Jeff Johnson

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Employment

Google Cloud, Seattle, WA [2016-Present]

BigQuery Platform – Senior Staff Software Engineer [Present]
- Actively working across Google to evolve BigQuery from a serverless multi-tenant exabyte scale data warehouse towards virtualized multi-single tenancy across compute, storage, and networking.
- Set multi-year charter for isolation, security, and reliability for BigQuery. Re-organized multi-cloud infrastructure team for horizontal innovation on GCP/Borg, hired and transitioned management.

BigQuery Omni – Senior Engineering Manager [2021-2025]
- BigQuery Omni was an ambitious project to run Google Cloud's marquee serverless data analytics service on AWS and Azure. Together, we raised BigQuery to be a definitive leader in Lake Analytics from Gartner/Forrester, won key deals for Google Cloud, and built an excellent team.
- Initially supported the infrastructure team as a manager then expanded scope to the entire product engineering team (30-40 SWE). Created and ran a customer engagement program across product/sales/SWE to drive revenue and improve the service. Developed managers and senior/staff ICs.
- Technically contributed while managing through strategic prototyping of infrastructure projects, executive-level technical designs, key design approval, 24x7 on call, and operational readiness for broader organization.
- Launched first in the industry capabilities through cross-cloud materialized views, joins, delivered on strategic partnership with Salesforce for Google Cloud. Expanded to all major AWS regions, reduced infrastructure costs by XX% ($XXM), evolved architecture to reduce ongoing maintenance cost to <2 SWEs.
- Created growth opportunities outside of the team and defined technical handoffs as investment winded down.

BigQuery Omni: Multi-Cloud Infrastructure – Staff Software Engineer [2019-2021]
- Joined as an individual contributor at the beginning of the Omni project, focusing on cloud infrastructure, operations, and architecture for the distributed query engine, distributed RAM/NVMe file system, and soft RDMA on Kubernetes.
- Led cross-organizational efforts and provided key technical contributions to port Container-Optimized OS to AWS/Azure, integrate multi-cloud Terraform into Google rollouts, and expand Anthos Kubernetes for first-party workloads. This was recognized externally as a strategic GCP initiative. (coverage)
- Integrated with Google production services, enabling SRE-supported Google3 services on AWS/Azure for the first time, and facilitated the migration of live production traffic from Anthos to a new declarative Kubernetes distribution across AWS, Azure, and GCP.
- Achieved security accolades unbreakable by internal orange team exercises, external pentesting/auditing, and compliance certifications (SOCS/PCI/HIPAA..) by consistently raising the bar in security, solving source transparency, identity, and auditing.

Google Kubernetes Engine (GKE), Anthos – Senior Software Engineer [2018-2019]
- Founding member of the team that built GKE On-Prem, Google's first external Kubernetes distribution. Drove design and implementation for upgrades, addons, led the GA release for the cluster lifecycle team.
- Designed and developed addons framework for integrating first party partner teams into Anthos. Led open sourcing of framework and creation of the Kubernetes Working Group. (github, kubecon talk, working group)

Cloud Graphite – Software Engineer [2016-2018]
- Partnered with Pivotal to build Kubernetes into Cloud Foundry with BOSH. Designed networking strategy and Cloud Foundry integration. (github)
- Integrated GCP services with Cloud Foundry. Spoke at various conferences and organized a web series on Pivotal Cloud Foundry including writing several episodes. (favorite talk, web series clip)

Microsoft Office – Software Engineer, Redmond, WA [2013-2016]
- Shipped the new charting engine in Office 2016 with a focus on cross platform UI. Built support for collaboration into OfficeArt content model to enable real time editing in Office Desktop and Mobile.

ClassBug – Co-Founder/CTO, Chicago, IL [2012-2016]
- ClassBug is a studio management platform based on Ruby on Rails processing >$XM/day in transactions.

Research

BigQuery's Evolution towards a Multi-Cloud Lakehouse [ACM SIGMOD 2024]

Education

Illinois Institute of Technology, Chicago IL [2013-2016]
- B.S. Electrical Engineering, B.S. Compute Engineering. Magna Cum Laude.

Expertise

Programming Languages, Tools
- Golang, C++, Java, Ruby
- Linux, Kubernetes, Containers, Bazel, Terraform, AWS/Azure/GCP

Focus Areas
- Happy, healthy, productive, operationally excellent teams
- Large scale distributed systems, networking, operating systems, and their subtle interactions