

CHIRAPHON KRAIYA

Network Engineer | Network Automation & ISP Infrastructure

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PROFESSIONAL SUMMARY

Network Engineer who also ships production software: 7+ years running ISP-scale, multi-vendor infrastructure (Cisco IOS-XE/XR, Huawei VRP, FortiOS) under strict SLA requirements — and the Python/FastAPI engineer who automated it. Built the automation platform (FastAPI, Netmiko, Jinja2, Docker) that cut circuit provisioning time by 70% and manual operations by 65%, without sacrificing the operational safety and rollback discipline enterprise networks demand.

TECHNICAL SKILLS

Network Engineering & Protocols (Core): Cisco (IOS-XE/XR), Huawei (VRP), FortiOS / NGFW, L2/L3 Routing & Switching, BGP, OSPF, MPLS, L2 EVPN, L3VPN, PE/CE Architecture, QoS & Traffic Shaping, DWDM & SDH/TDM, OLT/ONU GPON, ISP Circuit Delivery

Network Automation & NetDevOps: Python 3, FastAPI, Netmiko, Paramiko, Jinja2 Sandboxing, Pydantic Data Validation, Stateless API Design, RESTful APIs & JSON, Regex CLI Parsing

Infrastructure & Platforms: Linux (Ubuntu Server), Docker & Docker Compose, Nginx Reverse Proxy, Git / GitOps Workflow, CI/CD (GitLab / GitHub Actions)

Monitoring & Network Operations: Grafana API, PRTG Network Monitor, n8n Orchestration, SAP Backend Integration, Maintenance Windows & Change Control, Strict SLA Management, AutoCAD

Security & Identity: Microsoft Entra ID (Azure AD SSO / MSAL), OAuth2 / OIDC, Input Sanitization, API Gateway Security

PROFESSIONAL EXPERIENCE

Network Engineer (Provisioning)

Symphony Communication PCL.

Location: Bangkok, Thailand | Dates: August 2022 – Present

- **ISP Enterprise Provisioning & Delivery:** Owned end-to-end network provisioning for enterprise circuits (PE/CE, L2/L3, MPLS, DWDM), reliably delivering ~30 circuits per week in high-scale ISP production environments.
- **Network Automation Platform:** Designed and developed a Python-based configuration automation engine (FastAPI, Jinja2, SAP API Integration), reducing circuit provisioning turnaround time by 70% and eliminating manual calculation errors.
- **NetOps API & ChatOps Orchestration:** Built a production-grade Network Operations API using FastAPI and Netmiko integrated with n8n and Line Messenger, automating port status diagnostics and bandwidth

adjustments, cutting manual repetitive tasks by 65%.

- **Production Safety & Zero-Impact Deployment:** Implemented dry-run validation mechanisms and non-destructive deployment workflows for multi-vendor configuration pushes, designed to prevent unintended service disruptions during live changes.
- **L2/L3 Incident Escalation & SLA:** Provided escalation support for complex ISP network incidents, restoring mission-critical customer circuits within 3-hour MTTR targets and maintaining 99.95% SLA compliance.
- **Change Management & Maintenance:** Executed scheduled maintenance window firmware upgrades and security hardening on multi-vendor enterprise routers, switches, and Next-Generation Firewalls (NGFW), adhering strictly to change control and rollback protocols.
- **Proactive Network Monitoring:** Leveraged Grafana API and PRTG Network Monitor to establish real-time circuit health visibility and proactive fault detection.

Technical Engineer

Fecomm Systems Co., Ltd.

Location: Nonthaburi, Thailand | Dates: February 2021 – February 2022

- Designed and deployed structured cabling systems and physical network infrastructure for enterprise customer sites.
- Executed on-site troubleshooting, preventive maintenance, and hardware repair for network switching nodes.
- Produced precise AutoCAD-based as-built engineering drawings to guarantee documentation accuracy and project handover integrity.

RF Engineer (Contract)

NETWORK QUALITY MANAGEMENT SERVICE CO.,LTD.

Location: Bangkok, Thailand | Dates: March 2019 – December 2019

- Conducted RF field testing, drive tests, and parameter optimization (RRU and antenna alignment) for mobile carrier networks.
- Diagnosed and resolved 4G LTE cellular data throughput bottlenecks to improve network stability and KPI standards.

Network Engineer (Contract)

MFEC PCL.

Location: Bangkok, Thailand | Dates: June 2018 – January 2019

- Configured and verified multi-vendor enterprise routing and switching infrastructure for corporate post-sales deployments.
- Delivered Tier-2 technical support and on-site troubleshooting for customer WAN connectivity and VLAN segmentation issues.

Service Engineer

Planet Communications Asia PCL.

Location: Bangkok, Thailand | Dates: August 2016 – May 2018

- Installed, integrated, and maintained enterprise telecommunication and unified collaboration systems.
- Conducted preventive maintenance cycles and delivered technical handover training for enterprise clients.

KEY ENGINEERING PROJECTS

Network Configuration & CID Service Portal (FastAPI & NetDevOps)

- Designed and developed a Python-based automation gateway and dynamic template rendering engine that integrates SAP enterprise data with multi-vendor network devices (Enterprise Network OS / IOS-XE / VRP).
- Stateless GitOps Architecture: Built a decoupled gateway using FastAPI fetching device templates dynamically via GitLab/GitHub APIs with TTL caching.
- Data Integrity & Subnet Calculation: Implemented a robust Pydantic validation architecture to sanitize SAP payloads, calculate CIDR subnets/wildcard masks, and normalize port designations automatically.
- Security & Sandboxing: Secured dynamic configuration generation using Jinja2 SandboxedEnvironment (mitigating SSTI/RCE risks) and integrated Microsoft Azure AD SSO (OAuth2/OIDC) with audit logging.

Network Operations API & ChatOps Gateway

- Developed a production-grade Network Operations API using FastAPI and Netmiko, transforming complex multi-vendor CLI workflows into standardized RESTful endpoints.
- Engineered ChatOps workflows integrated with n8n and Line Messenger, enabling Level-1 support teams to execute port status checks and bandwidth adjustments safely.
- Implemented robust CLI parsing using Regex for multi-vendor devices, Python Context Managers for SSH connection teardown, and structured exception handling for production safety.

Bandwidth & QoS Automation with Grafana Sync

- Built automation systems for Bandwidth and QoS management on multi-vendor network devices in ISP environments, supporting split Domestic/International traffic policies.
- Implemented dry-run workflows and non-destructive logic to preserve existing QoS burst parameters (CBS/PBS) and prevent packet drops across network devices.
- Integrated automation with Grafana REST APIs to synchronize network policy changes with live monitoring dashboards.

EDUCATION & CERTIFICATIONS

Bachelor of Engineering (Electronics & Telecommunication)

Rajamangala University of Technology Thanyaburi

Location: Pathum Thani, Thailand | Graduated: 2016

Cisco Certified Network Associate (CCNA)

Cisco Systems | Valid until: August 01, 2027