Cody Kochmann

Principal Infrastructure Engineer, Security Developer & DevSecOps Enthusiast

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Summary

I'm a senior infrastructure engineer, security developer, programming polyglot and DevSecOps enthusiast. Whether you need to accelerate your developer workflows, harden your infrastructure for state sponsored attacks, push high performance systems or simply need a passionate software engineer you can trust to drive company goals I'm your guy.

Top skills

- Addressing Nuance
- Project Management
- Operational Cost Reduction
- High Performance Tuning
- Security Design

Experience

This resume's timeline is correct. 2024 was spent helping several colleagues with research into LLM design, training, utilization, and risks.

Strake - September 2023 to December 2023

Strake closed business in December 2023.

Roles: Lead Senior Infrastructure Engineer

Programming Languages: Make, Python, Bash

Technologies: GitHub, CloudFormation, CodeDeploy, BuildKite, Postgres, SQLite3, SQS, Lambda

Achievements:

- Drove the development of the tools and workflows needed to generate ephemeral development environments for engineers to safely preform isolated experiments.
- Designed and implemented tools that provided deep insights to every corner of the company's infrastructure, development patterns, and communication effectiveness.

QOMPLX - September 2019 to July 2023

QOMPLX closed business in July 2023.

Roles: Principal Cloud Platform Automation Engineer, Project Lead, Kubernetes SME, Solutions Architect, Security Architect, Security Developer, Mentor

Programming Languages: Python, Golang, Rust, Make, Bash, Jinja, YAML

Technologies: GitLab, CI/CD Pipelines, CI Runners, Kubernetes, Docker, Terraform, Linux Kernel, rsyslog, syslog-ng, Postgres, SQLite3, perf, ebpf, LVM2, Loki, Grafana, Kafka, ElasticSearch, Logstash, Kibana, Kafka, Prometheus, Aqua, Sysdig, Twistlock, CrowdStrike, Linux Kernel, Digital Ocean, Linode, AWS (EKS, ECS, EC2, Lambda, CloudTrail, SQS, S3, Lambda, Config, IAM), and more Operating Systems: Debian, Amazon Linux, CoreOS, Ubuntu, Fedora, FreeBSD, CentOS

Achievements:

- Lead, designed and implemented the entire company's GitLab organization, security layout, and repo architecture.
- Designed and lead the development of CI/CD pipelines that would reshape how the entire company operated.
- Drove company culture changes by building the tools to enable development teams to take ownership and automate their own deployments.
- Drove security and vulnerability scanning operations for the entire company.
- Addressed and resolved thousands of vulnerabilities that were in the company's infrastructure.
- Identified and prevented active security breaches that would have gone unnoticed by normal company operations.
- Designed and built the company's centralized log collection systems providing new levels of observability into all levels the company.
- Lead the company's migration to Kubernetes as a Kubernetes SME and security architect.
- Took ownership of the entire company's CI/CD runner research and deployments to ensure security in the company's supply chain.
- Held weekly lectures for developers on defensive coding, infrastructure insights, company operations, high performance architecture and other topics that strengthened the company.
- Salvaged multiple large client relationships by stepping in and addressing product issues live in production environments.
- Designed intelligence tools to allow senior engineers to monitor company wide changes from a single view.
- Managed the security of on-prem deployments for special clients.
- Lead, tracked, and addressed security issues across the company.
- Acted as the platform team's scrum master ensuring the team's efforts were in sync with the company's long term goals
- So much more. . .

EMBEDDED FLIGHT SYSTEMS INC (NASA) - January 2017 to July 2019

Roles: Network Operations Engineer, Security Developer, Mentor

Programming Languages: Python, Golang, Rust, Bash

Technologies: Docker, Kubernetes, rocket, Twistlock, Sysdig, Aqua, HELK, Security Onion, OpenShift, Kubernetes, Docker, Amazon Lambda, Amazon ECS, Amazon EKS, Digital Ocean, Google GKE, systemd, rpm Operating Systems: Debian, Amazon Linux, CoreOS, Ubuntu, Fedora, FreeBSD, CentOS, Cisco

Achievements:

- Designed and built a high performance DDOS mitigation tool capable of protecting NASA's network from state sponsored attacks.
- Architected a high performance distributed ELK cluster to ingest and analyze network logs across our hybrid cloud / on-prem network.
- Preformed security analysis for numerous black box solutions to identify how safe the tools were to use and how we could keep them locked down when risks were identified.
- Lead the efforts for analyzing which container security analysis tools were worthy of NASA's security standards.
- Designed and implemented a multitude of netflow/packet capture/firewall log analysis tools to give the company deeper insight to AWS, on-prem, and container network traffic.
- Taught developers about the principals of defensive coding and how to build highly resilient architectures that met NASA's reliability and security standards.

Open Source Development | June 2013 - Present

I am the lead author and architect for all of the following projects.

battle_tested	Fully automated Python fuzzer that highlights every crash a piece of code will raise in production.

generators	High performance pipeline processing library written in pure python.
graphdb	The fastest pure python graph database available on pypi.
queued	Turns functions into fully functional multi-core queued services.
strict_functions	Function decorators for more secure python code execution.
stricttuple	Python tuples with rust style built in rule enforcement
litecollections	python collection types except they're all backed by SQLite

References

All of the following were solid people I had the honor to work with and would love to work with again one day.

Marcin Pohl	Systems / Security Engineer @ NASA	marcin.pohl@nasa.gov
Adam Younce	CTO @ Strake	ayounce@ripcord.net
Jim Treinen	CEO @ Strake	
Beck Norris	Information Security / Compliance Expert @ Frontier Airlines	rrnorris33@gmail.com
Mason Walton	Automation Engineer @ QOMPLX	fin.mwalto7@gmail.com
Jason Hurley	Platform Team Lead @ QOMPLX	j.m.hurley@gmail.com
Nic Ladas	Senior Platform Architect @ QOMPLX	https://www.linkedin.com/in/nicladas/
Christopher Mishaga	CISO @ NASA	christopher.a.mishaga@nasa.gov