Christopher Davies

Network Automation Engineer | Python, AWX, Ansible & Cisco Infrastructure

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Professional Profile

Network automation engineer with 10+ years of enterprise Cisco networking experience and hands-on production automation using Python, RHEL and AWX. Designed zero-touch provisioning and repeatable configuration workflows using site-aware logic, device-based mapping and fallback handling. Strong understanding of the infrastructure being automated across routing, switching, wireless and SD-WAN, supported by NetBox experience across source-of-truth, IPAM and DCIM use cases, plus independent engineering work covering Jinja2 configuration generation, structured data, validation, rollback and automation safety. Particularly effective at turning manual network processes into documented, maintainable and operationally reliable workflows.

Core Expertise

Production network automation	Python scripting	RHEL & AWX
Zero-touch provisioning	NetBox source of truth / IPAM	Jinja2 configuration templates
Cisco routing & switching	Cisco SD-WAN / vManage	Enterprise wireless
Fallback & exception handling	Documented workflows	Monitoring & optimisation

Selected Network Automation Project

Founder and Automation Engineer (Pre-launch)

Nautomation Prime | *Independent project | nautomationprime.io | 2026 - Present*

Building a pre-launch network automation practice and technical learning platform focused on transparent, maintainable and production-grade Cisco automation. The project is not yet trading.

- Developing practical reference material and implementations covering Python, Jinja2 configuration templates, YAML and JSON data modelling, validation, Nornir, PyATS and testing.
- Designing patterns for configuration generation, pre-flight checks, rollback, audit records, idempotency, credential handling, source-of-truth trust and safe failure.
- Creating documented workflows that help network teams move from manual processes and fragile scripts towards repeatable, team-owned automation.

Professional Experience

Network Operations Senior Analyst

Müller UK & Ireland | *Remote / UK sites | 2020 - Present*

Manage, maintain and optimise network infrastructure across UK offices and dairy sites, supporting resilient connectivity and operational continuity. Monitor performance and availability with SolarWinds Orion, Cisco Catalyst Center and Cisco SD-WAN vManage/Analytics, and provide on-site diagnosis, equipment replacement and remediation.

- Designed and developed production Python automation on RHEL and AWX, including a zero-touch provisioning workflow using site-aware logic, serial-number-based configuration mapping and fallback templates.
- Designed and delivered upgrade plans for multiple UK dairy sites, aligning infrastructure with evolving standards and improving network readiness.
- Delivered site-wide wireless upgrades for end-of-life environments, using Ekahau AI Pro and Sidekick to redesign and validate coverage, capacity and performance.
- Support business-critical network incidents, root cause investigation, planned change and ongoing service optimisation across Cisco LAN, WAN, wireless and SD-WAN environments.

System Infrastructure Specialist / Senior IT Support

Involve Visual Collaboration | *Remote / customer sites | 2018 - 2020*

Installed, configured and supported networking and collaboration technologies across customer environments. Delivered proactive 3rd line support, customer-site troubleshooting and administration of the main office network.

- Developed Python automation for large-scale switch configuration during a nationwide network upgrade across UK courts, prisons and probation offices, improving deployment speed and consistency.
- Improved video-conferencing performance and capacity across justice-sector environments to support more reliable and scalable services.
- Designed and implemented a solution for NHS environments integrating Cisco networking, Dell virtualisation hosts and Pexip across the HSCN network.

Network & Collaboration Engineer

Autonet Insurance | *Burslem, Stoke-on-Trent | 2016 - 2018*

Managed and supported the inter-site MPLS WAN and wider network estate across multiple business locations within ITIL- and PRINCE2-aligned practices.

- Led migration from an on-premises Mitel telephony platform to a cloud-based Cisco telephony solution.
- Delivered new-site integrations from design through deployment, covering physical and logical networking, site connectivity and SD-WAN/MPLS hybrid infrastructure.

2nd / 3rd Line IT Support and Network Administrator

Autonet Insurance | *Burslem, Stoke-on-Trent | 2015 - 2016*

Provided 2nd and 3rd line infrastructure support across all sites, coordinating with internal teams, end users and third-party suppliers. Supported an estate spanning Cisco, HP ProCurve and WatchGuard technologies.

- Introduced automation and more efficient administration processes to reduce manual effort and improve operational scalability.
- Maintained service availability through proactive monitoring, log analysis, patching, performance reporting and system tuning.
- Contributed to network, telecommunications, security, disaster-recovery and business-continuity improvements.

Earlier experience: Network Administrator, Redeem Ltd / Envirofone.com.

Technical Skills

Networking: Cisco routing and switching, LAN/WAN, VLANs, IPv4/IPv6, wireless LAN controllers, Cisco SD-WAN/Viptela, Meraki, ASA, WAN connectivity and network security.

Automation & Platforms: Python, AWX, Red Hat Enterprise Linux, NetBox, Jinja2, YAML, JSON, Nornir, PyATS, Cisco Catalyst Center, Cisco vManage, SolarWinds Orion and ThousandEyes.

Infrastructure: Windows Server, Microsoft 365, Exchange, IIS, SQL Server, Hyper-V, Failover Clustering, System Center, VMware ESX/ESXi, vSphere, vCenter, AWS and Linux/Unix.

Collaboration: Cisco Unified Communications, CUBE, Call Manager Express, Unity, Mitel MiVoice, MiCollab, MiCC and related contact-centre technologies.

Training and Professional Development

- In-depth CCNP Enterprise (ENCOR), CCNP Automation and CCNP Collaboration-level training and self-study. These certifications are not currently held.
- Currently preparing towards CCNP Enterprise and CCNP Automation certification, with a goal of completing both within the next 12 months.
- Advanced routing and switching, network automation, design, collaboration, CUBE, SD-WAN and Catalyst Center study through Cisco Press, Cisco-led learning, CBT Nuggets, technical webinars and practical lab work.