# **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]

- <u>BigQuery Omni</u> 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 <u>materialized views</u>, <u>joins</u>, 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.</li>
- 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 (<u>forbes</u>).
- 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. (<u>favorite talk</u>, <u>web series clip</u>)

## 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