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PROFESSIONAL EXPERIENCE

Site Reliability Architect

Okta

📅 March 2023 – Current

📍 Remote

- Designed and implemented FedRAMP High-compliant Okta Workflows
- Mentorship across the org
- Manage inter-team relations and dependencies

Principal Site Reliability Engineer

Okta

📅 November 2019 – March 2023

📍 Remote

- Onboarded Okta Workflows infrastructure during Azuqua acquisition
- Built the Okta Workflows SRE team from the ground up
- Team Lead for Okta Workflows SRE
- Architected and implemented Okta Workflows infrastructure
- Designed and implemented HIPAA-compliant Okta Workflows

Staff Site Reliability Engineer

Okta

📅 June 2016 – November 2019

📍 Remote

- Designed and implemented HIPAA-compliant cells
- Designed and implemented FedRAMP-compliant cells
- Innovated on Okta's ingress
- Okta's Networking Subject Matter Expert

Senior Site Reliability Engineer

Okta

📅 January 2015 – June 2016

📍 San Francisco, CA

- Designed Okta's PKI system
- Migrated Okta's customer encryption to use AWS KMS
- Designed and authored production tool execution platform
- Migrated Okta from EC2 Classic to VPC
- Architected and built the Okta Internal Network spanning both VPCs and Regions

DevOps Engineer

Okta

📅 April 2013 – January 2015

📍 San Francisco, CA

- Designed and authored a CMDB built on top of Cassandra
- Redesigned Okta's Chef Cookbooks
- Architected Okta's Taxonomy
- Designed and authored a unified CLI for infrastructure management
- Collaborated to design and migrate Okta to a cell-based architecture

SUMMARY

Versatile and innovative engineer with over a decade of experience across the full spectrum of infrastructure, from on-premise to cloud-native.

Deep expertise in Site Reliability Engineering, DevOps practices, and architecting scalable and resilient systems.

Demonstrated ability to tackle complex technical challenges, build impactful tools, and contribute to both professional and community-driven technology initiatives.

SKILLS

Cloud Platforms

AWS, GCP

Container Ecosystem

Kubernetes (kops, k3s, bare-metal), Helm, Docker (and OCI), containerd (and CRI-O), Calico (and Flannel, kube-router), Istio (and MetalLB)

IaC

Terraform, Crossplane

Operating Systems

Linux (Debian/Ubuntu, RHEL-derivatives, Gentoo), Solaris (OpenIndiana), FreeBSD

Networking

TCP/IP, DNS, BGP (and OSPF), Firewalls, Load Balancers, Packet Analysis

Programming

Java, C++, Go, Ruby, JS, PHP, Python

Security

PKI, Cryptography, IAM, Vulnerability Scanning (and Remediation), Best Practices

Compliance

FedRAMP, HIPAA, SOC2

Monitoring

Datadog, Prometheus, Splunk, ELK, Pagerduty

Storage

Ceph, Bacula, Minio, S3

Datastores

Postgres, MariaDB (and MySQL), Cassandra, Redis, OpenSearch, etcd, ZooKeeper, RabbitMQ

CI/CD

CircleCI, Argo, Concourse

PERSONAL PROJECTS / VOLUNTEER

Home Lab

📅 March 2019 – Current

- Designed and built a 6-node Kubernetes cluster built on k3s on physical machines
 - Racked and stacked physical hardware
 - Implemented a fault-tolerant Ceph cluster with 198 drives and 670TiB of raw storage
 - Implemented Bacula to perform backups to LTO-6 tapes
 - Implemented a home network with BGP and 40gbit/s backbone supporting more than 150 client devices
 - Implemented Wi-Fi with Ubiquiti's UniFi products
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Infrastructure

Tableflippers Anonymous

📅 March 2019 – Current

- Designed and built a 20-node Kubernetes cluster from scratch on physical machines
 - Racked and stacked physical hardware
 - Applied for and received ASN 53546
 - Purchased IP space 144.86.176.0/23
 - Managed BGP peering
 - Implemented PXE to boot diskless images on cluster
 - Migrated existing workloads from Legion's infrastructure
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v1x1

Tableflippers Anonymous

📅 October 2016 – February 2019

- Architected and implemented v1x1, a chatbot for Twitch and Discord channels
 - Built using Java, Dropwizard, Redis, Cassandra, and Zookeeper with a service-oriented, no-single-point-of-failure architecture
 - Authored WebAssembly VM from scratch in Java to enable customization of the bot
 - Built a web interface using Angular 2
 - Implemented Argo for CI/CD
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Infrastructure

Legion

📅 May 2012 – March 2019

- Designed and built Legion's infrastructure on dedicated servers purchased from CoreNetworks
 - Implemented ZFS snapshotting on top of OpenSolaris and OpenIndiana
 - Migrated infrastructure to OVH
 - Implemented GlusterFS
 - Migrated to CephFS
 - Implemented backups to AWS S3 and Glacier
 - Implemented configuration management
 - Mitigated DDoS attacks
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Software / ClueBot

Wikimedia Foundation

📅 July 2007 – Current

- Wrote early portions of the English Wikipedia Account Creation Interface
 - Designed and built ClueBot, a very successful heuristics-based anti-vandalism bot for Wikipedia
 - Designed and built ClueBot III, a discussion archival bot used by over 12,000 discussion pages on Wikipedia
 - Co-created ClueBot NG, Wikipedia's most successful anti-vandalism bot using machine learning and neural networks
 - Submitted patches to MediaWiki for bugs and features
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Administrator

Wikimedia Foundation

📅 July 2007 – Current

- Reviewed and approved automated tooling on Wikipedia as a member of the Bot Approvals Group
 - Participated in the rewrite of Wikipedia's Bot Policy
 - Scanned and evaluated reports of open proxies and other abusive clients as a clerk of the Open Proxy Noticeboard
 - Participated in the creation of the Rollbacker user group
 - Authored and maintained Edit Filter rules to prevent bad-faith edits to Wikipedia
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Software

Legion

📅 March 2012 – May 2019

- Designed and implemented several dozen plugins to the Minecraft server, Bukkit
 - Made modifications to the Minecraft server, requiring reverse engineering
 - Implemented multi-server coordination and communication
 - Implemented robust user authorization system
 - Designed and implemented mini-games
 - Found and patched security vulnerabilities in the Minecraft server
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Co-founder

ClueNet

📅 2005 – 2011

- Implemented Kerberos and LDAP for user authentication and authorization
- Architected and operated a fully-featured mail server using Courier, Maildrop, and SpamAssassin
- Operated an IRC network with various services and bots
- Designed and authored custom IRC services suite
- Managed and moderated the IRC chat rooms
- Dealt with spam, bots, and attacks
- Mediated disagreements between members