

NICHOLAS FERGUSON

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PROFILE

I treat platform capabilities as products. I start by learning the problems of the engineers around me—their deployment friction, observability gaps, tooling pain points—which gives me an accelerated tour of the company. I build the infrastructure and automation that lets teams ship faster and sleep better, then measure success by adoption and satisfaction. Four platforms built from scratch across three companies. I've led distributed engineering teams and I build systems that run without me.

SKILLS

Languages: Python, TypeScript, Rust, C#.NET, C++, SQL, Bash, PowerShell

Infrastructure: AWS, Linux, Kubernetes, Docker, Terraform, Ansible, Serverless (Lambda, Step Functions), GitOps (Flux)

Data & Observability: PostgreSQL, SQL Server, MongoDB, Kafka (AWS MSK), Prometheus, Grafana, InfluxDB

Also: CI/CD pipeline design, release engineering, distributed team leadership, technical writing, runbooks and shift-left documentation, LLM-augmented development workflows, customer-facing delivery

PROFESSIONAL EXPERIENCE

A10 Networks *(acquired ThreatX)*

Senior Platform Engineer

Feb 2025 – Mar 2026

- **Took the product from SaaS-only to deployable on customer-managed hardware.** Ported a dozen cloud-native backend services to an embedded installer (kurl.sh): Helm charts for MongoDB, Kafka, Istio virtual services, and complex initialization logic, migrating all AWS-native dependencies (EKS, MSK, Secrets Manager) to portable equivalents. One-shot install on bare metal. Demo'd to customer, shipped.
- **Gave the sales organization the ability to demo without engineering in the room.** A10's sales org was significantly larger than ThreatX's, and the new on-prem capabilities needed to be demonstrated regularly across many deals simultaneously. Built a demo platform where sales engineers tailor attack scenarios per vertical and spin up environments with one click, plus a self-service validation platform. Led a team of 4 offshore frontend engineers on the platform UIs.
- **Rebuilt the core product to eliminate tech debt and capture an underserved on-prem market.** The ported platform worked but carried too much legacy weight. Rebuilt from scratch as a standalone edge sensor with sub-millisecond detection (4,400× faster than the cloud model), fleet management, and collective defense. A10's 7,700 existing customers were mainly on-prem, and every competitor offering AI-integrated security required cloud connectivity. The sensor originated from the offline simulator in the demo platform.
- **Defined a new sub-category in API security: Authorization Intelligence.** Vendors could detect BOLA, but none provided continuous authorization observability. Built an Authorization Coverage Map that auto-discovers endpoint auth posture from live traffic with zero configuration. Designed edge ML behavioral learning: under 5ms inference, 200MB footprint, 99%+ accuracy. Only possible because the rebuilt sensor was already fast and lightweight enough to run ML inline.
- **Redesigned the weekly executive security report and published a 67-page data visualization guide.** Rebuilt the report to be trend-focused with baselines and context for all metrics, WCAG Level AA accessible, and aligned to A10's design language. The process produced a heavily cited internal data visualization and accessibility guide published as an ebook across the organization.

ThreatX *(acquired by A10 Networks, Feb 2025)*

Senior Platform Engineer

Jan 2022 – Feb 2025

- **Fixed customer onboarding, then built the team to run it without me.** Identified that scattered scripts and manual steps were frustrating both engineering and the SOC. Built a unified sensor management CLI with hot-reloading plugin architecture, then mentored SOC analysts into SRE practitioners who took over the platform entirely.
- **Cut AWS spend ~50% (~\$60K/mo).** Replaced a legacy architecture that over-provisioned compute and network resources per customer: dedicated VPCs, NAT gateways, EIPs, and CPU-based auto-scaling. Redesigned around lightweight Fargate infrastructure with connection-based scaling after identifying the fleet was scaling on the wrong metric.
- **Brought the entire platform under infrastructure-as-code from nothing.** Migrated a dozen backend services from bare Docker to Terraform-managed EKS with Helm charts and Flux/Kustomize for GitOps deployments. Built a monorepo of reusable Terraform modules orchestrated by Terragrunt. Set up Kafka (MSK) with custom connectors and managed EKS upgrades.
- **Scaled documentation from a single-author bottleneck to an automated platform.** Authored all of ThreatX's published documentation, then built the infrastructure so it didn't depend on me. Designed the information architecture

from scratch (Diataxis framework), developed a custom style guide and controlled vocabulary, and built a docs-as-code platform on Antora with automated quality enforcement via Vale. Reusable AsciiDoc components and contribution templates meant other engineers could ship docs that met the standard without my review. Every minor version shipped with versioned documentation automatically, which was critical for the on-prem launch requiring complete customer self-service documentation on day one.

- **Diagnosed a production failure that two weeks of planned optimizations couldn't fix.** Built a distributed load testing framework from scratch, identified Linux conntrack table exhaustion at the kernel level at 150K RPS, built dynamic conntrack sizing. Saved a \$1M contract.
- **Created the professional services function.** Recognized the company had no way to deliver custom integrations. Proposed the service model, organized delivery, and personally ran 4 enterprise engagements: Microsoft-ecosystem integrations, a VMware appliance for a customer who wouldn't run Linux containers, and pre-sales technical translation that opened new market segments.
- **Stabilized the production database under load.** Deployed Kafka (AWS MSK) as a buffer when the database was saturating under production traffic. Event-sourcing pipeline processing millions of security events daily.

Vispero

Senior Platform / Build Engineer

Oct 2018 – Dec 2021

- **First platform developer in a newly created role.** Built the internal developer platform from scratch: a task-based build DSL abstracting compilation across 6 targets (Windows, macOS, iOS, Android, Linux, Embedded Linux), self-bootstrapping from a clean machine. Shipped \$50M/year in software on this framework. Recognized with quarterly award (1 of 450+ employees).
- **Gave developers back a full day per week by automating release engineering.** Replaced the release engineering team as a gatekeeper across 600+ pipelines. Gave developers sandbox environments with template guardrails, automated the release candidate process, and built diagnostic tools including a static analyzer with 100% accuracy on compiler error diagnosis.
- **Unified 4 acquired companies into one engineering organization.** Each acquisition brought different architectures, toolchains, and target platforms. This is what drove building the cross-platform framework. Contributed to 3 new product lines.
- **Eliminated a 3-day turnaround and a single point of failure on \$2M+ in government licenses.** Reverse-engineered license generation logic out of an ancient C++ application backed by XML flat files that only one person understood. Rebuilt as a database-driven platform, reducing license turnaround from days to immediate.
- **Isolated engineering from a ransomware attack.** Designed hybrid CI/CD architecture (AWS control plane, on-prem ephemeral VMware agents). Had already migrated all dev services to AWS before ransomware incapacitated the rest of the organization.

PROJECTS

Open source projects I created and actively maintain. More at atlascrew.dev

- **Synapse WAF & Horizon:** Embedded intelligence for API security and application defense. All detection and blocking decisions happen locally at the edge.
- **Inferno Lab:** Security testing, simulation, and education platform. Apparatus (58+ feature simulation lab), Chimera (450+ endpoint training platform across 22 verticals), and Crucible (enterprise attack validation with MITRE ATT&CK mapping and compliance reporting).
- **Cortex:** AI development framework. Context orchestration for Claude Code, Codex, and Gemini. 90+ skills, intelligent recommendation engine, memory vault, and a Python CLI/TUI.
- **Facet:** Vector-based job search platform. Targeted resume generation with Typst WASM rendering, pipeline tracking, AI-powered interview prep and cover letters. React 19, TypeScript, Zustand, TanStack Router.

EDUCATION

St. Petersburg College, Clearwater, FL. AAS, Computer Information Systems