

CHRIS KIRKLAND

Backend Software Engineer

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WORK EXPERIENCE

Advisory Software Engineer

IBM Kubernetes Service

📅 September 2017 – Present

📍 Austin, TX

- Formed and lead a squad of 6 developers to improve reliability and scalability of ETCD as core database for microservices.
- Designed and orchestrated a zero read-downtime migration from legacy DBaaS to self-hosted HA ETCD cluster.
- Designed and lead development of event-based system for synchronizing IAM ABAC policies to Kubernetes RBAC policies.
- Contributed to design and development of global API layer for regional APIs using Global Search and Tagging service. Managed rollout and uptime through feature flags in Launch Darkly.
- Co-lead the modernization and redesign of the IKS CLI plugin under the V1 release to increase discoverability.
- Developed and maintained dozens of Go microservices providing the core APIs and event-driven backend for IKS.

Staff Software Engineer

IBM Kubernetes Service

📅 January 2017 – September 2017

📍 Austin, TX

- Created a collection of APIs to support logging functionality in guest clusters in Kubernetes-on-Kubernetes architecture. Backend functionality was implemented with Fluentd using community and internally developed plugins.
- Designed and developed a scalable system for monitoring infrastructure and guest clusters using Prometheus federation

Staff Software Engineer

IBM Cloud Foundations Performance

📅 June 2015 – September 2017

📍 Austin, TX

- Developed, planned, and maintained performance tests of BlueMix services including KeyProtect and AutoScaling.
- Executed continuous performance and regression tests of OpenStack components including Keystone, Nova, and Heat for Container and VM public cloud offerings.

EDUCATION

MS in Applied Mathematics

North Carolina State University

📅 2012-2015

📍 Raleigh, NC

BS in Mathematics, BA in Computer Science

Mercer University

📅 2008-2012

📍 Macon, GA

LANGUAGES

Expert: Golang

Proficient: Python, Bash

Familiar: Ruby, NodeJS, Javascript, HTML/CSS

TOOLS

Prometheus

Grafana

Alertmanager

PagerDuty

Ansible

Docker

Linux

CERTIFICATIONS

Certified Kubernetes Administrator

CNCF

📅 September 2017-2020

STRENGTH

- System Architecture and Design
- Backend Performance
- Reliability First Mindset

SIDE PROJECTS

go-xtract

<https://github.com/chriskirkland/go-xtract>

Using Go parser and AST to extract strings from arbitrary function signatures. Used in the IKS CLI to ensure user-messages in source code were available for translation as part of i18n workflow.

Cellular Automata

<https://github.com/chriskirkland/cellular-automata>

Interactive webpage for visualizing 2D Cellular Automata generations based on known and user-provided patterns. Two different implementations in pure HTML/CSS and SASS/pug, with the purpose of learning different web frameworks and tools.