

AARON STOVALL

SENIOR NETWORK SECURITY ENGINEER

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PROFESSIONAL SUMMARY

Senior Network Security Engineer with over 15 years of experience designing, securing, and automating enterprise-scale IT infrastructures. Deep specialization in firewall architecture across Palo Alto Panorama-managed HA environments—including PA-7080, PA-5400, PA-3000, and PA-1400 series platforms—as well as Check Point Multi-Domain and Fortinet, complemented by hands-on network engineering with Cisco, Meraki, and Aruba ecosystems. At TikTok, led global network security operations aligned with NIST, CIS, and CISA frameworks, deploying scalable automation through Python and Ansible. Experienced in managing large multi-domain firewall environments with thousands of HA-configured devices, leading M&A security integrations, and building CI/CD pipelines for secure network deployments. Additionally brings full-stack development capability in Rust, TypeScript, and Python, having independently designed and built enterprise network management platforms with modern web architectures. Bridges high-level security architecture with deep implementation skills to deliver solutions that align with business growth, compliance, and operational excellence.

KEY ACCOMPLISHMENTS

- **Global Firewall Operations Leadership** — Directed Palo Alto Panorama and Check Point Multi-Domain firewall environments across global operations, improving incident response time by 20% through centralized policy management and proactive automation.
- **Cross-Functional Architecture Expertise** — Developed broad expertise blending hands-on infrastructure engineering, automation tooling, and secure protocol design across global-scale environments. Known for bridging high-level architecture with deep implementation, with extensive real-world experience across the full networking stack.
- **DevOps & Automation at Scale** — Reduced manual operational tasks by 40% through Python and Ansible automation integrated into DevOps pipelines for consistent, secure provisioning.
- **Enterprise Platform Development** — Independently designed and built full-stack network management and security analysis platforms using Rust, TypeScript, and modern web frameworks, integrating vendor APIs for Palo Alto, Cisco, and Juniper ecosystems.
- **M&A Security Integration** — Led network security assessments for mergers, acquisitions, and divestitures, streamlining integrations through structured playbooks and reducing organizational risk.
- **Tier 3 Escalation Lead** — Led resolution of hundreds of complex Tier 3 support cases involving routing, switching, firewalls, and vendor hardware, coordinating across multiple stakeholders to drive issues to successful resolution.
- **Custom Tooling & Efficiency Gains** — Created custom security and network analysis tools adopted by adjacent teams, improving operational efficiency across security operations.

CORE COMPETENCIES

Security & Architecture: Security Architecture & Engineering, Zero Trust Frameworks, Firewall Architecture (Palo Alto, Check Point, Fortinet), WAF & IDS/IPS Deployment, VPN & Perimeter Security, Threat Modeling & Risk Assessment

Network Engineering: LAN/WAN Design & Deployment, Cisco Catalyst/Meraki/Aruba, Routing & Switching, Wireless Architecture, Network Segmentation, Tier 3 Troubleshooting

Automation & DevOps: Python, Ansible, CI/CD Pipeline Security, API Orchestration (REST), Infrastructure as Code, Ansible Tower/AWX

Development: Rust (Axum), TypeScript, Svelte/SvelteKit, Python (Flask, Django), Go, Full-Stack Web Development, SSH Protocol Engineering, CLI Tooling

PROFESSIONAL EXPERIENCE

Contract Network Engineer

Rady Children's Hospital • San Diego, CA • October 2025 – February 2026

- Served as a contract network engineer specializing in firewall request fulfillment, policy troubleshooting, and firewall analysis across the hospital's Palo Alto Panorama-managed HA environment, supporting PA-7080 and PA-5400 series firewalls.
- Developed custom automation tools leveraging the Palo Alto Networks API to streamline firewall operations, policy validation, and configuration analysis across the PA-7080 and PA-5400 platforms.
- Built solutions for Cisco Catalyst Center integration, utilizing both the platform API and direct SSH operations to automate network device management and configuration tasks.
- Performed in-depth firewall troubleshooting and traffic analysis to resolve complex connectivity and security policy issues in a healthcare environment with strict compliance requirements.

Independent Development & Consulting

Chula Vista, CA • November 2024 – October 2025

- Designed and developed a full-stack enterprise network management platform using Rust (Axum framework) for the backend and SvelteKit with TypeScript for the frontend, targeting unified control of multi-vendor network infrastructure.
- Built integrated modules for firewall policy analysis, overlap detection, and rule optimization across Palo Alto environments, including automated import and comparison of large-scale rulesets.
- Developed network diagnostic and traffic analysis tools with real-time data visualization, enabling detailed inspection of application-level traffic patterns and security posture assessment.
- Engineered API integrations for Palo Alto Panorama, Cisco Catalyst Center, Cisco ISE, and Juniper Mist platforms, providing centralized visibility and control across disparate vendor ecosystems.
- Implemented SSH client functionality and certificate management systems for direct device interaction, supporting both automated and interactive network operations.
- Created enterprise authentication frameworks supporting multiple credential types, role-based access, and secure session management for multi-user deployment scenarios.

Sr. Business Operations Protection Specialist, Network Security

TikTok (ByteDance) • Los Angeles, CA / Remote • June 2022 – November 2024

- Directed daily operations for a global Palo Alto Panorama-managed HA environment with PA-3000 and PA-1400 series firewalls, alongside a Cisco Meraki infrastructure of routers, switches, and wireless access points; improved resolution times by 20% via proactive automation and live collaboration with engineering teams.

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- Engineered multi-cloud network security architectures across Azure and Oracle Cloud, improving security posture by 30% through automation-driven deployments and advanced threat modeling using Python and Go.
- Built a custom Ansible Tower environment to automate firewall and network configurations, cutting manual effort by 40% and enabling consistent, secure provisioning at scale.
- Authored internal compliance tooling and led regulatory audits, achieving 100% adherence to frameworks including NIST, CISA, and ISO 27001, while reducing audit prep overhead through automation.
- Developed and deployed biometric 2FA solutions using TruU and Prisma APIs, improving user experience and reducing security incidents by 15% through seamless biometric verification workflows.
- Led Tier 3 troubleshooting efforts for complex issues involving network infrastructure, wireless connectivity, firewall policies, and VPN services, often resolving escalations that impacted production services.
- Participated in 24/7 on-call operations, ensuring rapid incident response and maintaining uptime for critical infrastructure across global environments.
- Spearheaded multiple projects and authored comprehensive documentation for internal teams, streamlining deployment and support processes for firewalls, BYOD networks, and VPN solutions.

Network Security Engineer III

TE Connectivity • San Diego, CA / Remote + Travel • March 2021 – June 2022

- Managed global firewall operations across a Check Point Multi-Domain Management System (MDMS) with thousands of HA-configured firewalls; led site security integrations and posture reviews as part of M&A activities.
- Developed Python applications to automate firewall imaging, policy updates, health checks, and log analysis for a 6,000-device refresh project, significantly accelerating deployment timelines.
- Built custom tooling for policy validation, scanning firewall configurations in batch to detect violations and untracked access patterns, remediating through targeted rule updates.
- Engineered and automated RBAC frameworks, standardizing access controls across infrastructure teams; integrated SAML/OAuth authentication and increased adherence to identity policies by 20%.

Information Security Engineer III

TE Connectivity • San Diego, CA / Remote + Travel • January 2019 – March 2021

- Partnered with SOC analysts to enhance detection workflows using Python-based log parsing and anomaly flagging, improving incident triage response times. Served as lead point of contact for major incidents on the west coast team for 24/7 on-call operations.
- Collaborated across network and security teams to align firewall operations with broader organizational objectives. Improved project delivery timelines by 15% through Python-based automation of configuration updates and streamlined policy management.
- Reduced security incident rates by 10% via QA validation, HA failover testing, and automated remediation during infrastructure changes.
- Conducted and participated in security reviews, evaluations, and risk assessments, assisting in the development and implementation of security policies and procedures.

IT Operations Analyst III

TE Connectivity • Oceanside/San Diego, CA + Travel • November 2011 – January 2019

- Oversaw multi-site IT operations for West Coast facilities, coordinating upgrades, greenfield deployments, and on-site security integrations aligned with corporate standards. On-site work accounted for 35–45% of responsibilities.
- Developed and implemented comprehensive vulnerability management programs, reducing security risks by 20% through proactive assessment, remediation planning, and automated reporting.
- Established team standards for technical and operational management of security platforms. Led DevOps initiatives and collaborated with cross-functional teams to standardize infrastructure security across new and acquired sites.
- Partnered with cross-functional teams (facilities, network, security) to ensure scalable, secure growth across enterprise operations through process automation and consistent policy enforcement.

Helpdesk Administrator

Deutsch Industrial Products • April 2010 – November 2011

- Provided helpdesk administration and network support, handling user support and system troubleshooting across the organization.

Network Administrator

Ramko Manufacturing • February 2009 – April 2010

- Managed network administration, user support, and multi-site infrastructure support.

EDUCATION

Bachelor of Science — Game Software Development

Westwood College, Upland, CA • 2005 – 2009

Specialized in modular architecture, engine design, and performance-optimized software engineering. Established a strong foundation in low-level systems programming.