



Cert: 2273572, exp 5/31/28

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JOSH D SYLVIA

SUMMARY

Accomplished Principal Software Engineer and team leader who has worked at federal government agencies that uses technical skills in software design & development, infrastructure, and project management, along with written and verbal communication to provide the best software product. Responsible for recruitment, hiring, and mentoring junior software engineers with documentation and coding standards.

EXPERIENCE

NATIONAL SECURITY AGENCY (NSA)

FORT MEADE, MD

PRINCIPAL SOFTWARE ENGINEER / LEAD TECH DIRECTOR, 6/2019-PRESENT



- Led a 40-person cross-functional team supporting software, systems, and audit-related work in a federal environment.
- Managed server migrations and reduced downtime while maintaining operational continuity in a sensitive environment.
- Oversaw real-time server migrations with minimal downtime, reviewing technical plans, specifications, and cost estimates while applying ITIL change management and NIST-aligned security practices to ensure continuity and reduce operational risk.
- Produced documentation for architecture, data flows, and network diagrams to support operational transparency and audits.
- Coordinated a team to develop a security system dashboard for system monitoring, logging, intrusion detection, usage metrics, and performance visibility.
- Developed end-to-end web applications using Angular for the frontend, with a Node.js and Java Spring Boot backend, interfacing with a MySQL database.
- Supervised all Tier I-III JIRA support tickets.
- Responsible for recruitment, interviews, as well as mentoring junior software engineers and new hires about systems architecture, coding standards, documentation and data flows.
- Spearheaded Documentation of complex code, data flows, architecture, and network diagrams to have a clear picture of the overall set of systems.
- Streamlined the SDLC by establishing a robust CI/CD workflow, allowing teams to seamlessly build, test, and deploy code updates multiple times a day.
- built automated testing using selenium that reduced bugs by 20%. Developed and tested a cross-browser web application using Playwright across AWS, Azure, and GCP, while supporting FedRAMP-aligned logging, IAM, and secure access controls.
- Conducted CMMC Level 3 testing across network environments to validate security controls and support compliance readiness.
- Implemented Terraform to provision and manage cloud infrastructure across environments, supporting infrastructure-as-code best practices, configuration consistency, and secure cloud operations.
- Adopted COTS software and 3rd party software such as; AI / ML video analytic and Deepfake technologies into existing software application using Docker and EKS.
- Built a workflow management system that sets part of the system to working, degraded, broken, or archive. Workflow management system would remove broken or unusable workflows from customer view and add documentation on how to fix the workflow.
- Designed a UI to be more accessible, 508 compliance, for disabled users using JAWS screen reader.



BARRACUDA NETWORKS

SAN JOSE, CA

SOFTWARE ENGINEER - DEVOPS PLATFORM TEAM, 1/2018-5/2019

- Worked on a Linux development machine to build virtual machines for ESXi, HyperVisor,

XenCenter, AWS, Google Cloud, and Azure.

- Installed HyperVisor, VMWare, and XenCenter tools for on premise Virtual Machines.
- Created custom scripts that would install applications and services on different platforms.
- Modified iptables pre-routing rules to point to a specific destination port that contained the End User License Agreement (EULA).
- Assisted in building a complete Software As A Service (SaaS) Development Structure.
- Helped in designing a complete database structure for SaaS project.
- Built a Docker web server container that uses python flask and deployed on Kubernetes machines.
- Designed functions that would be able to communicate with Azure, AWS, and GCP.
- Maintained MySQL and Postgres databases.
- Created RESTFUL API's that would accept JSON post request and bill the customers according to their billing model.
- Supported logging that gave details of transactions processed and used sendmail daemon to send mail alert when logging hit a critical error.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GREENBELT, MD
WEB AND APPLICATION DEVELOPMENT INTERN, 6/2017-8/2017

- Developed Perl scripts to automate file discovery and management within a hierarchical file system.
- Used string manipulation and scripting logic to reorganize and rebuild file structures efficiently.
- Updated MySQL tables and fields to support application data maintenance and consistency.
- Tested Docker containers in both Windows and Linux environments to validate cross-platform compatibility.

SMART SOURCE, INC. ST CHARLES, IL
IT CONSULTANT / REMOTE TECHNICAL SALES, 6/2008-6/2017

- Consultant for remote operations, technical sales, and management.
- Installed and configured network devices.
- Removed virus and malware from infected systems.
- General computer maintenance along with replacement and installation of new hardware.

XCITE NETWORKS SCOTTS VALLEY, CA
FIELD IT TECHNICIAN / SOLUTIONS ENGINEER, 10/2003-6/2008

- Delivered end-to-end technical solutions for small to enterprise clients, combining desktop support, systems administration, and network engineering to improve operational reliability.
- Engineered router and firewall configurations with QoS policies to prioritize voice traffic, reduce latency, and ensure consistent service delivery.
- Acted as a technical advisor to clients, recommending and implementing network management and monitoring tools aligned with business goals and scalability needs.
- Collaborated with cross-functional teams and stakeholders to translate business requirements into practical, cost-effective technical solutions.
- Supported infrastructure upgrades and modernization efforts, including hardware selection, deployment planning, and performance tuning.

EDUCATION

SAN JOSE STATE UNIVERSITY (SJSU), 3.33 GPA SANTA CLARA, CA
B.S. SOFTWARE ENGINEERING, 12/2017

- Member of Computer / Software Engineering (CSE) club.

CABRILLO COLLEGE, 3.25 GPA APTOS, CA
A.S. COMPUTER SCIENCE, 5/2015

- Treasurer of Student Senate and Engineering Abroad.

CERTIFICATE

Certified Information Systems Security Professional (CISSP)

- Certificate Number: 2273572, Certificate Cycle:6/1/25-5/31/28
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AWS Certified Cloud Practitioner

Skills Certification: LINUX SYSTEM ADMINISTRATION, 5/2015

Skills Certification: MICROSOFT SYSTEMS ADMINISTRATION, 5/2015

Skills Certification: CISCO CERTIFIED NETWORK PROFESSIONAL, 5/2015

SKILLS &
ABILITIES

- **Programming Languages and Frameworks:** Angular, React, C, C++, C#, Java, Kotlin, Objective-C, Perl, Python, Go, Html, CSS, Shell, JavaScript, and Swift.
- **Operating Systems:** Linux(RedHat/Debian), Unix, Mac, Android, IOS, Win Server, & more.
- **Databases:** SQL, MySQL, Postgres, MongoDB.
- **DevOps, Cloud, Tools and programs:** AWS, Azure, GCP, EC3, S3, NiFi, Kafka, Ansible, Terraform, SDLC, Scrum, VPNs, WAF, Cloudwatch, Datadog, Docker, Kubernetes, Elasticsearch, microservices, Git, JIRA, Confluence, Agile, Scrum, CI/CD, DevSecOps, IntelliJ, PyCharm, StarUML, AutoCAD, PSpice, Xcode, Android Studio, Eclipse, NetBeans, Splunk, SwiftUI, Visio, WireShark, Jupyter Notebook and MS Office.
- **Computer Networking:** OSI model, Network security communication, OSPF, IGRP, EIGRP, BGP, VLAN, VRRP, InterVlan Routing, STP, Ipsec tunneling, Load Balancers, VRRP.
- **Generative AI:** Windsurf, Claude, Copilot, ChatGPT, Gemini.
- **Testing:** UI Testing, API Testing, White box testing, Black Box Testing, Unit Testing, Test Automation, SAST, DAST, User Acceptance Testing (UAT), Integration Testing, Regression Testing.
- **Cloud Architecture:** IaaS, PaaS, DaaS, SaaS, FaaS, VPC, SASE.
- **Compliance and Security Controls:** Role-Based Access Control (RBAC), DAC, Gap Analysis, CVEs, Threat Modeling, Cyber Threat Intelligence, logging, monitoring, Metrics, KPIs, KPI Metrics, KPI Analysis, Log Data Analysis, API Security, Security as Code, Cloud Security, Security Testing, SOC, SOC2, FISMA, FedRAMP, POA&M management, Web Application Security, RMF process, Incident Response, IAM, NIST 800-53, Federal audits, MITRE ATT&CK, Risk Management, RMF, PII, PHI, EDR, DLP, MDR, Change Management, Configuration Management, Vulnerability Management, HIPAA, GDPR, CCPA, SLA, Root Cause Analysis, SIEM, SOAR.

LEADERSHIP

- Principal Software Engineer and Lead Tech Director of about 40 personnel.
 - Speaker at major online Skype event that spanned five different countries.
 - Treasurer of Student Senate Cabrillo College.
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