

Nik Ogura

Infrastructure - Security - Software - Platform - Tools - Leadership

San Diego County, USA

Viam inveniam, aut faciam. (I will find a way, or I will make one)

Professional History

Terrace: 2023 - Present Director of Cloud Infrastructure and Security, Chief Information Officer

- Replatformed DeFi/ CeFi Crypto Trading proof-of-concept from GCP/GKE to AWS/EKS and finally to AWS/Talos Linux (Immutable Kubernetes).
- Built a cloud-agnostic, secure, planet-scalable Kubernetes platform across multiple cloud providers and on-prem installations.
- Secured company IP during critical moment of turnover.
- Took over as Head of Engineering. Expanded a globally distributed engineering team to re-architect Terrace's core product from the ground up into a performant platform for DeFi, CeFi and Cryptocurrency trading. This system combines Fintech, Blockchain, and Security, and has latencies measured in milliseconds. Brought Terrace's product to success launch.
- Led Observability - designing systems, and educating, demonstrating, mentoring engineers on how to write software and make systems that can be monitored in a performant and scalable manner.

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

- Implemented automation processes to ensure the security and maintenance of Amazon Global Accelerator systems for FedRamp.
- Served as internal Security Consultant to Amazon Global Accelerator. Certified as AWS Solutions Architect and Hashicorp Vault Professional.
- Created Kubernetes Operators for Amazon Web Application Firewall.

Orion Labs: 2020 - 2022 Head of Infrastructure / SRE / DevOps, Principal Engineer

- Lead Infrastructure/DevOps/SRE Team across AWS, Azure, and On Prem systems.
- Designed and implemented a Kubernetes platform for SaaS, CloudPrem, OnPrem, and Air-gapped installations for realtime secure voice communications.
- Built contract tracing systems used by public transportation systems for epidemiological contract tracing during Covid.
- Developed a cutting-edge Framework for Voice Bots using the Orion Platform on Kubernetes.
- Created coding guidelines and migrating existing microservices to meet new standards and led internal training initiatives on technology for all employees at Orion.

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

- Founded, hired, and led the Scribd Security Team.
- Developed a scalable SIEM system to monitor and secure Scribd's global CDN, ensuring the protection of customer data.
- Implemented a WAF (Web Application Firewall) to protect Scribd's services and network.
- Created an easy-to-use YAML interface on Hashicorp Vault called "Managed Secrets" for streamlined management of sensitive information- now published as an Open Source project.
- Designed Kubernetes clusters and Kubernetes native tooling that linked application workloads to Fastly CDN caches, enabling efficient tracking of cache expiration of precompiled javascript code at scale.
- Created an advanced IAM System and PKI to protect internal networks and Kubernetes clusters against unauthorized access.

Stitch Fix: 2017 - 2017 Sr. DevOps/SRE, Data Platform Engineer

- Created the IAM System whereby the Algorithms & Analytics department connects to every resource, instance and container in the stack.
- Enabled AWS IAM Role based development that works transparently on a laptop as if the computer were actually an EC2 node. Whether you're local or in the cloud your code works exactly the same.
- Created a system for interactive containers in the cloud that enabled Data Scientists to run their code near their data transparently as if it was local.
- Created self-updating userspace tool framework that creates and distributes signed tools for doing work on laptops, servers, and containers.

Apple: 2015 - 2017 Systems Architect, Lead DevOps Engineer, Senior DevOps Engineer

- Led Apple Pay DevOps team.
- Transformed Systems Design and Administration by bringing Security, Audit, and Engineering to a modern, best-practice based pattern of administration and audit.
- Designed and built a dynamic test driven CI/CD pipeline for Apple Pay, Apple Sim, and every Apple device in the world.
- Architected the command and control architecture for Apple Pay for the China launch.
- Implemented a private OpenStack cloud for testing and verification of applications from bare metal hardware.
- Created a system by which full end-to-end integration testing of the Apple Pay stack can be performed on any laptop.
- Implemented Git for Apple Pay.

Data Recognition Corporation: 2014 - 2015 Principal DevOps Consultant

- Designed an auto-scaling Continuous Delivery System for educational testing.
- Shepherded multiple applications from proprietary systems to fully Open Source platforms.
- Designed and taught internal training curriculum for the technology, disciplines, and cultural concepts that come under the heading of DevOps.

Wells Fargo: 2014 DevOps Consultant, Sr. Software Engineer

- Led Development, Testing, and Delivery of Applications and Middleware.
- Module Developer for Continuous Integration/ Continuous Delivery of multiple applications across multiple technologies and multiple operating systems.

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

- Security Architect for Corporate Payment Systems. Consultant for Threat Modeling, Penetration Testing, Security Remediation.
- Built and Maintained Web Application Firewalls (WAF) for all of U.S. Bank.
- Software Engineer for special / sensitive projects around Security and Payment Systems.
- Consultant / Trainer for Automated Testing.
- SRE for Payment Systems (Credit card processing). Maintained PCI DSS compliance. Created Observability / Monitoring / Alerting systems.
- Created Encryption Key management and delivery service used by multiple users in multiple countries.
- Created Encryption and Tokenization system for PAN (Primary Account Number) data in Merchant Acquiring systems.
- Designed and implemented processes for Code Signing, Continuous Integration, and Artifact Storage.

Plain Black: 2006 - 2007 Software Engineer

- Software Engineer - WebGUI Content Management System. Managed Customer Service for paid and open source community customers.

Universal Talkware: 2000 Lead Systems Engineer - Network Operations Center

- Built Network Operations Center, Internal tools. Ran On Prem / Bare Metal Servers/ Datacenter

Hessian & McKasy: 1999 - 2000 Director of IT / Systems / Security

- Ran IT for a 40 seat law firm. Desktops, Servers, Network, Backups, Compliance, Security - entire electronic / technological base of the company.

Skills

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

Operating Systems: Linux, Windows, MacOS, Unix

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

Service Meshes: Istio, Consul

Containerization: Kubernetes, ECS, Docker, Containerd

Security: OpenSSL, Luna HSMs, IPTables, PF, OpenVPN, ModSecurity, SIEM

Virtualization: Bare Metal, VmWare, Libvirt, OpenStack, EC2, GCP, Azure, VirtualBox, XHyve

Databases: Postgresql, Mysql, Oracle, Redis, Clickhouse, TimescaleDB, DynamoDB

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/Public Clouds: AWS, Azure, GCP

Kubernetes: EKS, AKS, Rancher, Kubeadm, Replicated, Talos, Operators

Identity: LDAP, OIDC, SAML

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

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

Networking: TCP/IP, Routers, Gateways, NAT, DNS

CDNs: Fastly, Cloudfront

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>.

GoMason <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.