Spencer Julian

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Senior Engineer - Software, Systems, and Reliability

Strategic and technically-astute professional with substantial experience in software engineering, systems architecture, and Site Reliability Engineering (SRE). Proven leader in designing, deploying, and optimizing large-scale systems to ensure high availability, scalability, and performance. Strong leadership in CI/CD pipeline automation, cloud infrastructure, and microservices architecture with deep knowledge of DevOps practices. Demonstrated success in collaborating with cross-functional teams, managing service reliability, and delivering multi-million-dollar cost savings through strategic analysis and optimizations. Strong expertise in incident management, root cause analysis, and enhancing system resilience. Dedicated mentor; committed to fostering innovation and team growth in high-impact environments.

Technical Proficiencies

<u>Software:</u> Kubernetes, Docker, Gitlab, GitHub, Artifactory, Puppet, Ansible, Terraform, Jenkins, Gitlab CI, Bazel, Splunk, Sentry, Tableau, Prometheus, Grafana, PagerDuty

<u>Technical:</u> Linux, Linux Containers, AWS, Package Management, Configuration Management, Git, Version Control, Automated Testing, Continuous Integration, Continuous Deployment, Observability Instrumentation, Go, Python

<u>Expertise:</u> Automation Strategies, Cloud-native Architecture, Large-scale Distributed Systems, Incident Response Coordination, System Design and Architecture, AI Prompts and Best Practices, Reliability Engineering Practices, Release Management Processes, Software Infrastructure Development, Test-Driven Development Principles

Professional Experience

Apple, Cupertino, CA   **2017 – Present**
Senior Site Reliability Engineer

Develop and optimize media intake pipelines across multiple teams for seamless ingestion and processing of thousands of media assets daily. Implement a standardized Helm chart with integrated best practices, simplify Kubernetes deployment processes, and minimize operational complexity. Enhance site reliability by performing comprehensive incident retrospectives and utilizing advanced monitoring tools to identify and mitigate recurring vulnerabilities.

Noteworthy Accomplishments:

- Directed a team of 20-30 engineers in the recruitment process and oversee technical assessments.

- Provided mentorship to 11 newly hired engineers with varying experience levels.

- Introduced a bare-metal provisioning system, eliminated manual validation tasks, and elevated operational efficiency.

- Developed a tool and implemented processes that minimized inactive user accounts on GitHub Enterprise Server that contributed to a reduction of $3M in licensing costs.

- Revamped the package versioning workflow by engineering a self-service system and slashed promotion times from days to under 30 minutes through precise version management.

- Engineered a command-line framework and API service that automated an existing secrets management solution; reduced a time-consuming manual process from hours to two minutes, improved security, and minimized errors.

NVIDIA, Santa Clara, CA   **2016 – 2017**
DevOps Engineer

Improved infrastructure provisioning through cloud platforms, reduced system downtime, and enhanced scalability. Monitored and maintained system health to ensure performance, security, and compliance with industry standards.

Noteworthy Accomplishments:

- Optimized a multi-stage Jenkins CI pipeline, increased daily developer commits by 15%, and boosted overall team productivity.

- Developed an advanced Continuous Deployment (CD) system using Jenkins as well as reduced commit-to-deployment time from several days to two-to-three hours.
- Refined code management workflows, enhanced efficiency, and trained the development team on best practices by leveraging expertise in Git, GitLab, and version control systems.

Purdue University, West Lafayette, IN   2013 – 2016
HPC Systems Administrator

Established comprehensive metrics and analytics platforms using Sensu, Ganglia, OpenNMS, and Splunk for real-time tracking of job completion rates, node health, latency, error logs, and system performance in an HPC environment. Applied expertise in AWS as well as configured and integrated GitHub Enterprise appliance for seamless cross-departmental collaboration. Collaborated with cross-functional teams to optimize high-performance computing resources and lead major improvement initiatives. Designed and implemented robust systems exclusively for monitoring and maintaining HPC resources. Developed and maintained backend infrastructure to support internal operations. Directed the operations and upkeep of supercomputers and related systems for continuous uptime and performance. Conducted research, tested, and implemented new environments and infrastructure components to enhance daily system operations and upgrades. Partnered with vendors to facilitate research efforts and secure technical support for seamless operations.

Noteworthy Accomplishments:
Docker Infrastructure Design and Development Project, 2016
Budget: $2M | Team Size: 4 | Tools: CoreOS, CentOS, xCAT, Docker, CircleCI, GitHub Enterprise

- Managed and optimized complex systems and infrastructure.
- Developed a highly available Platform-as-a-Service (PaaS) environment using Docker, CoreOS, and CentOS.
- Directed the development of front and back-end services as containerized applications for the PaaS environment.
- Devised unique services, including auto-scaling computational and web clusters.

Rice Build and Installation, 2015
Budget: $2M | Team Size: 24 Staff, 60 Volunteers | Tools: Mellanox InfiniBand, Red Hat Enterprise Linux 6, Kickstart

- Architected and automated the installation infrastructure for a 600-node supercomputer.
- Spearheaded the installation team and completed the majority of system setup within one business day.
- Configured and verified the InfiniBand fabric and 10 Gigabit Ethernet network for cluster performance.
- Accelerated time from installation to production deployment.

Monitoring Systems Overhaul, 2013
Budget: $0 | Team Size: 1 | Tools: SNMP, Sensu, OpenNMS

- Assessed and replaced outdated Nagios systems by developing a more efficient self-remediating solution.
- Slashed system repair time by 90% through advanced monitoring and automated remediation.
- Evaluated and implemented SNMP and message-queue-based system handlers using OpenNMS and Sensu.
- Collaborated with key organizational teams to ensure the monitoring system appropriately handled critical scenarios.

Education

Bachelor of Science in Computer Engineering, Purdue University, West Lafayette, IN