BAIHU QIAN

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EXPERIENCE SUMMARY

Full-stack Software Engineer and Architect experienced in design, implementation, operation, and optimization of large-scale, highly-available distributed software services in the cloud. Proficient in:

· Service-oriented architecture;
· Best practices of RESTful API design;
· Distributed software system, high-availability (HA) and scalability best practices;
· Event-driven software system.
· Asynchronous IO design.
· Project design, planning, and management.
· Architect and build on AWS.
· DevOps, service operation, and monitoring best practices.

EMPLOYMENT

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

AWS HyperPlane is the group of highly-scalable network services reveiled at *re:Invent 2017*. My team works on a Layer-3 network platform with advanced routing features.

· Architect and implement the control plane: API, data store, provisioning, and resource management.
· Design and implement interfaces with other components, including data plane, routing, and health.
· Design and lead the engineering effort of first public service built on the Layer-3 HyperPlane platform.

VPN, Amazon Web Services   *Herndon, VA*
Software Development Engineer II   February 2017 - Present
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.

· Lead the effort for public features. Responsibilities include feature definition, user experience design (API and AWS management console), task planning and estimation, project driving, and cross-team communication.
  1. Configurable Amazon-side ASN on Virtual Private Gateway;
  2. VPN Custom PSK, Inside Tunnel IP, and SDK update;
  3. Advanced VPN Encryption Options in GovCloud.
  4. VPN support for VPC expansion.
· Optimized the performance, efficiency, and scalability for multiple critical components.
· Optimize distributed routing engine for better performance, lower latency, and higher efficiency.
· Hire and mentor engineers and interns in the team.

SIDE PROJECT

MerryMen, the Robinhood companion   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 KMS, and daily notifications are generated with 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.