

MIKE HOLZINGER

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I am a thoughtful systems engineer focusing strongly on DevOps, tooling, and systems development. I am experienced in coding to protocol specifications, PKI, TLS, and many Network protocols.

MRI Technologies

NASA

Sr. Systems Engineer

2023

Senior systems engineer for cloud-hosted projects at NASA.

Key Tasks:

Managed and refined proof of concept code for Kubernetes deployments and GitLab pipelines on the Google Cloud Platform, enhancing infrastructure scalability and resilience.

Modernized GitLab pipelines, transitioning from Docker-in-Docker to Kaniko. This refactoring removed legacy dependencies and slashed deployment times from 1 hour to under 8 minutes.

Built out CI automation and scripting Kubernetes-related tasks, including database job scheduling and export operations, contributing significantly to the efficiency and reliability of the space and aeronautics cloud platform.

Key Technologies:

Python, Terraform, Kubernetes, Docker, Gitlab, Google Cloud Platform

HTC Global

Disney (Parks and Recreation)

Site Reliability Engineer

2022 - 2023

SRE for over 500 applications migrated from hardware to AWS ECS-hosted solutions at Disney Parks and Recreation.

Key Tasks:

Managed change for application onboarding, scheduled nightly maintenance windows, and served as incident management commander. I extensively utilized Python to automate and streamline these

processes.

Developed Python-based automation for Service Now, integrating it with the Slack Notification API. This innovation significantly improved escalation and alert management, leading to a marked decrease in missed change management windows and enhanced operational efficiency.

Employed Python scripting with tools for AppDynamics and Grafana for monitoring and proactive incident management, contributing to a more reliable application environment.

Tools/Platforms:

AWS ECS, AppDynamics, Grafana, Prometheus, Python, Rundeck, Service Now, Slack Workflow Builder, Spark

SMARSH

Site Reliability Engineer

July 2021 - September 2022

Embedded SRE working alongside application developers, taking legacy stuff and making it cloudy.

Key Tasks:

Migrating legacy Ansible and BOSH infrastructure to Kubernetes private cloud using VMWare hosted Cloud Provider Interface.

Minor tasks: Automating configuration for SOLR private cloud, admin for AMQ, Writing tooling for Mutual TLS, and Opentelemetry application integration for DataDog.

Tools/Platforms:

Python, Ansible, Artifactory, Bosh, CircleCI, Credhub, Docker, Github Actions, Hashi Vault, Kubernetes, Terraform, Vsphere, YAML

IBM

Watson Data Platform (Cloudant)

Software Engineer

2018 - 2019

Projects:

Cloudant NoSQL Document Storage as a Service (CouchDB), This role was primarily operations and development, finding issues with CouchDB production issues.

- Wrote a client tool for support and operations engineering (Python), cutting Operator time by enabling insights to issues without logging into server nodes.

- Wrote data health investigation tooling for cluster information (Python / Erlang), one tool to bring multiple node details together.
- Wrote automated operation playbooks for support (Python / Bash) and shortcuts to solve problems quickly.

FoundationDB Document Storage

- Wrote and installed metrics performance tooling for FoundationDB (C / Bash), laying the groundwork for a new document store infrastructure with a modern engine powering Watson Data Platform.

IBM Global Managed Cloud (GBS)

Software Engineer

2017 - 2018

Independent contributor for Oracle SAP and distributed VMWare offering within IBM. I wrote code and tooling for CI/CD, Operations, and the GBS Security Squad.

Projects:

Security & Compliance + Data Remediation

- Wrote automated host discovery for compliance reporting (Chef / Knife)
- Designed and built a service to reconcile resources in IBM's compliance system - Mixed Address Database "MAD" (Ruby / REST / Chef)

Fully automated GitHub for Gitflow model

- Integrated API feature to control dual control and review features for GitHub (Ruby / REST / GitHub / Chef)
- Chef automated metrics collection for real-time inventory + auditing (Ruby / REST API)

IBM Bluemix - Object Storage:

Systems Engineer

2016 - 2017

Projects:

Object Storage deployment operations for IBM Cleversafe acquisition

- Wrote software to deploy inventory and automatic system rollout (Softlayer / Ansible / YAML)
- Wrote Cleversafe user account creation tooling (Ansible / Python / SoftLayer)
- Wrote client audit and account remediation tool for Cleversafe deployments covering petabyte object storage deployments (Ansible / Python / Softlayer)

Tier 2 On-call technology integration

- Monitoring: ELK, Sensu, Flapjack

- Pagerduty (escalation)

IBM Bluemix - OpenStack:

Operations Engineer - OpenStack

2015 - 2016

Linux Operations engineer for OpenStack service on IBM Cloud.

Key Tasks:

Leadership: 1st Shift Operations Lead

- Orientation and onboarding for new employees in IBM and IBM transfers to BlueBox
- Training lead to new sysadmins and new operations engineers (OpenStack, Linux)

Operations: Cloud deployment operations for Bluemix Local and Bluemix Cloud

- OpenStack on SoftLayer bare-metal cloud (Softlayer / ELK / PagerDuty / SysAdmin)
- On-call operational admin for OpenStack (Softlayer / ELK / PagerDuty / SysAdmin)

BLUE BOX GROUP

Operations Engineer - Linux

2014 - 2015

Linux Operations engineer and DevOps role for OpenVZ and OpenStack private cloud.

Key Tasks:

Migrate BlueBox customer tenant OpenVZ applications, databases, and infrastructure to OpenStack.

Primary service owner:

- High Availability Load Balanced services (HAProxy / Perl / HaProxy)
- CA / Registrar: Internal Certificate Authority (Primary service owner)
- Corporate bastion/authentication gateway (SSH Key auth)

TOWNSEND SECURITY

Software Engineer

2007 - 2013

Lead C developer for cross-platform SaaS client applications, Primary Hardware Security Module (HSM) Integration

Tools built:

- Central Certificate Authority for testing, demos, and handling partner deployments (Bash / OpenSSL)
- Metrics testing: Encryption API IOPS / HA failover and scaling (AWS, Perl, Bash)
- Consumer PKI deployment tool (SSL certificate) Windows/Linux (OpenSSL / Nullsoft)
- Java key requestor client application for Hardware Security Module (Java)
- Cross-platform PKI key client modules for Townsend Hardware Security Module

Certifications: NIST certifications for key management cryptographic algorithm libraries written for Townsend Security

- AES, PRNG, SHA, HMAC, FIPS 140-2
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Skills/Languages:

Languages: Python (3 years), C (7 years), Ruby (2 years)

Scripting: Shell/Bash (10+ years), YAML (6 years)

Linux/Unix System Administration: 10+ years

Extensive knowledge: AES, PKI, Github/Gitlab Automation

Tools/Frameworks:

Build + Deploy, CI/CD Automation: Chef, Ansible (2+ years each), Travis

Containers: Docker, OpenVZ, OpenStack

Cloud: AWS ECS, GCP EKS

Education:

Green River Community College: Advanced HS and AA completion