

# Justin Knox, CISSP, CISA

Cybersecurity & Infrastructure Engineer | Secure Systems Architecture

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## SUMMARY

Cybersecurity & infrastructure engineer with 20+ years securing OT/IT systems. Skilled in vulnerability remediation, Linux hardening, and hybrid system integration. CISSP- and CISA-certified, with a proven record of building resilient, compliant architectures using FOSS tools and automation.

Featured Employers: **Google | British Telecom | Scientific Games**

## RELEVANT EXPERIENCE

10.2024 – Present

### DTE Energy, Cyber Security Analyst

*Gas Cybersecurity Compliance | Strategic Staffing Solutions*

*Detroit, MI | 40% remote*

- Implemented vulnerability management (VM) operations across hybrid IT/OT environments, updating full system remediations (FSR) based on manually calculated CVE and CVSS scores, tracking remediation via SLA-compliant workflows, and reporting risk posture to leadership.
- Orchestrated ongoing vulnerability assessments with Nessus and Qualys, validating results manually to ensure accuracy. Captured findings with full CVE/CVSS context, tracked remediation per SLA, and compiled detailed risk posture summaries for leadership.
- Worked with network engineering teams, integrating TLS, IPsec, and 802.1X protocols with RBAC and ACLs to safeguard mission-critical traffic across segmented networks.

09.2023 – 10.2024

### Great Lakes Water Authority, Senior IT/OT Infrastructure Administrator

*Cyber & Information Security, Water Resource Recovery Operations*

*Detroit, MI | Onsite to 20% Remote*

- Built and deployed a centralized cyber defense platform integrating SIEM, CMDB, and IPAM (PostgreSQL, Redis, Jenkins) across segmented IT/OT environments.
- Designed and implemented a clustered Debian/Red Hat Linux virtualization environment with automated provisioning, patching, and sustainment pipelines using PowerShell and Bash, aligned with NIST 800-53, CSF 2.0, and Zero Trust principles.
- Supported SCADA and DCS modernization efforts through collaborative field operations engagement, troubleshooting hybrid control system architectures, and optimizing database workflows across multi-vendor environments consistent with asset management methodologies.
- Deployed TLS 1.2 and X.509 certificate frameworks to secure communication channels between DMZ-layer applications.
- Developed (non-GPT) Active Directory security auditing and reporting solutions, using real-time network diagnostics from Cisco; and change-management for Microsoft 365.

06.2023 – 09.2023

### Corewell Health, Systems Engineer

*Critical Environment Engineering | Matech Resources, LLC*

*Grand Rapids, MI | Onsite to 20% Remote*

- Streamlined production infrastructure deployment, cutting delivery time by 40% through workflow optimization and bottleneck elimination.
- Applied industry-standard deployment methodologies, enhancing scalability, reliability, and maintainability of infrastructure rollouts.
- Identified and resolved critical infrastructure risks ahead of deployment, ensuring minimal downtime and maintaining operational continuity during rollouts.

12.2018 – 12.2021

### Google, Senior Operations Engineer

*Network Operations | Server Operations | Hardware Operations | Engineering Field Services | Data Center Infrastructure Operations | Google Cloud VMWare  
Charleston, SC | Reston, VA | Washington DC | 100% Onsite*

- Deployed the East Coast's Google Cloud VMware Engine project, delivering 75% of milestones ahead of schedule by driving infrastructure readiness, workload isolation, and secure-by-default configurations across production systems — with emphasis on Linux-based environments modeled after Google's hardened Debian variants (e.g., gLinux), ensuring compatibility, stability, and policy enforcement at scale.
- Developed automation tools to streamline server diagnostics and repair workflows, achieving over 800% measured operational efficiency gains and reducing manual repair intervention.
- Awarded 19 Peer Bonuses and 2 Challenge Coins for excellence under pressure during Hurricane Dorian and the COVID-19 pandemic, demonstrating leadership and resilience in global operations.

07.2017 – 12.2018 **Switch Inc., Data Center Technician**

*Network Operations*

*Las Vegas, NV | 100% Onsite*

- Conducted physical penetration tests for high-profile data center clients, following initial work in smart-hands and rack deployments.
- Automated ticket workflows with AutoHotKey, reducing processing time by 65%.

10.2016 – 06.2017 **Pinnacle Community Services, Senior Systems Administrator**

*Las Vegas, NV | 100% Onsite*

- Designed and deployed HIPAA-compliant infrastructure using FOSS technologies, implementing hardened firewalls, encrypted storage, RBAC access controls, and secure IAM with TLS/SSH tunneling and network segmentation.
- Conducted digital forensics and incident response in compliance with legal standards, applying encryption, key management, and containment strategies to ensure traceability, defensible posture, and audit-ready compliance.

11.2013 – 04.2015 **Scientific Games (formerly Bally Technologies), Senior Technical Specialist**

*Technical Training and Documentation Department*

*Las Vegas, NV | 100% Onsite*

- Developed and deployed the company's first internal training portal.
- Implemented Nevada Gaming Control Board and New Jersey Division of Gaming Enforcement security protocols, documenting and distributing field operating procedures.
- Developed and published the technical field service videos for Bally Technologies, WMS, and Shufflemaster products, including slot machines, card shufflers, roulette machines, and video poker systems, reducing travel-related training costs by 95%.

05.2008 – 09.2009 **British Telecom (formerly Infonet), Senior Network Event Management Technician**

*Network Operations Center | Network Event Management Center | Global Converged Services, Network Event Management Center*

*EI Segundo, CA | 100% Onsite*

- Managed incident response for OSI L1-3 across MPLS & BGP, utilizing Cisco, Juniper, and Alcatel-Lucent platforms.
- Developed OpenCV-based machine vision automation scripts to reduce incident resolution time from 4 hours to under 10 minutes, leveraging PowerShell and custom algorithms to enhance network monitoring and incident response.
- Monitored and optimized TCP traffic for L1-L3 network performance on MPLS, BGP, and core platforms (Cisco, Juniper, Alcatel-Lucent), reducing latency with custom TCP optimizations and response time modification techniques.

06.2006 – 11.2007 **Synetcom Digital Inc., Junior Electronics Engineer**

*EI Segundo, CA | 100% Onsite*

- Engineered industrial SCADA radios from PCB to application layer as part of the R&D team, including chip-level systems integration, embedded microcontroller development (PLC-to-RF encapsulation over RS-232/Ethernet), and GUI design using C and TKL.
- Simulated field conditions in the lab to validate reliability and drive iterative improvements.

- 03.2004 – 06.2006 **Academic Tutor, Faculty Assistant & Lab Technician**  
*DeVry University*  
Long Beach, CA | 100% Onsite
- Supported academic success and hands-on learning as a faculty assistant and peer tutor in computer science, networking, and electronics.
  - Led one-on-one and group tutoring sessions, graded coursework, and assisted faculty in the advanced development lab—helping students build lab readiness, troubleshoot real systems, and translate theory into working projects.

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## CONSULTING ENGAGEMENTS

- 12.2021 – 03.2023 **Startup CTO / Technical Consultant**  
Alchemy Computing, Dumpt'd (Pre-revenue) — Washington, DC | Remote
- Served as acting CTO for early-stage startup, leading a small engineering team in prototyping network infrastructure and full-stack architecture (Laravel, PostgreSQL).
- 09.2009 – 10. easy **Technical Consultant (Independent)**  
Alchemy Computing — Las Vegas, NV | Onsite
- Provided IT and network engineering services for SMBs across various sectors including legal, financial, cosmetics, and music production. Expertise included network design, virtualization (Hyper-V, KVM), malware remediation, website development, and electronics prototyping (under NDA).
- 09.2009 – 11.2013 **Technical Consultant (Independent)**  
Alchemy Computing — Las Vegas, NV | Onsite
- Delivered IT and network engineering services for SMBs in cosmetics and music production, including website development, malware remediation, and electronics prototyping (under NDA).

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## PROJECTS

- Homelab 4x Orange Pi micro-cluster running home automation VMs, with a Palo Alto PA-500 and 1Gb PoE Avaya L2 switch for VLAN segmentation and multi-cloud, offsite backup rotation for resilience. Proxmox cluster on Dell R610/R430 servers with Windows Server 2022 AD, DNS, SMB, and Linux dev/security VMs, utilizing a Cisco 1845 ASA for custom network security.

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## CERTIFICATIONS & TRAINING

- CISSP Certified Information Systems Security Professional  
International Information System Security Certification Consortium (ISC2)  
Member ID: 954626 | 03.2024 - Present
- CISA Certified Information Security Auditor  
Information Systems Audit and Control Association (ISACA)  
Member ID: 2063351 | 11.2024 – Present
- Security+ Computing Technology Industry Association (CompTIA)  
Candidate ID: COMP001022411475, 11.2023 – Present
- Technician Class FCC Amateur Radio License  
Federal Communications Commission (FCC)  
Callsign: KF8BVZ | 07.2024 – Present
- OSCP Offensive Security Certified Professional (IN PROGRESS)  
*Expected certification: September 2025*

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## EDUCATION

- 03.2003 – 03.2008 Bachelor of Science in Computer Engineering Technology  
*DeVry University, Long Beach, California*  
Cum Laude, GPA: 3.6

- Best Senior Project 2008: "Fingertip Effects" (Acoustic Manipulation using Hand Gestures and Machine Vision; Java, C++, Assembly).

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## SKILLS

### Infrastructure & Virtualization

- KVM, ESXi, Hyper-V, BSD Jails | Docker, VMware Workstation, VirtualBox
- AWS, Azure, GCP | System Hardening (Debian, Red Hat, SELinux, AppArmor)

### Security & Automation

- SIEM, IAM, TLS/x.509, Zero Trust, Network Segmentation
- Bash, PowerShell, Python | Jenkins, GitLab CI/CD, IaC Pipelines

### Tools & Technologies

- PostgreSQL, Redis, Jenkins | Active Directory, LDAP, Microsoft 365
- Cisco IOS, OPNSense, Nmap, Wireshark | VeraCrypt

### Programming & Reverse Engineering

- C, C++, Python, Assembly | Java, JavaScript, Ruby
- IDA Pro, Ghidra, Radare2 | Exploit Dev, Debugging, Disassembly

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## COMMUNITY INVOLVEMENT

09.2024 **GrrCON, Event Volunteer**

Grand Rapids, MI

Supported conference operations over three days, assisting with attendee logistics and on-site coordination to support the security community.