

Kevin Mok

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Projects

AWS Server

May 2024

AWS, Kubernetes, Docker, Terraform

- Deployed and maintained multiple web applications on AWS EC2 Debian/Linux servers using Docker Compose, supporting 2,000+ monthly requests.
- Automated infrastructure provisioning with Terraform for EC2 instances and Docker workloads, reducing deployment time by 80%.
- Configured Route 53 DNS and NGINX subdomain routing to improve discoverability and navigation across hosted applications.
- Implemented uptime monitoring with a JavaScript service and systemd timer, reducing downtime by 95%.
- Automated EBS snapshot backups to improve disaster recovery readiness and reduce potential data loss by 95%.

Work Experience

Red Hat

Cloud/Software Engineer Intern May 2020 — Aug 2021

Kubernetes, GoLang, Jenkins

- Reduced deployment time by 66% by implementing a local-binary deployment path on Kubernetes/OpenShift, cutting release cycles from 45 minutes to 15 minutes.
- Eliminated 80% of manual configuration errors by automating operator-side data fetching and config updates, reducing startup time by 40%.
- Improved application stability by introducing startup probes for legacy applications with longer boot times, reducing startup failures by 50%.
- Enhanced reliability by assigning probe defaults dynamically from deployed YAML and fixing reconciliation issues, increasing probe accuracy by 30%.
- Increased CI pipeline efficiency by rewriting a Jenkins nightly pipeline for GitHub PR environments, reducing manual intervention by 60%.
- Demonstrated leadership in Agile sprint planning within a 12-member team, improving sprint velocity through better task delegation.
- Increased reproducibility by creating a reusable GitHub parameters file for the pipeline, enabling consistent setup across environments.
- Streamlined onboarding by authoring project documentation and mentoring an incoming intern, reducing onboarding time by 50%.

Skills

AWS, Kubernetes, Terraform, Docker, Compose, Jenkins, Groovy, Go(Lang), Bash, Linux, JavaScript, React, Python, Django, Node.js, PostgreSQL, MongoDB, Solidity, C, Git, Command Line

Education

University of Toronto (St. George)

Computer Science Specialist

3.84 GPA

2019 — 2024

References

See my LinkedIn for references from my Red Hat managers/mentee, a startup client, and a graduate student mentor.