Keith Kain

Lead Platform Engineer

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SUMMARY

Lead Platform Engineer with 10+ years of experience building and scaling cloud-native infrastructure, driving site reliability practices, and improving developer experience across regulated financial environments. Leads cross-functional efforts that own the full platform lifecycle — from designing resilient architectures to automating away operational toil — while also writing and shipping production software in Go, Python, TypeScript, and Java. Led modernization efforts across application ecosystems, reduced compliance findings by 80% through automation, and personally developed and maintained 20+ containerized services running in production.

CERTIFICATIONS

AWS DevOps Engineer Professional • AWS Solutions Architect Associate • AWS Certified AI Practitioner

TECHNICAL SKILLS

Cloud & Infrastructure: AWS (Lambda, ECS/EKS, API Gateway, DynamoDB, CloudFront, S3, Route53), Serverless Architecture, Multi-Account Management

Leadership & AI: Cross-functional Collaboration, Architectural Decision-Making, Mentorship, AI-Assisted Workflows (Claude, Windsurf)

CI/CD & Developer Experience: Jenkins, GitHub Actions, GitLab CI, GitOps, Blue/Green & Canary Deployments

Site Reliability & Observability: SLOs/SLIs, Error Budgeting, Grafana, Prometheus, New Relic, Datadog, CloudWatch, PagerDuty, X-Ray

Languages: Go, Python, TypeScript, Java, Node.js, Bash, PowerShell

Containers & Orchestration: Kubernetes (EKS), ECS/Fargate, Docker, Service Mesh

IaC & Configuration: Terraform, CloudFormation, AWS SAM, Ansible, Puppet, PowerShell DSC

Security & Compliance: IAM, Security Hub, Control Tower, SOC2, PCI-DSS, Auto-Remediation

EXPERIENCE

Lead Platform Engineer - Manager

2026 - Present

Capital One - Commercial Money Movement / Bank Tech

- Reduced vulnerability and compliance findings by 80% by designing and implementing automated remediation workflows, eliminating manual triage and accelerating time-to-resolution across the application portfolio.
- Led cross-team effort to build AWS Glue Pipelines for critical complex data migration from legacy systems to modern platforms, enabling retirement of costly legacy infrastructure while ensuring zero data loss.
- Spearheaded migration and modernization initiatives across the application ecosystem, driving adoption of containerized architectures and cloud-native patterns to improve reliability and reduce operational overhead.
- Established SRE practices including SLOs/SLIs, error budgeting, and blameless postmortems. Built observability solutions using Grafana, New Relic, Datadog, and distributed tracing.
- Implemented AI-assisted engineering workflows using Claude and Windsurf to accelerate development velocity, improve code quality, and standardize engineering practices across the team.

Senior Platform Engineer (Cloud/DevOps) - Principal Associate

2022 - 2026

Capital One - Commercial Money Movement / Bank Tech

- Maintained and developed 20+ application components containerized across multiple Kubernetes and ECS clusters, written in Java, Go, and Python, supporting the Intellix money movement platform serving thousands of commercial banking clients.
- Architected secure CI/CD pipelines with automated testing, security scanning, and compliance validation. Implemented IaC using Terraform and CloudFormation with automated drift detection.
- Optimized cloud infrastructure costs through right-sizing, reserved instances, and serverless architectures, delivering measurable savings while maintaining performance SLAs.
- Enhanced incident recovery through self-healing automation using EventBridge, Lambda, and Step Functions. Authored runbooks and implemented auto-remediation for mission-critical financial systems.
- Led migration of monolithic applications to microservices using ECS/Fargate and serverless technologies, significantly reducing deployment time while improving scalability and reliability.

Systems/Software Engineer

2022

Carnegie Mellon University - College of Engineering

- Implemented DevOps practices for research computing infrastructure, introducing Git and GitLab CI to reduce deployment cycles while improving quality and reliability.
- Built a self-populating inventory system for hardware and software assets using automated discovery tools integrated with the machine build pipeline.
- Modernized middleware code by refactoring legacy components, implementing version control, and establishing automated testing to reduce technical debt.
- Created infrastructure-as-code templates using Ansible and PowerShell DSC for standardized, consistent environment provisioning.

Systems Administrator

2019 - 2022

Carnegie Mellon University - College of Engineering

- Managed enterprise Windows infrastructure using MDT, SCCM, WSUS, and PowerShell. Administered Linux servers with Red Hat Satellite and Puppet.
- Implemented MacOS management with Jamf Pro and Automated Device Enrollment, creating a unified cross-platform device management strategy.
- Developed automation solutions using PowerShell and Python that eliminated repetitive tasks and improved system reliability.

IT Generalist / Systems Administrator

2017 - 2019

Slippery Rock University

- Managed 3,000+ endpoint environment across Windows and Mac platforms using centralized RMM/MDM solutions.
- Led cross-functional migration of 2,000+ endpoints from Windows 7 to Windows 10, coordinating with academic departments to minimize disruption.

Assistant to the Director of Educational Technology

2011 - 2017

Reynolds School District

- Modernized system deployment with MDT, WDS, and PowerShell automation, replacing legacy imaging methods.
- Managed identity and access systems for student and staff accounts across multiple educational platforms.

PROJECTS

Serverless Resume Platform — Designed and implemented a serverless resume website using AWS S3, CloudFront, Lambda, and API Gateway with CI/CD via GitHub Actions and IaC with Terraform.

Streaming Data Pipeline for Log Analysis — Architected a real-time log analysis solution using AWS Kinesis Data Streams and Lambda for proactive monitoring and alerting at scale.

Multi-Region Disaster Recovery Solution — Designed cross-region DR strategy using Route 53 health checks, S3 cross-region replication, DynamoDB global tables, and automated Lambda failover procedures.

EDUCATION

BS - Digital Media Production — Indiana University of Pennsylvania 2016