Jacob Kupersmith

404-989-5409 | jake@jkup.org | github.com/jakup

Summary

Highly skilled software engineer with 20 years of experience in full-stack application development working in cybersecurity, telecommunications, and service provider industries.

Specializing in designing, building, and maintaining both direct customer facing and backend applications and services.

Proven track record of delivering high-quality software solutions, collaborating effectively with cross-functional teams, and working under tight deadlines.

Seeking an opportunity to leverage my technical expertise to develop innovative solutions.

Technical Skills

Programming Languages: C/C++, Java, JavaScript, Golang, Python, Perl
Web Development: Node.js, Express.js, Vue, Angular
Databases: MySQL/MariaDB, PostgreSQL, MongoDB, Elasticsearch, Redis
DevOps: Ansible, SaltStack, GitLab, Kubernetes
Cloud Technologies: AWS, GCP

Work Experience

Sr. Staff Engineer | Balbix | San Jose, CA | Nov 2021- Present

Industry: Cybersecurity (Asset inventory and risk management)

- Developed and maintained network and operating system sensor applications targeting Linux, macOS, and AIX platforms.
- Collaborated with engineering teams and product managers to design and implement new features, ensuring on-time and high-quality project delivery.
- Conducted code reviews, implemented unit tests, and worked closely with QE team to ensure software reliability.
- Mentored junior developers and provided technical guidance on best practices and coding standards.
- Conducted technical interviews for engineering and internship positions.
- Worked closely with customer satisfaction team and with customers directly, ensuring sensors are deployed correctly working as designed.

Programming: Python, Golang, Java, C++

Software Developer, DevOps | MyNetWatchman | Atlanta, GA | Jul 2017 - Nov 2021
Industry: Cybersecurity (Fraud intelligence)

- Developed and maintained public web portal and APIs responsible for delivering core data feed to customers.
- Developed and maintained ML/data processing pipelines and (dark-)web site scraping applications.
- Built and supported several clustered services deployed to on-premises SuperMicro systems; 80 node elasticsearch cluster, 2PB ceph storage cluster, 100 node proxmox cluster, 30 node kubernetes cluster, multi-node rabbitmq clusters.
- Designed, built, and supported several smaller database solutions as well; PostgreSQL, MariaDB, Redis
- Migrated manually scaled data pipeline workers into kubernetes cluster and created autoscaling based on workload.
- Design, build, and support custom CentOS linux based routers using iptables and iproute2.
- Support and enhance distributed packet capture and analysis system (Arkime Full Packet Capture, formerly Moloch)

Programming: Python, C, Golang, Java
DevOps: Ansible, Salt stack, Linux, Elasticsearch, Ceph, Kubernetes, ProxMox, KVM, PostgreSQL, MariaDB, Redis, GitLab

Software Engineer III | Cox Communications | Atlanta, GA | Aug 2010 - Jul 2017
Industry: Telecommunications
Organization: Service assurance

- Developed and maintained customer premise equipment management system used by DOCSIS engineers, field technicians, and customer support staff to maintain high-quality and reliable service.
- Optimized and scaled the distributed SNMP collection process responsible for scanning ~12M cable modems and cable modem termination systems on an hourly schedule. Resulted in a 100% improvement in runtime performance and allowed the solution to scale to our largest markets without additional hardware.
- Conducted code reviews, implemented unit tests, and worked closely with QA and operations teams to ensure application reliability.
- Worked closely with DOCSIS engineering teams to deliver new features and enhancements in support of new cable modem and set-top box capabilities; i.e. IPv6, DOCSIS 3.1

Programming: Java, Perl, PHP, Python

Network Admin | Cox Communications | Atlanta | Jun 2003- Aug 2010

Industry: Telecommunications
Organization: Data product services
Team: Network and application health, performance monitoring

- Developed and maintained network monitoring system responsible for delivering real-time alerts to the network operations center and reporting service availability, ensuring core services meet the required SLA and positive customer experience.
- Worked closely with product owners to develop intelligent health checks and performance monitoring of their systems and services. Helping provide engineers with the tools necessary to diagnose and troubleshoot health and performance related issues.
- Build repository of OSS packages for Sun Solaris running on SPARC systems using NetBSD's pkgsrc package manager.
- Managed team of offshore developers in 2009-2010, 50% travel. Helping to deliver new enhancements to web reporting and management portal.

Programming: C, Perl, PHP, Java, Python

Systems Administrator | Usenetserver | Atlanta, GA | 2000- May 2003

Industry: Service provider (NNTP)

- Build and administer servers responsible for providing core internet services; such as DNS, HTTP, RADIUS, and NNTP running on Solaris, FreeBSD, and Linux.
- Develop and maintain customer usage reports working closely with account team to generate monthly invoices.
- Developed network and server traffic utilization reports helping to ensure adequate service capacity.

Programming: Perl, PHP

Technical Support | Lynxus | Atlanta, GA | 1998- 2000

Industry: Telecommunications (Dial-up access provider)

- Provided over the phone help to customers related to setup and troubleshooting dialup internet service on Microsoft Windows.
- Developed small applications to assist members of the technical support staff quickly lookup useful information.
- Administration of RADIUS server.