# andrewschwartz

senior software engineer

#### contact

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# fav. languages

GolangPython

#### fav. tech

Kubernetes PostgreSQL Prometheus

### languages

English native Japanese fluent

## quick stats

29 years old Golang enthusiast Kubernetes advocate Cloud native Scalable systems B.S. Comp. Sci, '13 CT → NY → JP ↔ FL

## experience

Dec. 2017 -- Present

#### **IBM Cloud Databases**

Japan/USA (remote)

Senior Software Engineer

Architect and lead platform engineer of the next-gen DBaaS offering on IBM Cloud, modernizing the Compose suite of databases on Kubernetes. Thought leader and advocate within the company for Kubernetes and the Controller pattern.

- Lead architect of declarative Controller based platform running 40k+ instances of 10+ types of databases with high availability on Kubernetes
- Represent IBM Cloud Databases as architect at compliance audits (SOC, PCI, FS Cloud, etc), ensuring systems are well understood and compliant
- Automated management of workers within Kubernetes clusters to improve utilization and reduce overhead, leading to a 30% decrease in hardware costs
- Architected system to create on-demand isolated environments within a cluster using a shared worker pool and custom worker scheduler
- Introduced LUKS encryption using a cloud KMS w/ BYOK and in-place expansion of iSCSI volumes through a custom flexvolume driver
- Implemented elastic zero-downtime vertical scaling for databases on Kubernetes
- "Level 3" SRE, responsible for debugging and remediating escalated issues, requiring deep knowledge Kubernetes workers, Linux, and database instances,

Oct. 2015 -- Dec. 2017 Compose.io (acquired by IBM)

Japan/USA (remote)

Platform Engineer

Engineer on the team building the platform to orchestrate hundreds of thousands of stateful containers running Compose's suite of databases (PostgreSQL, etcd, Redis, MongoDB, RabbitMQ, and more) on a variety of public and private cloud environments.

- Built out new etcd3 and ScyllaDB services on Compose, used to back several key internal services on IBM Cloud, tested in Travis CI, built into container.
- Refactored and maintained open source Transporter ETL tool, made available as a free service to easily load data from external databases into a Compose instance, increasing customer acquisition

Aug. 2013 -- Oct. 2015 Gengo (acquired by Lionbridge)

Tokyo, Japan

Full Stack Software Engineer

Engineered Gengo's microservice architecture serving hundreds of millions of requests per day on AWS.

- Advocated for and redesigned monolithic PHP API to microservice Golang-based architecture, cutting average response times by 10x and reducing availability events by 90%
- Spearheaded event-driven architecture shift, providing an extensible solution for separating application and async concerns

## interests

**professional:** golang, kubernetes, operators / controllers, SaaS, DBaaS, software architecture, scalability, observability **personal:** tennis, HN, japan, /r/programming, travel, gaming