BAIHU QIAN

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EXPERIENCE SUMMARY

Software Engineer and Architect experienced in design, implementation, operation, and optimization of cloud-scale, highly-available distributed software services. Team Lead and Project Manager with impeccable record of driving high-impact, large-scadle, and complex projects across organizations. Proficient in:

· Service-oriented architecture and microservice architecture;
· RESTful API design;
· Distributed software system, high-availability (HA) and scalability best practices;
· Event-driven and asynchronous software systems.
· Architect and build on AWS.
· DevOps, service operation, and monitoring best practices.
· Project scoping, planning, and management.
· Cross-team coordination and communication.

EMPLOYMENT

HyperPlane and New Service, Amazon Web Services   *Herndon, VA*
Software Development Engineer II   September 2017 - Present

AWS HyperPlane is the group of highly-scalable software-defined network services reveiled at *re:Invent 2017*. I am a key member for the development of a Layer-3 network platform with advanced routing features and the lead engineer for the first public product launched with it.

· Architect and implement the control plane for HyperPlane: API, data store, provisioning, resource management. Make technological choices for involved services. Design and implement loosely-coupled interfaces between services.
· Actively involved in design discussions for other service components.
· A key member of the product design group. Responsibilities include product design, API design, cost modeling, product positioning.
· Lead a team of 5 engineers to deliver API service, provisioning, and AWS management console on time. Prioritize tasks to maximun integration and testing time for other teams.
· Develop other engineers in the team. Improve engineering standards and promote best practices within the team.

VPN, Amazon Web Services   *Herndon, VA*
Software Development Engineer II   February - September 2017
Software Development Engineer I   May 2015 - February 2017

AWS VPN service provides highly-available managed connectivity between on-premise network and VPC using industry-standard IPSec technology over Internet. The 2nd generation software-defined solution provides advanced features and high scalability, enabling the VPN service to become a $100MM run rate business.

· Deliveedr public features. Responsibilities include feature definition, API design, task planning and estimation, implementation, project management, and cross-team communication. Features launched in 2017 are:
  1. Configurable Amazon-side ASN on Virtual Private Gateway;
  2. VPN Custom PSK, Inside Tunnel IP, and SDK update;
  3. VPN support for VPC expansion.

- · Optimized the performance, efficiency, and scalability for provisioning service.
- · Optimized distributed routing engine for better performance, lower latency, and higher efficiency.
- · Optimized MySQL database queries and access usage.
- · Improved overall service availability, quality of service, latency, and error rates. Improved resiliency to dependency failures.
- · Hire and mentor engineers and interns in the team.

SIDE PROJECT

Robinhood Portfolio Management August 2017 - Present

MerryMen provides automatic portfolio management for Robinhood at zero cost, while popular financial management apps (e.g. Mint, PersonalCapital) do not support Robinhood.

- · Python application is hosted on AWS Lambda, credentials is managed by AWS Secrets Manager, and daily report is sent by SNS.
- · Google Sheet is used for data persistence, analysis, and visualization.
- · Apex and Terraform are used to manage Lambda functions.

TECHNICAL SKILLS

Programming Language	Scala, Java, Python, Go, Ruby, C
Framework	Akka, Spring
Web Technology	Ruby on Rails, AngularJS, GWT, Node.js, Twisted
Logging & Testing	Log4j, JUnit, ScalaTest, Mockito, Hamcrest
Tools	Maven, Ant, Git, Distutils
Relational Database	MySQL, SQLite, Squeryl, SQLAlchemy, JDBC
NoSQL Database	DynamoDB, HBase
Data Warehouse	Redshift
Data Analytics	ElasticSearch, Hadoop, MapReduce, Hive, Spark
Operating System	Major Linux distributions (Ubuntu, Amazon Linux, RHEL), MacOS

CERTIFICATION

· AWS Certified Solutions Architect - Associate	April 2018
· AWS Certified Developer - Associate	December 2017
· Juniper Networks Certified Associate - Junos	February 2016

EDUCATION

Carnegie Mellon University *Pittsburgh, PA*
M.Sc. in Electrical & Computer Engineering August 2013 - May 2015

Zhejiang University *Hangzhou, China*
B.Eng. in Information & Communication Engineering September 2009 - July 2013

Summa cum laude, Chu Kochen Honors College.