Andrew Lavery

Senior Golang and Kubernetes Engineer

SKILLS

Go / Golang
Kubernetes operators and installers
On-prem and enterprise software
Microservices and APIs
Embedded Kubernetes
Automated infrastructure migrations
AI development tools
k0s
Helm
AWS
GCP
Docker
GitHub Actions
Postgres
Terraform
Git
Linux
Bash and automation

CONTACT INFORMATION

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PROFESSIONAL SUMMARY

Senior Go and Kubernetes engineer with deep experience building on-prem and enterprise software, Kubernetes installers, in-cluster operators, upgrade workflows, and backend services. Strong background taking infrastructure-heavy products from internal platforms to customer-facing tools, with an emphasis on reliability, operability, and practical user experience for complex deployments.

WORK EXPERIENCE

Senior Engineer, Replicated Inc.

September 2017 - May 2026

Replicated SDK

- Primary engineer for an in-cluster Kubernetes operator installed as a Helm subchart to monitor application health and expose licensing information to applications.
- Built image inventory and digest reporting, report-all-images behavior, dynamic namespace discovery, and support bundle metadata APIs.
- Added HA deployment, minimal RBAC, TLS/proxy support, enterprise pull secrets, digest-addressed images, and EndpointSlice discovery.
- Maintained E2E coverage for restricted RBAC, custom metrics, image reporting, and enterprise deployment modes.

Embedded Cluster

- Co-owned the v1 operator for a k0s-based dedicated Kubernetes cluster used for application installations.
- Built airgap install/materialization for images, Helm charts, k0s assets, local registry, and SeaweedFS, plus Velero backup/restore workflows.
- Reworked upgrade and chart reconciliation into operator jobs; added HA registry/rqlite, multi-node join/reset, and enterprise networking/config validation.
- Implemented vendor-specified Helm addon support, drift detection, pending chart status, and shared install/upgrade chart generation.

KOTS

- Built core features in an on-prem installation and management platform for third-party Kubernetes applications.
- Built Embedded Cluster admin features including node management, join commands, observability, backup/DR metadata, and enterprise install customization.
- Implemented config/template/security improvements: dependency graph resolution, YAML escaping, CA templating, auth/secrets/RBAC, and non-root contexts.
- Improved airgap image transfer and deterministic Helm deployment ordering for complex multi-chart applications.

Kurl

- Built declarative Kubernetes installer components used to assemble and operate deployment environments.
- Built migration workflows using PVMigrate across Rook, Longhorn, OpenEBS, MinIO, registry data, plus Weave-to-Flannel and Rook/Ceph upgrades.
- Expanded Testgrid, modern OS/runtime support, and storage add-ons including Longhorn, Local Path Provisioner, MinIO, and KOTS Admin.
- Hardened airgap, multi-node, containerd-first, and customer migration paths across varied enterprise infrastructure.

Troubleshoot

- Designed and iterated the support bundle redaction subsystem, adding global/custom redactors, YAML and multiline support, safer report metadata, and broad test coverage.
- Improved health analysis across host services, OS detection, block devices, filesystem performance, Kubernetes distributions, and workload readiness.

- Developed customer-facing and internal Go services, APIs, and microservices supporting online and airgap on-prem Kubernetes and Helm application delivery workflows.
- Built and maintained software used across thousands of on-prem application installations.
- Migrated internal infrastructure from Amazon ECS to Kubernetes, improving alignment between Replicated's production systems and Kubernetes-focused product direction.
- Served as a frequent reviewer, mentor, and incident owner while working across product, infrastructure, and support needs to turn complex deployment requirements into maintainable engineering systems.

EDUCATION

Bachelor of Science in Computer Science

Class of 2017

University of Michigan, Ann Arbor