

# AARON STOVALL

## SENIOR NETWORK SECURITY ENGINEER

aaronstovall.com • linkedin.com/in/aaron-stovall • github.com/gh0stinthemirr0r  
619-616-5121 • aaronstovall@pm.me • Chula Vista, CA

### 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.
- **Compliance & Zero Trust Leadership** — Achieved 100% audit adherence across NIST, CIS, CISA, and ISO 27001 frameworks. Championed Zero Trust Network Access (ZTNA) principles, embedding least-privilege enforcement and continuous verification into firewall policy, access control, and network segmentation strategies.

### 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.
- Developed the CNTRL Platform, a unified network management application leveraging the APIs of Palo Alto Panorama, Cisco ISE, Cisco Catalyst Center, and Juniper Mist, delivering over 70 features automating policy hygiene analysis, rule overlap detection, configuration compliance, traffic analysis, and operational workflows across the hospital's multi-vendor infrastructure.
- Managed IP address allocations, DNS records, and network object documentation within Infoblox IPAM, ensuring accurate device tracking and subnet management across the hospital's network infrastructure.

#### Independent Development & Consulting

Self-Employed • Chula Vista, CA • November 2024 – October 2025

- Designed and developed over a dozen enterprise-grade desktop applications using Rust (Tauri 2.0) and SvelteKit/TypeScript, purpose-built for network security engineering, firewall operations, and infrastructure automation.
- Built a unified Palo Alto firewall management platform (VERTEX) consolidating real-time telemetry monitoring, automated diagnostics across 115+ troubleshooting scenarios, policy authoring and hygiene analysis, blast radius assessment, upgrade orchestration, and a 21-tool integrated network operations suite.
- Developed a Cisco Catalyst Center operations platform (PRISM) with SSH terminal management, ISE 802.1X compliance analysis, configuration compliance checking, port health scoring, and confidence-based inactive port reclamation with full rollback capability.
- Engineered a post-quantum secure terminal system (GHOSTSHELL) implementing Open Quantum Safe (OQS) cryptography throughout the entire application stack, including Kyber key exchange, Dilithium signatures, quantum-safe TLS, and encrypted vault storage to ensure data integrity and forward-looking security.
- Created specialized diagnostic tools for Palo Alto GlobalProtect VPN troubleshooting (GP-MEDIC) and firewall incident analysis (PA-DIAG), automating 60+ diagnostic commands in parallel with statistical analysis, anomaly detection, and TAC-ready report generation.
- Built a wireless network security auditing platform (GHOSTWAVE) with RF spectrum analysis, rogue AP classification, WPA3 transition scoring, PCI compliance checking, and penetration test report generation with evidence collection.
- Developed enterprise SSH/RDP/serial terminal clients, a domain-specialized AI assistant trained on Palo Alto, Cisco, and Juniper documentation via hybrid RAG retrieval, and endpoint telemetry platforms with real-time hardware monitoring and fleet discovery.

#### Sr. Business Operations Protection Specialist, Network Security

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

# AARON STOVALL

## SENIOR NETWORK SECURITY ENGINEER

aaronstovall.com • linkedin.com/in/aaron-stovall • github.com/gh0stinthemirr0r  
619-616-5121 • aaronstovall@pm.me • Chula Vista, CA

- 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.
- 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.
- Provisioned and managed Palo Alto firewall and Panorama instances in Microsoft Azure, configuring virtual network security groups, peering, and policy sets to extend on-premises security architecture into cloud environments.
- 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.
- Deployed and managed ByteWAF, a proprietary ByteDance web application firewall, across Kubernetes-based infrastructure using Istio service mesh for traffic management and policy enforcement. Operated both the operations and development interfaces to configure rulesets, monitor threats, and protect web services within the USDS enclave.
- 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.
- Maintained network device inventories, IP address allocations, and subnet documentation within NetBox, ensuring accurate source-of-truth records for infrastructure planning and change management across the USDS environment.

### 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 a Python application 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.
- Coordinated multi-domain firewall change management across global sites, ensuring policy consistency, rule documentation, and compliance validation across the MDMS environment during M&A integrations and infrastructure refresh cycles.

### Information Security Engineer III

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

- Performed operational management of Check Point MDMS firewalls across thousands of HA-configured devices, handling daily security requests, policy changes, and HA failover validation while supporting M&A-related site security integrations across the global portfolio.
- Processed firewall policy updates, imaging requests, and health check validations across the MDMS environment, maintaining configuration standards and ensuring compliance with security baselines during scheduled maintenance windows.
- Reviewed and validated firewall configurations to identify policy violations and untracked access patterns, coordinating remediation through targeted rule updates and change management processes.
- 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.

### 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.
- Administered BlueCat IPAM for centralized management of IP address space, DNS zones, and DHCP scopes, maintaining accurate network documentation and supporting capacity planning across enterprise facilities.
- Served as the subject matter expert for Aruba wireless infrastructure, managing controller configurations, access point deployments, RF tuning, and role-based access policies across West Coast facilities.

### Helpdesk Administrator

Deutsch Industrial Products • Hemet, CA • April 2010 – November 2011

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

### Network Administrator

Ramko Manufacturing • Hemet, CA • 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.