# Raymond Kroeker

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## About

I’m a software engineer in Vancouver, BC. I have deep experience building distributed systems, data stores, and closed-loop infrastructure control platforms. I’m familiar with multiple languages, protocols and skilled in agile development methodologies and project ownership. My focus is building reliable, scalable platforms and services.

## Experience

**Salesforce:** December 2018-Present

**Software Engineer Architect Infrastructure**

* Led the definition and refinement of an architecture and roadmap for the control plane platform managing the bare-metal lifecycle for all of Salesforce.
* Led the implementation of OS patching for hundreds of thousands of physical servers intersecting hundreds of roles across multiple data centers.
  + Led dozens of developer (service owner) teams to provide health signaling for their services.
  + Define standards for OS integration and service maturity within Salesforce.
  + Improve security compliance from *<60%* to *>90%*.
  + Improve time-to-delivery from *3 months* to *< 7 days*.
* Design, implement and operate distributed key/value store.
  + Increase the breadth of consensus for writes across the cluster.
* Led multiple teams to design and implement autonomous software release.
* Led the design and implementation of a framework and platform for scalable, reliable lambda execution.
* Mentor senior engineers and lead cross-team architecture and design discussions.

**eBay:** September 2017-November 2018

**Software Engineer Architect, Structured Data**

* Design and implement a distributed, scalable knowledge graph data store.
* Implement a query-language and parser for SPAQL-like queries.
* <https://github.com/eBay/beam.git>
* <https://innovation.ebayinc.com/tech/engineering/akutan-a-distributed-knowledge-graph-store/>

**Salesforce**: December 2012-September 2017

**Software Engineer Principal Member of Technical Staff**

* Design, implement and operate provisioning API for bare metal servers and switches operating hundreds of thousands of devices.
  + Reduce time-to-delivery for data center OS build from *2* months to *< 12 hours*.
  + Improve reliability of delivery from *~70%* to *90%*.
* Design, implement and operate a closed-loop control system for bare metal infrastructure.
* Design and implement a RESTful API for signal ingress and consuming/completing work for infrastructure change.
* Design and implement a work scheduler for an infrastructure control plane.

**Ping Identity:** March 2009-October 2012

**Lead Software Engineer**

* Led the design and implementation of various microservices within PingOne’s initial Software-as-a-Service offering.
* Design and implement the data model and access layer for PingOne.
* Led the design and implementation of an internal testing platform and framework for the PingFederate product, serving the development team.

**thinkParity Solutions:** September 2005-December 2008

**Software Engineer Founder / Architect**

* Design, implement and operate a SaaS document management system.
* Implement a service to synchronize and manage documents w/in S3.
* Implement a desktop client to browse, share and synchronize documents.

**Gemcom Software:** January 2004-September 2005

**Senior Software Engineer**

* Build a data warehouse enabling customers to optimize their extraction logistics.
* Develop CI pipeline automation for ProdTrak, GEMS and Whittle in Java/C/C++/Visual Basic/Fortran.

**Correlation Technologies:** April 2000-December 2003

**Software Developer**

* Implement project management software as a service for the insurance claims vertical.
* Implement a pub/sub message and notification service.
* Implement project management software as a service for a restoration vertical.

## Education

**CDI College of Business and Technology**

Technology Diploma: Programmer Analyst

## Skills

Languages (Go, Ruby, Java, C/C++), databases (Oracle, PostgreSQL, MySQL), key / value stores and database internals (Bolt, RocksDB), distributed systems, consensus algorithms (Raft, Paxos), authentication (SAML, OAuth), API and protocol design and implementation (REST, gRPC, HTTP), bare-metal and public-cloud infrastructure (AWS), software development methodologies (agile), micro-services, software-as-a-service, service and project ownership.