

TRAVIS SANDMANN

Senior Network Automation Engineer | Platform, DevOps & Infrastructure

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SUMMARY

Senior network automation engineer with 12+ years of network engineering experience and 15+ years in telecommunications. Background spans service-provider networking, Python/Go development, Ansible/AWX, Linux, Kubernetes, Docker, CI/CD, observability, and AI-assisted engineering. Built automation for 1,000+ zero-touch device turnups, 700+ router software upgrades, and engineering platforms supporting 70,000+ network elements across 32 markets nationwide.

SKILLS

Network Automation: Python, Go, Ansible, AWX, Jinja, REST APIs, dynamic inventory, zero-touch provisioning (ZTP)

Platform / DevOps: Linux, Kubernetes, Docker, Git, Jenkins, ArgoCD, Infrastructure as Code, Prometheus, Grafana, Redis, MongoDB

Networking: BGP/iBGP, OSPF, IS-IS, MPLS/LDP, Segment Routing, BFD, RSVP-TE, IPv4/IPv6, ECMP, Layer 2/Layer 3 services

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 spanning 32 markets nationwide and used by 1,000+ employees.
- Build Python and Go microservices, Kubernetes manifests, and internal dashboards; troubleshoot workloads, ingress, TLS/certificate issues, and application failures across multiple Kubernetes environments.
- Operate Linux-based engineering infrastructure and Docker-hosted tooling, including DHCP/HTTP/TFTP provisioning services, TACACS+ authentication, internal dashboards, 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.
- Built a device polling proof of concept that replaced staggered cron jobs with a continuously running scheduler and introduced Redis caching for LLDP-neighbor correlation and newly discovered device processing.
- Built lifecycle and decommission dashboards that track device counts and 7-, 30-, and 90-day trends and correlate active services, ports, and SDP bindings to remaining equipment dependencies.
- Built a Go-based platform for creating reproducible, production-derived network labs for testing, troubleshooting, and change validation.
- Use Git-based infrastructure-as-code workflows with Jenkins CI, Jenkins or ArgoCD deployments, and Prometheus/Grafana monitoring; share production support ownership for the services the team builds.
- Integrate AI coding agents into daily engineering for development, code review, testing, debugging, documentation, and network-data analysis; built controlled tooling that exposes structured platform context while blocking direct production-device access.

Senior Engineer, Network Automation Tiger Team

Cox Communications | Oct 2019 - Apr 2024

- Served as a senior technical contributor and coordinator on a network automation tiger team originally chartered to stand up ZTP, later expanding into broader provisioning, validation, upgrade, and engineering automation.
- Developed a multi-vendor Python ZTP bootstrap used to turn up 1,000+ network devices; devices retrieved the bootstrap via BOOTP/DHCP and HTTP, detected platform/model, selected model-specific software from JSON definitions, and executed 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 separate configuration-generation API to retrieve the correct production configuration 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 source for pre/post validation, upgrades, quarterly technical-bulletin work, and other automation workflows.

- Built nationwide software-upgrade automation for 700+ IOS XR routers plus Cisco Nexus, Arista EOS, and Juniper platforms; automated staged installs/reloads, routing and service verification, interface/traffic validation, and failure gates, increasing safe concurrency from 2-4 devices to 10-20.
- Replaced manual Segment Routing deployment processes 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 who were new to Python 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, spanning seven markets and 80+ hub sites across Cisco, Juniper, Arista, and Nokia routing and switching infrastructure.
- Owned operational execution of major regional modernization work, including migrating hub sites from legacy metro-core connectivity to direct backbone attachment, retiring a separate OSPF-based multicast transport topology, and upgrading core routing platforms from Cisco 7600-series routers to ASR 9000 infrastructure.
- Planned and led production maintenance windows, authored MOPs for facility technicians, implemented router configuration changes, directed physical equipment and cabling moves, coordinated change bridges across engineering and field teams, and validated network and service health.
- Performed day-to-day production engineering including new hub-router turnups, capacity augments, BGP and route-policy changes, MPLS-related changes, and Nokia SDP provisioning between PE and P infrastructure.
- Supported market Layer 3 internet termination routers and provided escalation-level troubleshooting for customer-impacting Layer 2 and Layer 3 issues, including BGP routing problems and Ethernet-service faults.
- Handled hardware failures, RMAs, vendor escalations, and production incidents while carrying long-term on-call and escalation responsibility.

Earlier Cox Roles

Cox Communications | 2010 - 2014 | *Service Assurance Technician III* | *NSC Technical Lead* | *Cox Business Tier II / NSC Support Specialist*

- Progressed through inbound technical support, technical-lead, and service-assurance roles before moving into production network engineering.
- Performed hands-on customer-premises and network infrastructure installation, turn-up, and troubleshooting, including racking and cabling equipment, fiber patching, and work within regional data centers and hub sites.

RECOGNITION

Cox Gold Standard Award recipient, 2022 - recognized for network automation contributions.

EDUCATION

Associate Degree, Liberal Studies | Rose State College

CERTIFICATIONS

Cisco Certified Network Associate (CCNA) - Active