenter operations.

## Hessian & McKasy: 1999 - 2000 Director of IT

- Oversaw all IT operations for a 40-seat law firm, including desktops, servers, network, backups, compliance, and security.
- Successfully managed the company's entire electronic and technological infrastructure.
- Skillfully navigated the challenges of the Y2K Crisis.

## Skills

**Programming Languages:** Golang, Bash, Perl, Python, Ruby, Java, Groovy, JavaScript

**Frameworks:** Spring, Antlr, Gherkin, Cucumber, PyTest, Test::More, Go Test, Godogs, Selenium

**Disciplines:** Test Driven Development, Behavior Driven Development, Agile, Rugged, SOLID

**Compute / Virtualization:** Bare Metal, VmWare/ESX/ESXi, Qemu, KVM, OpenStack, EC2, GCP, Azure, VirtualBox, XHyve, Vagrant, Libvirt, Proxmox

**Kubernetes:** EKS, AKS, Rancher, Kubeadm, Replicated, Talos, Operator Framework, Minikube, Jsonnet, Helm

**Operating Systems:** Linux, Windows, MacOS, Unix

**Web Servers/ Load Balancers:** Nginx, Apache, Envoy, HAProxy

**Containerization:** Kubernetes, ECS, Docker, Containerd

**Security:** OpenSSL, OpenSSH, Luna HSMs, OpenVPN, SIEM, Kerberos, PKCS, IPSec, JWT

**Firewalls:** IPTables, PF, AWS WAF, Fastly WAF, ModSecurity

**Databases:** Postgresql, Mysql, Oracle, Redis, Clickhouse, TimescaleDB, DynamoDB, Hasura, GraphQL

**Configuration Management:** Puppet, Chef, Ansible, Terraform,

**Continuous Integration/ Testing:** Jenkins, GitHub Actions, TeamCity, Travis, CircleCI, FluxCD, ArgoCD, Tekton

**Version Control:** Git, Subversion, Mercurial, GitHub, GitLab

**Hyperscalers/Compute Cloud:** AWS, Azure, GCP, OpenStack

**Access and Identity:** LDAP, OIDC, SAML, FusionAuth

**Secrets Management:** Hashicorp Vault, AWS Secrets Manager, AWS Systems Manager Parameter Store

**Observability:** Prometheus, AlertManager, Grafana, Loki, Promtail, Thanos, Fluentd, Fluent-bit, ElasticBeats, ElasticSearch, Artifactory, Logstash, Kibana, CloudWatch, Splunk, DataDog

**Networking / Service Meshes:** TCP/IP, Routers, Gateways, NAT, DNS, Forward Proxies, Reverse Proxies, Istio, Consul, PXE, TFTP

**CDNs:** Fastly, Cloudfront

**Compliance:** FedRamp, SOC2, PCI, SOX, HIPAA, CIS, CVE, Inspec

**Messaging:** Kafka, Elasticache, SNS, RabbitMQ

**Blockchain / Crypto:** Ethereum

## Profiles

*Web Site* <https://nikogura.com>

*Portfolio* <https://github.com/nikogura>

*LinkedIn* <https://www.linkedin.com/in/nikogura/>

## Open Source Projects

*Dynamic Binary Toolkit* <https://github.com/nikogura/dbt> A delivery system for self-updating, signed tools. Listed in *Awesome-Go* <https://github.com/avelino/awesome-go>.

*Go Mason* <https://github.com/nikogura/gomason> A tool for doing clean-room CI testing locally. Listed in *Awesome-Go*.

*Managed Secrets* <https://github.com/nikogura/managed-secrets> A YAML interface on Hashicorp Vault that allows teams to manage their secrets, without being to access them in production.