Thomas Bell

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Summary

DevOps and operations engineer with ten years of hands-on AWS experience running production infrastructure for video-streaming and web properties, and over twenty-five years in Linux, Windows, and networked systems. Builds and manages AWS infrastructure with Terraform, CI/CD pipelines, monitoring and alerting, and serverless applications, with security, scalability, and automation in mind. Member of an on-call rotation supporting global products, and comfortable working autonomously on a fully remote team.

Experience

Warner Brothers Discovery — Remote

Senior Software Engineer — 2024 - Present

Member of the platform operations team responsible for maintaining the cloud infrastructure for HarryPotter.com (~150k daily active users, ~350req/sec) and DC Universe Infinite (~125k subscribers, ~150 req/sec).

- Implemented Terraform for infrastructure automation and administration of AWS environments for multiple video-streaming services.
- Oversaw the migration of incident response infrastructure to a fully IaC-managed system across multiple products.
- Developed CI/CD deployment pipelines for Harry Potter microservices using GitHub Actions.
- Architected, wrote, and deployed a serverless application for security issue aggregation, reporting, and ticketing (AWS Lambda, API Gateway, Aurora Serverless MySQL).
- Architected and deployed multi-region serverless infrastructure for a cross-product user linking service (AWS Lambda, API Gateway, DynamoDB).
- Implemented automated access control for Okta-based authentication and authorization across multiple services.
- Member of the on-call rotation supporting global products and ensuring high availability.
- Built monitoring and observability with CloudWatch alarms, CloudWatch metrics, and Datadog.
- Administered production infrastructure for harrypotter.com, dramafever.com, boomerang.com, warnerarchive.com, and dcuniverseinfinite.com.

Senior Cloud Engineer — 2023 - 2024

Senior Platform Operations Engineer — 2022 - 2023

Platform Operations Engineer — 2016 - 2022

AWeber Communications — Chalfont, PA

Operations Engineer — 2013 - 2016

Member of the operations team responsible for the infrastructure of AWeber.com, a leading email marketing service provider.

- Managed a continuous deployment pipeline using Jenkins and GitHub Enterprise to build packages and Docker containers for deployment in AWS ECS and on-site virtualized infrastructure.
- Developed and managed service and system monitoring, alerting, and metrics collection for hundreds of physical and virtualized Linux servers and their networks using Grafana, Graphite, and Nagios.
- Automated infrastructure configuration and maintenance using Chef, Puppet, and Fabric.
- Wrote Python utilities wrapping Cobbler, Jenkins, and Chef to fully automate provisioning and bootstrapping of hardware and virtualized nodes in the datacenter.

Expert Computer Specialists — Oreland, PA

Junior Systems Administrator — 2012 - 2013

Responsible for providing IT consulting services to small and medium businesses, including systems administration, end-user tech support, both remotely and on-site.

- Deployed and maintained backup and disaster recovery plans for multiple sites/organizations.
- Systems administration of MS Windows environments and Asterisk-based PBX systems.

Hypotenuse, Inc. — Clifton, NJ

IT Director — 2002 - 2011

Oversaw the technical operations for Hypotenuse, the umbrella under which operate a collection of automated telephone polling and get-out-the-vote companies. Responsibilities included the telephone calling infrastructure, an automated call center capable of 1,995 simultaneous calls, maintaining Windows Server based architecture for email, file, and web services, multi-site Asterisk based internal phone system, and design and implementation of web architecture.

- Deployed and managed multi-site Asterisk based internal phone system.
- Architected and managed Windows Server based architecture for email, file, and web services.
- Managed automated call center capable of 1,995 simultaneous calls.
- Migrated call center infrastructure from on-prem to an off-site location without service disruption.

Skills

Cloud & Infrastructure as Code

AWS (ECS, Lambda, API Gateway, DynamoDB, Aurora Serverless), serverless architecture, multi-region deployments. Terraform, Chef, Puppet.

CI/CD & Monitoring

GitHub Actions, Jenkins, GitHub Enterprise, Docker. Monitoring, alerting, and observability with CloudWatch alarms and metrics, Datadog, Grafana, Graphite, and Nagios; on-call incident response.

Linux & Systems Administration

Years of experience maintaining Linux, UNIX, and Windows environments and services including Apache, nginx, IIS, MySQL, MS SQL, PostgreSQL, MongoDB, Postfix, and Exchange, plus virtualization with KVM, Hyper-V, VMware, and Vagrant.

Networking

TCP/IP networking, F5 BIG-IP and software load balancing (nginx/HAProxy), and firewalls (iptables, hardware firewalls).

Scripting & Development

Python, Bash, and PowerShell scripting; JavaScript, HTML, and CSS web development; C# and Java.

Education

Temple University, College of Science & Technology
Bachelor of Science, Information Science & Technology

Certifications

Global Knowledge (AWS Training Partner)
System Operations on AWS
Front Row Agile
Agile Estimation & Planning