Cole Koester

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Summary: Software developer with 5 years of experience in full-stack programming and cloud architectures, migrations, and operations. Improves and debugs large scale systems while minimizing user disruptions.

Professional Experience

Lyft Inc. — New York, NY
Software Engineer, Production Infrastructure — 11/2021 - Present

Zone Aware Routing: Improved intra availability zone routing with ROI of $2 million.
- Reduced inter-AZ production inter-AZ traffic to 40% of its original value. Deprecated error prone load balancing components.
- Migrated 1416 microservices to envoy load balancing subsets.
- Wrote design spec and grafana/kibana dashboards. Communicated with customer teams to debug load balancing edge cases.

No More Yaml (NoMoYa): Decreased time-to-deploy networking settings from 15 minutes to less than 30 seconds.
- Implemented new configuration API server (GoLang) and user interface (TypeScript + React) handling circuit breakers, health check endpoints, traffic migrations, and network dependency allow lists.
- Improved team operations through self-service SEV mitigation, preventing context switching from team members.

Control Plane Backend Sharding: Collaborated with tech lead to simplify endpoint discovery.
- Transitioned from leader-elected writers to independent writers, enhancing service reliability and simplifying the deployment pipeline.
- Implemented new data layer on control plane frontend and backend with 0 downtime, and a 99.95% mesh availability SLA.
- Parallelized service discovery queue reducing endpoint query latency by roughly 50%.

Networking Day-to-Day
- Participated in debugging and mitigating more than 100 incidents through analyzing various kibana and prometheus queries, and SSHing into hosts themselves to validate networking components.
- Performed technical deep dives on load balancing, did 30+ candidate interviews, actively helped in team planning, and acted as mentor for both interns and new-hires.

iManage LLC — Chicago, IL
Software Engineer, API — 11/2019 - 08/2021

IP Whitelisting and Subdomains: Implemented requirements with ROI of $1.8 M / Year.
- Implemented new authorization service in GoLang scaling to roughly 10M requests / day. Authorization service handled: vanity subdomains, IP whitelisting, and proxying to core auth service.

API Gateway: Deployed new API gateway edge proxy serving 30M requests / day with a 99.95% success rate SLA.
- Defined and deployed envoy edge proxy configures separate listeners for internal/external clients, and multi-region traffic.
- Deployed ratelimit service with a centralized configuration repo, reducing DDOS risk and putting backpressure on noisy internal services.

Education

Tufts University — Somerville, MA
Bachelor of Science in Mathematics | QuestBridge Scholar

Skills & Interests

- **Languages**: GoLang, TypeScript, Python, Java, C++, C, Rust
- **Tools**: Envoy, Kubernetes, Docker, Prometheus, Grafana, Kibana, Terraform, AWS, GCP