Shan Lu

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Summary

Results-driven IT professional with 6 years of experiences in network & system administration, cloud engineering and software DevOps. In-depth knowledge of cloud computing strategies (IaaS, PaaS, SaaS) & building, deploying in and maintaining the cloud environment. Experience in container technology and CI/CD pipeline automation. Passionate on data-driven technology and business and being dedicated to maintain up-to-date IT skills and industry knowledge.

Skills

- Languages: Java (fluent), Shell (fluent), SQL (proficient), Python (prior experience), JavaScript (prior experience)
- Databases: Cassandra, MySQL, DynamoDB
- Tools: Git, Ansible, Prometheus, Zabbix, Grafana, Spring MVC, Maven, ELK, Wireshark
- Platforms: AWS, Ali-Cloud, Docker, Jenkins, Kafka, Zookeeper, IntelliJ IDEA, OpenStack
- Network: TCP/IP, HTTP/HTTPS, Load Balance, Access Control, DNS, SSH, VPN, BGP, IPv6

Experiences

Software Engineer @ Nauto – Palo Alto, CA, US   12/09/2019 -- Present

- Provided automation, tooling and continuous delivery services for AWS cloud infrastructure used by Nauto product, AI/ML, and other infrastructure teams.
- Produced high quality, infrastructure focused software that is unit tested, reviewed and continuously integrated.
- Managed individual projects priorities, deadlines and deliverables related to your technical expertise and assigned domains.
- Participated in 12x7 on-call rotation and work with global teams in the event of critical outages.

Sr. Network Engineer @ Panasonic Avionics Corporation – Lake Forest, CA, US   07/15/2019 -- 11/27/2019

- Provided professional technical support on designing, employing and maintaining the PAC's global network.
- Evaluate and design the cloud-based applications for optimizing and monitoring the network.
- Manage the global server configuration and maintenance.

Network Engineer @ China Telecom Americas – Los Angeles, CA, US   05/23/2018 -- 07/09/2019

- Provided professional technical support on designing, employing and maintaining the services on AWS.
- Deployed and maintained the DevOps pipeline using AWS ECS then monitored by CloudWatch and Prometheus.
- Infrastructure development on AWS by employing services such as EC2, RDS, S3, VPC, ASG, etc.
- Familiar with different AWS deployment method includes management console, AWS CLI, CloudFormation.
- Designed mixed underlying and ASG-configured EC2 instances (spot-fleet & on-demand) to lower the cost.
- Evaluated various Cassandra deployment strategies on AWS for customer to extend service into US.
- Compared suitable EC2 instance types for Cassandra nodes.
- Designed VPC and CIDR block for Gossip traffic between nodes and used auto-scaling scheme for non-seed nodes.
- Deployed the Cassandra cluster using AWS CloudFormation.
- Determined performance metrics need to be monitored includes (throughput, latency, disk usage and so on).
- Performed Cassandra environment administration includes commissioning and decommissioning nodes, cluster capacity planning, performance tuning, cluster monitoring and troubleshooting.
- Experiences in developing and maintaining automated CI/CD pipelines for code deployment using Jenkins.
- Knowledgeable in common SCM practices, such as branching and code merge.
- Created Kafka cluster and ZooKeeper cluster on AWS EC2.
- Performed benchmark test on Kafka to evaluate the throughput and find the saturation point and maximum message rate.
- Tested the scalability performance using consumer groups.
- Built real-time monitoring system using open source tool Prometheus and Grafana.
- 24*7 production support & on-call support experience.

Network Engineer @ China Unicom Americas – San Jose, CA, US   05/20/2013 -- 02/05/2018

- Solid experience with Linux (Ubuntu, CentOS) administration.
- Created shell scripts and Cron jobs that monitored and reported security issues.
- Managed, monitored and tested individual and group user access privileges and security.
- Monitored system performance and prevented resource exhaustion using ssh, sar, vmstat, iostat, netstat and nmon.
- Worked extensively with AWS services like EC2, RDS, S3, VPC, ELB, AutoScalingGroups, Route53, IAM, CloudWatch, CloudTrail, CloudFormation and ECS.
- Worked with customer to migrate local MySQL database to AWS RDS.
- Chose appropriate RDS instance which can handle future growth in short coming future.

- Enabled both periodically snapshot backup scheme and auto backup scheme to ensure the data reliability.
- Experiences on Cassandra cluster deployment using DSE across two physical data centers.
- Installed and configured DSE OpsCenter for customer to monitor and manage the nodes.
- Evaluated DynamoDB by comparing features with Cassandra.
- Configured DynamoDB and did some load tests.
- Calculated, optimized and updated the RCU and WCU based on data modeling and volume prediction.
- Utilized AWS CLI to automate backups of ephemeral data-stores to S3 buckets and EBS.
- Created monitors, alarms and notifications for EC2 hosts using CloudWatch.
- Designed and managed global backbone network to achieve optimized performance such as latency, availability and stability.
- Integrated public cloud providers' (AWS & Ali-Cloud) services to existing global network solutions.

Education

Master of Electrical Engineering   **2011.09 -- 2013.05**
Arizona State University, Ira.A Fulton Schools of Engineering, Electrical Engineering, Arizona, US
Relevant Coursework: Advanced Computer Architecture, Linux OS Kernel, Object-oriented Technical Design

Bachelor of Communication Engineering   **2007.09 -- 2011.06**
Hunan University of Science and Technology, Engineering School of Information, Hunan, China
Relevant Coursework: Basis of Computer Software Technique, The C Programming Language, Computer Network