MIKE HOLZINGER

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Skills and Expertise

Languages: Python (5 yrs), C (7 yrs), Ruby (2 yrs), Shell/Bash (10+ yrs), YAML (6 yrs)

DevOps & Automation Tools: Jenkins, GitLab CI/CD, GitHub Actions, CircleCI, Travis CI, Ansible, Chef, SaltStack, BOSH

Containers & Orchestration: Docker, Kubernetes, Helm, OpenVZ, OpenStack

Cloud Platforms: AWS (ECS), GCP (GKE, Terraform), IBM Cloud

Observability & Monitoring: Grafana, Prometheus, ELK Stack, OpenTelemetry, Sensu, Nagios, Zabbix

Security & Compliance: AES Encryption, PKI, FIPS 140-2, Certificate Authority Management, HashiCorp Vault, Keycloak

Databases: MySQL/MariaDB, PostgreSQL, PGAdmin, CouchDB, Cloudant, FoundationDB

Other Tools & Technologies: Terraform, Perl, HAProxy, Nginx, PagerDuty, ServiceNow, Slack Workflow Builder, YubiKey/Yubico

Operating Systems: Linux/Unix Administration (10+ yrs)

BAYONE SOLUTIONS

Cisco
Sr. Software Engineer
April 2024 - October 2024

WebEx Framework Modernization:
- Contributed to modernizing the **WebEx corporate framework**, configuring and deploying custom builds for over **300 clients**, enhancing the platform's flexibility and performance.
- **Migrated** the codebase from **Python 2.8 to Python 3.12**, utilizing tools like **Tox** and **Pytest** for testing and validation, ensuring code reliability and compatibility.

Configuration Architecture & Automation:
- Enhanced the configuration architecture by implementing design patterns and **Jinja**

templating, improving maintainability and scalability of configuration management.
- Developed new **linting tools** to validate **JSON**, **YAML**, and environment key settings, ensuring consistency across more than 5,000 configuration documents.
- Streamlined the deployment process using **Docker** and **Jenkins**, reducing build times and improving continuous integration workflows.

Collaboration & Testing:
- Collaborated with cross-functional teams to create comprehensive **unit tests** for system functionality, increasing test coverage and software quality.

Key Technologies:
Docker, GitHub, Jenkins, Jinja2, Pytest, Python 3.x, Tox, JSON, YAML

MRI TECHNOLOGIES

NASA

Sr. Software Engineer
March 2023 - November 2023

Cloud Infrastructure Enhancement:
- Managed and refined Kubernetes deployments and GitLab pipelines on Google Cloud Platform, significantly enhancing infrastructure scalability and resilience.
- Transitioned GitLab pipelines from Docker-in-Docker to **Kaniko**, reducing deployment times from **1 hour to under 8 minutes** and eliminating legacy dependencies.

Security & Dependency Management:
- Applied Helm version locking to mitigate security vulnerabilities and improve dependency management, boosting system security and reliability.

Automation & Efficiency:
- Automated CI processes and scripted Kubernetes tasks, including database job scheduling and export operations, contributing to the efficiency and reliability of NASA's cloud platform.

Observability & Team Training:
- Deployed Grafana dashboards and trained development teams on utilizing logging assets and Kubernetes pod metrics, enhancing platform observability and performance monitoring.

Key Technologies:
Docker, GitLab, Google Cloud Platform, Grafana, Helm, Keycloak, Kubernetes, Python, Terraform

HTC GLOBAL

Disney (Parks and Recreation)
Site Reliability Engineer

September 2022 - April 2023

Application Migration & Management:
- Served as an SRE for over 500 applications migrated from on-premises hardware to AWS ECS-hosted solutions.
- Managed application onboarding, scheduled nightly maintenance windows, and acted as the incident management commander to ensure seamless operations.

Automation & Operational Efficiency:
- Developed Python automation scripts for ServiceNow integration with Slack Notification API, significantly improving escalation processes and reducing missed change management windows.
- Utilized Python with AppDynamics and Grafana for enhanced monitoring and proactive incident management, contributing to increased application reliability.

Key Technologies:
AWS ECS, AppDynamics, Grafana, OpenTelemetry, Prometheus, Python, Rundeck, ServiceNow, Slack Workflow Builder, Spark

SMARSH

Site Reliability Engineer
July 2021 - September 2022

- **Infrastructure Modernization**: Collaborated with application developers to migrate a .NET-based VMware-hosted application stack to Kubernetes, transitioning legacy Ansible and BOSH infrastructure to a hybrid cloud environment using VMware Cloud Provider Interface and AWS/EKS.

- **Helm Chart Development**: Gained advanced proficiency in Helm for chart development, template management, and deployment strategies, implementing security measures and optimization techniques to enhance operational efficiency and system integrity.

- **Automation & CI/CD**: Streamlined application deployment and management by automating CI/CD pipelines using tools like CircleCI and GitHub Actions. Leveraged Ansible, Docker, and Kubernetes to automate infrastructure tasks and improve scalability.

- **Observability & Monitoring**: Improved system reliability by employing monitoring and observability tools such as OpenTelemetry. Deployed new Grafana dashboards to provide insights into system performance and trained teams on utilizing these metrics effectively.

Key Technologies:
Ansible, Artifactory, BOSH, CircleCI, CredHub, Docker, GitHub Actions, HashiCorp Vault, Helm, Kubernetes, OpenTelemetry, PowerShell, Python, Terraform, SaltStack, vSphere, YAML

IBM

Software Engineer

July 2015 - October 2019

Roles & Responsibilities:
- **Cloudant Watson Data Platform:** Worked on operations and development for Cloudant (CouchDB), identifying and resolving production issues.
- **FoundationDB Document Storage:** Developed metrics performance tooling and contributed to the groundwork of a new document store infrastructure for the Watson Data Platform.
- **Global Managed Cloud (GBS):** Independent contributor for Oracle SAP and distributed VMware offerings. Created tooling for CI/CD, operations, and enhanced security compliance.
- **IBM Cloud:** Object Storage & OpenStack: DevOps and operations engineer for IBM's Cleversafe acquisition and OpenStack services, managing large-scale cloud deployments and customer instances.

Notable achievements:
- Developed a client tool that reduced operator time by providing insights without server node access.
- Created data health investigation tools aggregating cluster information across nodes.
- Automated host discovery for compliance reporting, improving data remediation processes.
- Led orientation and training for new employees, serving as West Coast Operations Lead.
- Built monitoring dashboards with Grafana and implemented operational tooling for large-scale storage deployments.

Key Technologies:
Ansible, AWS, BASH/Shell, Chef, Cloudant, CouchDB, ELK Stack, Erlang, FoundationDB, GitHub Enterprise, Grafana, IBM Cloud, Kubernetes, Linux, OpenStack, PagerDuty, Python, REST APIs, Ruby, Sensu, SoftLayer, VMware, YAML

BLUE BOX GROUP

Operations Engineer - Linux

July 2014 - July 2015

Cloud Migration & Infrastructure:
- Served as a Linux Operations Engineer and DevOps specialist for OpenVZ and OpenStack private cloud environments.
- **Led the migration** of customer tenant OpenVZ applications, databases, and infrastructure to OpenStack, enhancing scalability and performance.

Database Administration & Support:

- Provided admin and on-call support for MySQL/MariaDB and PostgreSQL instances.
- Built new primary and secondary SQL solutions and implemented disaster recovery strategies to ensure data integrity and availability

Service Ownership & Security:
- Acted as the primary service owner for high-availability load-balanced services, optimizing uptime and reliability.
- Served as the Registrar for the published Certificate Authority (CA) and managed the internal CA, ensuring secure communications and compliance with security standards.
- Maintained the corporate bastion/authentication gateway, enhancing security protocols for internal systems

Monitoring & Performance Optimization:
- Implemented monitoring solutions using Nagios, Zabbix, and Grafana to proactively identify and resolve system issues
- Optimized system performance through effective configuration of HAProxy and Nginx for efficient load balancing and traffic management

Key Technologies:
Apache, Grafana, HAProxy, Nagios, Nginx, OpenVZ, PKI, Perl, Python, Ruby, SSH Key Authentication, YubiKey/Yubico, Zabbix

TOWNSEND SECURITY
Software Engineer
2007 - 2013

Development of Cryptographic Client Libraries:
- Utilized **ANSI C** to develop lightweight client libraries for the **Alliance Key Manager** (Hardware Security Module).
- Created a **TLS client library in C** for partners to interface with the key manager, ensuring secure and efficient communication.
- Focused on clean code practices in config file parsing, TLS connection management using FIPS-compliant OpenSSL modules, and certificate generation.

FIPS 140-2 Certification:
- Contributed to the development of cryptographic libraries that achieved **NIST FIPS 140-2 certification**, ensuring compliance with stringent security standards.
- Implemented AES encryption, PRNG, SHA, and HMAC algorithms in accordance with NIST guidelines.

Cross-Platform Development & Automation:
- Developed cross-platform SaaS client applications compatible with both Windows and Linux environments.

- Utilized **Jenkins** for continuous integration, automating builds triggered by Git commits and creating testing harnesses to validate new builds.

Cross-Platform Development & Automation:
- Built a central **Certificate Authority** for testing, demos, and partner deployments using **Bash** and **OpenSSL**.
- Created metrics testing tools for encryption API IOPS, high availability failover, and scaling on AWS using **Perl** and **Bash**.
- Developed a consumer PKI deployment tool for SSL certificates on Windows/Linux platforms using **OpenSSL** and **Nullsoft**

Key Technologies:
ANSI C, AES, PKI, TLS, FIPS 140-2, OpenSSL, Jenkins, Bash/Shell, Perl, Java, AWS, Git, Linux