TRAVIS SANDMANN

Senior Network Automation Engineer | Platform, CI/CD & Infrastructure

Seeking remote or local roles · Oklahoma City, OK (Central Time) · 405-406-8734 · travissandmann@gmail.com
linkedin.com/in/travis-sandmann-507b87b9 · travis.s4ndmod.com · github.com/S4NDM4NN

SUMMARY

Senior network automation engineer with 12+ years in network engineering and 15+ in telecommunications, now working across platform engineering, CI/CD, and GitOps. Builds Python and Go automation, Kubernetes platforms, and delivery pipelines for large service-provider networks, including 1,000+ zero-touch device turn-ups, 700+ router software upgrades, and an engineering platform covering 70,000+ network elements across 32 markets.

Also designs and runs a self-hosted multi-cluster GitOps environment with its own CI/CD pipelines, and uses AI coding agents with guardrails. Looking for a remote or Oklahoma City-area role combining deep infrastructure experience with automation and software.

SKILLS

- **Automation & software:** Python, Go, C, Vue, FastAPI, Flask, Ansible, AWX, Jinja, REST APIs, NetBox, Nautobot, dynamic inventory, zero-touch provisioning (ZTP)
- **CI/CD & GitOps:** CI/CD pipelines, Jenkins, Gitea Actions, ArgoCD, Kargo, Renovate, Kustomize, PR preview environments, container image build and release pipelines, Infrastructure as Code
- **Platform & infrastructure:** Linux, Kubernetes (k3s), Docker, Containerlab, Traefik, Redis, MongoDB, Kafka, S3-compatible object storage, backup and disaster recovery
- **Observability & security:** Prometheus, Grafana, streaming telemetry, sops/age secrets, cert-manager and TLS, SSO, WireGuard, TACACS+, RBAC
- **Networking:** BGP/iBGP, OSPF, IS-IS, MPLS/LDP, Segment Routing, BFD, RSVP-TE, IPv4/IPv6, ECMP, Layer 2/Layer 3 services
- **Network platforms:** Cisco IOS XR, IOS, Nexus; Juniper MX, QFX; Arista EOS; Nokia SR OS
- **AI-assisted engineering:** Claude Code, Codex CLI, OpenCode, agentic development workflows, controlled CLI/API integrations

EXPERIENCE

Senior IP Solutions Design Engineer

Cox Communications · Apr 2024 – Present · Platform Engineering / DevOps / Network Automation

- Develop and support an internal network engineering platform aggregating topology, inventory, telemetry, service, and device data across 70,000+ network elements in 32 markets, used by 1,000+ employees.
- Build Python and Go microservices, the Vue-based CB-NEAT frontend, Kubernetes manifests, and internal dashboards; troubleshoot workloads, ingress, TLS/certificate issues, and application failures across multiple Kubernetes environments.
- Use NetBox as the source of truth feeding Nautobot for network inventory and device data.
- Run CI/CD for the team's services using Git-based infrastructure as code: Jenkins CI, Jenkins or ArgoCD deployments, and Prometheus/Grafana monitoring; share production support ownership for what the team builds.
- Built a Go-based platform on Containerlab for creating reproducible, production-derived network labs for testing, troubleshooting, and change validation.
- Built a device polling proof of concept that replaced staggered cron jobs with a continuously running scheduler and added Redis caching for LLDP-neighbor correlation and newly discovered device processing.
- Built lifecycle and decommission dashboards tracking device counts with 7-, 30-, and 90-day trends, and correlating active services, ports, and SDP bindings to remaining equipment dependencies.
- Operate Linux-based engineering infrastructure and Docker-hosted tooling, including DHCP/HTTP/TFTP provisioning services, TACACS+ authentication, and vendor test-automation platforms; built a Python TACACS+ management microservice and web UI for lab access.
- Develop Jinja templates and Ansible playbooks for provisioning, configuration changes, and validation workflows.
- Integrate AI coding agents into daily engineering for development, review, testing, debugging, documentation, and network-data analysis; built controlled tooling that exposes structured platform context while blocking direct production-device access.

Senior Network Engineer, Network Automation Tiger Team

Cox Communications · Oct 2019 – Apr 2024

- Technical lead on a network automation tiger team chartered to stand up ZTP, later expanding into provisioning, validation, upgrade, and engineering automation.
- Developed a multi-vendor Python ZTP bootstrap used to turn up 1,000+ devices: devices fetched it over BOOTP/DHCP and HTTP, detected their platform and model, selected model-specific software from JSON definitions, and ran vendor-specific upgrade workflows across Juniper, Cisco Nexus/ASR, and Arista EOS.

- Built and deployed a Kubernetes-hosted Python microservice that used device serial numbers to query Blue Planet inventory, resolve device TIDs, and call a configuration-generation API for the correct production config during turn-up.
- Built a Python dynamic-inventory plugin for Ansible that synchronized production routers from an internal discovery API and became the shared inventory for pre/post validation, upgrades, quarterly technical-bulletin work, and other automation.
- Built nationwide software-upgrade automation for 700+ IOS XR routers plus Cisco Nexus, Arista EOS, and Juniper platforms, with staged installs and reloads, routing and service verification, traffic validation, and failure gates, raising safe concurrency from 2–4 devices to 10–20.
- Replaced manual Segment Routing deployments with staged Ansible/AWX workflows that validated the routing underlay before traffic activation; automated streaming-telemetry deployment and per-device certificate rotation across IOS XR, Nexus, Juniper QFX, and Arista EOS using the Lemur API.
- Led weekly progress reviews, divided quarterly technical-bulletin work across engineers, integrated contributions into shared Ansible playbooks, and mentored network engineers new to Python, Ansible, and software-development practices.

Network Operations Engineer / Field Engineering Operations Engineer

Cox Communications · Apr 2014 – Oct 2019

- Performed production network engineering across Cox's Central Region: seven markets and 80+ hub sites on Cisco, Juniper, Arista, and Nokia infrastructure.
- Owned operational execution of regional modernization: migrated hub sites from legacy metro-core connectivity to direct backbone attachment, retired a separate OSPF-based multicast transport topology, and upgraded core routing from Cisco 7600-series routers to ASR 9000.
- Planned and led production maintenance windows, authored MOPs for facility technicians, implemented router configuration changes, coordinated change bridges across engineering and field teams, and validated network and service health.
- Handled new hub-router turn-ups, capacity augments, BGP and route-policy changes, MPLS changes, and Nokia SDP provisioning; provided escalation-level troubleshooting for customer-impacting Layer 2 and Layer 3 issues.
- Managed hardware failures, RMAs, vendor escalations, and production incidents with long-term on-call and escalation responsibility.

Technical Support Lead, then Field Service Assurance

Cox Communications · 2010 – 2014

- Started in inbound technical support and moved up to technical support lead, then went into the field as a service assurance technician.
- Gained hands-on experience with equipment turn-ups and troubleshooting, including racking and cabling, fiber patching, and work in data centers and hub sites.

INDEPENDENT PROJECTS

Platform & Software Engineer, Staples Farm

Farm and community projects · 2024 – Present · Self-hosted, in production

- Designed and operate a three-cluster Kubernetes (k3s) environment where ArgoCD is the source of truth for everything deployed, with a WireGuard mesh between nodes, Prometheus/Grafana monitoring, SSO, S3-compatible object storage, Ansible-based node bootstrap, sops/age-encrypted secrets in Git, and documented backup and disaster-recovery procedures.
- Built CI/CD pipelines for five apps: Gitea Actions builds a container image on every push, ArgoCD pull-request generators deploy each PR as an ephemeral preview environment (a bot posts the URL and the environment is removed when the PR closes), and Kargo promotes release images from dev to prod, with Renovate opening dependency-update PRs.
- Built the foundation of a FastAPI and MongoDB farm management app (data model, role-based access control, API tokens, CLI, test suite), since grown together with my farm partner, whom I mentored as a new developer. Includes litter-comparison analytics that compare growth, daily gain, and mortality across litters to support breeding decisions.
- Built the farm's public Flask website and storefront client, a thin server-rendered client of the app's key-authenticated API (staplesfarmok.com).
- Develop a Return to Castle Wolfenstein mod in C with a WebAssembly client that runs in the browser (s4ndmod.com), and a Go reimplementation of the Quake 3 master server behind a public RTCW/ET server list (list.s4ndmod.com).

RECOGNITION, EDUCATION & CERTIFICATION

- **Recognition:** Cox Gold Standard Award, 2022, for network automation contributions
- **Education:** Associate Degree, Liberal Studies, Rose State College
- **Certification:** Cisco Certified Network Associate (CCNA), active