

Mark Christopher West

Infrastructure Engineer · Kubernetes deployments & rollouts · Multi-cloud routing & resilience · Go / Python

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SUMMARY

Infrastructure engineer with 15+ years deploying, routing and keeping distributed platforms healthy across clouds. Before the field I was the customer: at Creative Artists Agency I built and shipped Go and Python services onto Kubernetes across AWS and GCP and ran a Consul service mesh spanning AWS, GCP and VMware; at Dell EMC I wrote Go services for OpenShift and a Python data-protection extension for OpenStack. Since 2021 I have been the deployment and escalation engineer for HashiCorp's and Wiz's largest accounts: production rollouts, cross-datacenter replication and DR topologies, and "why is this cluster unhappy" calls on Vault, Consul, Nomad and Kubernetes in Fortune 100 estates. Still hands-on daily on a mixed ARM64/x86-64 kubeadm cluster: Cilium BGP and Gateway API routing, GitOps rollouts, and the observability to see what broke.

RELEVANT EXPERIENCE FOR INFERENCE DEPLOYMENT

- **Deployment pipelines and rollouts** — GitOps (Flux) and Helm rollouts of Cilium, cert-manager and GitLab with rollout failures root-caused; a phased node-upgrade operator with SSH retry and reboot detection; Jenkins and GitLab CI (SAST / DAST) pipelines; a series of Terraform modules I developed as field SME cut typical Wiz onboarding for Globals & Majors from 16 weeks to 4.
- **Request routing, load balancing, traffic management** — Cilium BGP Control Plane v2 peering, LB-IPAM address pools and Gateway API HTTPRoutes (Kubernetes API served behind a Cilium Gateway); Consul service mesh spanning AWS, GCP and VMware; Boundary multi-hop PKI worker architectures.
- **Multi-cloud and cross-datacenter resilience** — Vault Enterprise disaster-recovery and performance-replication topologies for regulated customers; platforms deployed across AWS, GCP, Azure and Kubernetes; Consul → Raft and ZooKeeper → Raft storage migrations for Vault.
- **Heterogeneous fleet** — Mixed ARM64 (Raspberry Pi 5) / x86-64 (NUC) cluster; root-caused ARM64/amd64 scheduling failures (jemalloc page size) and per-architecture placement.
- **Observability-driven tuning** — Prometheus / Loki / Grafana pipelines fed by Terraform-emitted metrics; Hubble flow observability; Grafana + Loki packaging (grafana2go).
- **Languages** — Go (production services at CAA, Dell EMC and LoginID; a Vault / OpenBao secrets-engine plugin), Python (Dell EMC OpenStack extension, CAA services, metrics scraper), HCL, Bash.

SKILLS

Kubernetes & networking: kubeadm, CRI-O, Cilium (BGP control plane, LB-IPAM, Gateway API, Hubble), Flux GitOps, Helm, cert-manager, External Secrets, OpenShift, AKS; managed Kubernetes across AWS / GCP / Azure

Cloud & HashiCorp: AWS, GCP, Azure, OpenStack, VMware · Vault (Enterprise replication / DR, KMIP, PKI, plugin development), Consul (service mesh), Nomad, Terraform (modules, provider generation, CDKTF), Boundary

Observability & delivery: Prometheus, Grafana, Loki / Promtail, Hubble · GitLab CI (SAST / DAST), Jenkins, Ansible + Molecule, Packer, Vagrant

Languages & data: Go, Python, HCL, Bash, Rego, TypeScript (CDKTF) · PostgreSQL, CockroachDB, Redis, MinIO / S3

Security: Wiz, OPA / Rego policy-as-code, PKI / mTLS, SSO / OIDC / LDAP / Okta, SIEM integration

SELECTED ENGINEERING WORK

k8s-vanilla — cluster operations, routing and rollouts · github.com/markchristopherwest/k8s-vanilla

- Raspberry Pi 5 + NUC kubeadm cluster: CRI-O, Cilium CNI with BGP peering to the home gateway, LB-IPAM pools, Gateway API HTTPRoutes, Flux GitOps, cert-manager (Let's Encrypt DNS-01 wildcard, Hubble mTLS), TLS 1.3 on etcd, self-hosted GitLab 19 on external PostgreSQL / Redis / MinIO.
- Wrote the bash operator (Linux and macOS bash 3.2) that upgrades node OSes in phases with per-run reports. Root-caused a Cilium 1.20 DaemonSet rollout stalled by a dead CRI-O socket, Helm server-side-apply ownership conflicts on cert-manager CRDs, a CRI-O upgrade repository move, and a firmware-update loop driven by GitHub API rate limits.

openbao-plugin-secrets-graphql — Go · github.com/markchristopherwest

- Vault / OpenBao secrets engine for GraphQL APIs: credential lifecycle, GraphQL-over-HTTP protocol implementation, OpenBao SDK migration, generated Terraform provider, test suite; companion graphql-server-go and graphql-client-go.

Terraform → Prometheus / Loki / Grafana — observability from provider data

- Modules that query a security platform's Terraform provider on a schedule (CrowdStrike Falcon, Prisma Cloud), emit JSON reports, and feed Promtail / Loki / Prometheus and Grafana dashboards to track post-sales consumption and churn inside a customer tenant; Python scraper, docker-compose packaging.

Ontele — serving pipeline in Go · github.com/ontele/ontele

- Open-source (Apache-2.0) media server: HLS transcoding pipeline, HDHomeRun DVR with commercial skip, embedded web UI, zero-dependency Go.

HashiCorp reference implementations · github.com/markchristopherwest

- vault-operator-migrate (Consul → Raft, ZooKeeper → Raft), vault-k8s-external-secrets, vault-replication, vault-ldap, vault-gitlab-jwt, vault-mfa-pingid, vault-puppet (PKI), boundary-session-recording, terraform-ckx, terraform-tls-automagically, cdktf-demo, grafana2go.

EXPERIENCE

Wiz → Google Cloud · Irvine, CA Mar 2025 – Present

Senior Technical Solutions Consultant, Google Cloud (Wiz acquired by Google Cloud, March 2026) Jun 2026 – Present

Senior Advanced Delivery Architect, Wiz Mar 2025 – May 2026

- Deployment lead for a multi-cloud security platform: technical onboarding and rollout of Wiz for Globals & Majors accounts, mostly Fortune 100, across AWS, GCP, Azure and Kubernetes estates — cloud connectors, workload and IaC scanning, SSO / IdP, SIEM and ticketing integrations, CI/CD and policy-as-code.
- Cut typical onboarding from 16 weeks to 4 with a series of Terraform modules I developed as the field SME for Terraform / IaC and policy; hundreds of customers onboarded across very large estates.
- Wrote the metrics modules that track consumption across onboarded estates and flag churn risk.
- Led production migrations of Globals & Majors accounts onto the platform.
- Field-to-product loop: escalations, feature requests and reference architectures back to product engineering.

HashiCorp · San Francisco, CA Oct 2021 – Feb 2025

Senior Consultant May 2023 – Feb 2025

- Pre- and post-sales architecture for HashiCorp's largest Global and Enterprise accounts: designed, validated and troubleshot production deployments of Vault, Consul, Nomad, Terraform and Boundary — hundreds of architecture reviews across thousands of accounts including 70 of the Fortune 100; ~\$2B ARR influenced.
- Cross-datacenter resilience: Vault Enterprise disaster-recovery and performance-replication topologies and Advanced Data Protection (KMIP) for regulated customers.
- Access paths and session routing: Boundary OIDC integration, session recording, multi-hop PKI worker architectures.
- Production escalation point between customer platform / security teams and HashiCorp product engineering for Vault, Consul and Nomad clusters.
- Reference implementations published in this period: vault-replication, boundary-session-recording, vault-ldap (dynamic secrets), vault-mfa-pingid, vault-gitlab-jwt, vault-groovy (Jenkins), vault-puppet (PKI), vault-agent.

Consultant Oct 2021 – May 2023

- Strategic architectural guidance for cloud and enterprise accounts across Vault, Consul, Nomad, Terraform and Boundary: pre- and post-sales design, validation, and "why is this cluster unhappy" troubleshooting on production clusters.
- Vault storage and platform migrations: Consul → Raft and ZooKeeper → Raft (vault operator migrate); Vault on Kubernetes with External Secrets; Consul env / template integration.
- Reference implementations published in this period: Terraform CDK demo, Packer multi-cloud (AWS, GCP, Azure) and vSphere nested-ESXi builds, KMIP advanced curriculum.

LoginID — Site Reliability Engineer · San Mateo, CA Jun 2021 – Oct 2021

- Built and deployed Go services on AWS EC2 and AKS; stood up Kubernetes the hard way on EC2; GitLab CI with SAST / DAST; CockroachDB.

CERTIFICATIONS & EDUCATION

HashiCorp Terraform Associate · HashiCorp Vault Associate · AWS Cloud Practitioner · GitHub Foundations · Wiz Tech Essentials · Wiz Threat Detection & Response

University of San Francisco — Psychology, undergraduate studies