

# Alex Wicks

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## About Me

Technical leader bridging infrastructure and software engineering. My background spans bare-metal to cloud, with particular expertise in Kubernetes, observability, CI/CD and infrastructure as code. I'm equally comfortable architecting a PKI solution, writing a Kubernetes operator, or optimizing network performance – whatever solves the problem at hand. I strive to empower developers and make infrastructure invisible to users. Outside of work, I enjoy photography, cars, cooking and travelling.

## Skills

### Containerisation & Orchestration

Kubernetes, etcd, containerd, Docker

### Languages

Go, Rust, Python, Bash

### CI/CD & GitOps

GitLab CI, ArgoCD, GitOps

### Cloud & Infrastructure as Code

Azure, AWS, Terraform

### Observability

OpenTelemetry, Prometheus, Thanos, Loki, Vector

### Infrastructure

Linux, Windows, VMware, Networking, PKI, Storage

## Certifications

Red Hat Certified System Administrator (RHCSA) • Azure AZ-700: Designing and Implementing Azure Networking Solutions

## Experience

### Maven Securities

#### Platform Engineer

Jun. 2024 - Present

Supporting ~100 development engineers with platform infrastructure and traders with analysis environments (JupyterHub, Coder). Migrated Kubernetes networking from MetallLB to Cilium BGP, implementing custom Prometheus exporter. Designed an automated PKI solution using ACME and step-ca. Migrated large Kafka clusters into Kubernetes using Strimzi. Maintained an operator to configure OIDC clients in Keycloak, including a rewrite from Go to Rust, and Envoy Gateway integration for app-agnostic authentication. Deployed an on-premises data warehouse platform leveraging VAST S3, Hive metastore, Lakekeeper and Trino, working with data team to migrate from AWS Athena – saving hundreds of thousands in cloud costs.

### Speechmatics

#### Sr. Site Reliability Engineer

Jan. 2023 - Apr. 2024

In addition to previous responsibilities - **primary technical contact** for all on-premises resources (networking, VMware, SAN, etc). Setup of high-performance bare-metal GPU clusters (Nvidia H100 & A100), including updating our fork of Sun Grid Engine to work on Ubuntu 22.04. Replaced manual processes with a GitOps pipeline for our SaaS environment releases, enabling blue/green and canary testing of new infrastructure and software across multiple clusters. Leading best practices in our Kubernetes environments - e.g. implementing a **GitOps CI/CD** workflow, which **reduced deployment time** across our environments from **days** to **hours** as well as adding extra quality checks.

#### Site Reliability Engineer

Jan. 2022 - Jan. 2023

Working across on-premises AI GPU research and training environment for ~50 engineers and researchers, and production SaaS environment in **Azure** spanning 6 regions. Management of infrastructure deployments using **GitLab CI & Terraform**, designing modules to abstract this, as well as conformance testing frameworks with **Terratest**. Planned and executed datacentre migration to a new colocation.

### Capgemini HMRC Market Unit

#### Platform Engineer – Metrics & Monitoring

Jul. 2021 - Dec. 2021

Working on the monitoring platform for HMRC AWS infrastructure, spanning two regions with thousands of EC2 nodes, and hundreds of Kubernetes nodes (10,000s pods). Implement **Thanos** in a large **AWS** environment for Prometheus metric aggregation and long-term retention, enabling a single pane of glass across the entire estate. Design and roll out a blackbox monitoring solution for key platform services such as **Consul & Vault**, monitoring availability from various tenants to ensure SLAs were not breached.

### Flextrade

#### DevOps Engineer

Aug. 2020 - Jul. 2021

Create bare-metal **Kubernetes** clusters using **PXE automation**. Migrate CI/CD to new k8s deployment, **reducing build times by 40%**. Pilot **hybrid-cloud** bursting workloads into **AWS**. Lead cross-functional initiative for continuous delivery framework. Implementing automation framework for deploying VMs from Jira tickets.

#### Systems Administrator

Mar. 2019 - Aug. 2020

Operations & incident response in a complex on-premises, multi-tenant SaaS environment. Administration and configuration management of Linux & Windows systems - bare-metal and virtualised. VMWare ESXi/vSphere administration, maintenance & upgrades, including vSphere 6 to 7 and linked mode. Storage management - administering and provisioning LUNs, deploying and configuring NFS servers. Firewall, VPN & L2 switch configuration and troubleshooting, TLS certificate management, PCAP analysis for latency issues. Mentoring & training junior engineers to complete BAU tasks.