Justin Knox, CISSP

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SUMMARY:

- Networking, Systems & Cyber Security Engineer with 20 years of experience in the tech industry.
- 10+ years of professional experience in automation, support and development.
- Demonstrated leadership and adaptability, with expertise in mentoring and project delivery.

EXPERIENCE:

IT/OT Infrastructure Administrator, Cyber Security   September 2023 - Present
Great Lakes Water Authority, Operational Technology, Cyber & Information Systems Security
Direct-Hire | Onsite to 20% Remote | Detroit, MI
- Piloted a credential management system, increasing department's password complexity by ~8%.
- Using TLS 1.3 and xx509 certificates, I helped our team pilot the implementation of DNS for Level 4 and DMZ systems for an over-all increased use of encryption on the network by an estimated 10-20%.
- Converged legacy IP address datasets into a singular IP Address Management (IPAM) platform for change management utilizing PostgreSQL, Redis and Jenkins web-based technologies. Tested, deployed and automated full lifecycle management using PowerShell and Bash.
- Developed and implemented internal malware analysis processes, categorization, forensic incident handling methodologies and built the archival and analytic systems and station image.
- Designed and constructed Change Management systems for Active Directory User Groups and Permissions, and a vendor facing Network Change Management system in line with Discretionary Access Control principles.
- Conducted three internal assessments for the 2023q4 and 2024q1 periods utilizing each of the AWWA, NIST 800-153 & CSF 2.0 frameworks with cross-domain matching documented.

Systems Engineer   June 2023 – Sep 2023
Corewell Health, Critical Environment Engineering (CEE)
Contract-to-Hire | Ma-Tech Resources | Onsite to %20 Remote | Grand Rapids, MI
- Built and deployed production infrastructure within a 40% faster than estimated delivery time.
- Provided experienced deployment methodologies using industry best practices.

Network Engineer   March 2023 – June 2023
jPeg Design | Research & Development, Deployment, Support & Maintenance
Direct-Hire |100% Onsite | Dundee, MI
- Worked in a 3-person team to design, deploy and maintain small to medium business infrastructure.
- Developed the company's first inventory, customer, client and installation databases using PostgreSQL, DBeaver & Git.
- Developed in-house password management, reports automation and customer deployment monitoring solutions using Python Scapy, Git on a mixed Azure and AWS cloud infrastructure.

Freelance Technical Consultant   December 2021 – March 2023
Alchemy Computing, Dumptd | Research & Development, Systems Architecture
Multi-Contract | 100% Remote | Washington DC
- Coordinated with Start-Up engineering teams for the prototyping of Laravel built front and PostgreSQL back-end systems in the creation, securing and deployment of company and production infrastructure.

- Utilized TomTom & Google Maps API's, with PostgreSQL for the databases and custom design of use for RFID and QR-Code Programming. Heavily utilized Juniper and Cisco network equipment.

Operations Engineer II / Data Center Technician III   December 2018 – December 2021
Google | Engineering Field Services; Server, Network & Hardware Operations
Direct-Hire | 100% On-site | Charleston, SC; Reston, VA
Worked in the 12-member global EFS team covering all deployment architectures for the full-breadth of Google's production fleet.
- Provided zero loss to five-9 SLO and SLA during the ~400% increase to production load during the Covid-19 outbreak with an 80% reduction in staff.
- Led the GCVE East-Coast deployment project team; completed the project 75% ahead of schedule.
- Built repairs automation software which monitored, configured and automated 80% of server diagnosis, repairs and ticket closure. Measured an 800% decrease in server repair for each region deployed.
- Received 19 Peer Bonuses & 2 Challenge Coins; Commendable Service; Hurricane Dorian & Pandemic Support.

Skills: Bash · Bigtable · Protocol Buffers / ProtoBuff · Python · Planet-Scale CI/CD · Borg (aka Kubernetes)

Network Operations Technician   July 2017 – December 2018
Switch LTD | Network Operations
Contract-to-Hire | TekSystems | 100% On-site | Las Vegas, NV
Worked in one of the largest datacenters on earth, with customer deployments ranging from 1RU to multi-campus WAN networks.
- Developed automation of email using lexical analysis to automate ticket handling, saving approximately 65% of time spent.

Skills: AutoHotkey · BGP · PowerShell · Splunk

Systems Administrator IV   October 2016 – June 2017
Pinnacle Community Services | Information Technology
Direct-Hire | 100% On-site | Las Vegas, NV
Worked in an in-home care facilities provider for Elderly and Autistic individuals.
- Developed and migrated internal file-share-system to bring organization into HIPAA compliance.
- Secured the companies trunks using IPsec over GRE on Cisco and Avaya infrastructure.
- Conducted internal digital forensics investigations using the Sleuth toolkit.

Skills: Cisco · Windows Server 2012 · Active Directory · Samba · Porteus Linux · Java

Freelance Technical Consultant   April 2016 – October 2016
Alchemy Computing | Information Technology
Multi-Contract | 100% On-site | Las Vegas, NV
- Focused specialties included small to medium business PC Repair, website development, electronics prototyping.

Skills: A+ · Malware Removal · Digital Forensics · Data Recovery

Technical Specialist II   November 2013 – April 2015
Scientific Games | Technical Documentation and Training
Direct-Hire | 100% On-site | Las Vegas, NV
- Brought travel expenditures down by 95% through creating training videos.
- Saved 650 labor hours / week through consolidating a spreadsheet-based software tracking system into a single database.

Skills: SharePoint · Arch Linux · PHPFM · Memcached · NGINX · Apache · WordPress · Jekyll · Yammer

Freelance Technical Consultant
September 2009 – November 2013

Alchemy Computing | Information Technology | Las Vegas, NV
· Focused specialties included small to medium business PC Repair, website development, electronics prototyping.
Skills: A+ · Malware Removal · Digital Forensics · Data Recovery

Network Event Management Technician III
May 2008 – September 2009

Infonet - British Telecom | Converged Services Management Center
Contract-to-Hire | TekSystems | 100% On-site | El Segundo CA
Assisted with the internal acquisition of Infonet's global NOC to the UK's infrastructure.
· Provided complete coverage over the management platform for OSI L1-3 over a Cisco, Juniper, Alcatel-Lucent & Ciena mixed platform.
Skills: MPLS, EIGRP, IGRP, SDH, PDH, ATM Frame-Relay, TCP/IP V4/V6, SIP, ARP, CDP, CARP, EIGRP, OSPF, BGP, VTP, EtherChannel, 802.1Q trunking, QoS, Multicast, 802.11a/b/g/n/ac, IPsec, LDAP, RADIUS/TACACS+, SNMP, NTP, VRF and HTTP/HTTPS

Junior Electronics Engineer
June 2006 – November 2007

Synetcom Digital | Research and Development
Direct-Hire | 100% On-site | El Segundo, CA
Worked in the engineering team developing industrial SCADA radios for (in-house developed) industrial video, monitoring digital IO, 4-20ma sensor loops, and PWM.
· Built the GUI for the company's first PLC user control panel.
· Secured the internal LAN using IPSEC between machines in a mesh LAN topology.
Skills: PLCs · PIC Programming · BASIC Stamp Development · Propeller Chip · FHSS · EagleCAD · EWB · Embedded Linux · Windows CE · C++ · Ladder Logic

Academic Tutor, Faculty Assistant & Lab Technician
March 2004 - June 2006

DeVry University | Electronics, Network & Development Laboratory
Direct-Hire | 100% On-site | Long Beach, CA
Tutored students in the network security and advanced micro peripheral courses. Focused specialties included:
· Cisco CLI commands, interfacing and scripting.
· Implementing network configurations with Java
· Network Packet analysis
Skills: C++ · Java · Wireshark · Cisco · Novell · Windows 2000 Networking · RedHat Linux · Gentoo · TCP/IP Packet Optimization

EDUCATION:

(IN PROGRESS) M.S.C.S. Data Science and Intelligent Systems   (PROJECTED) December 2025
University of Tennessee, Knoxville   (ONLINE) Knoxville, TN

B.Sc. Computer Engineering Technology, Cum Laude, GPA: 3.6   March 2008
DeVry University, Long Beach   Long Beach, CA
· Best Senior Project, 2008, "Fingertip Effects". Machine vision Java, C++ & Assembly application.
· Associated Student Body President, Spring 2005 – Fall 2005, Spring 2006-Fall 2007

CERTIFICATIONS/PUBLICATIONS/PROFESSIONAL ASSOCIATIONS:

CISSP / Certified Information Systems Security Professional
  International Information System Security Certification Consortium, ISC2, Member ID: 954626
  Active as of: March 2024

SEC+ / Security+
  Computing Technology Industry Association, CompTIA, Candidate ID: COMP001022411475
  Active as of: December 2023

ISACA Member
  Information Systems Audit and Control Association, ISACA, Member ID: 2063351
  Active as of: August 2024

Amateur Radio Technician Class License
  Federal Communications Commission, FCC, Callsign: KF8BVZ
  Active as of: July 2024

SKILLS:

- Languages: C, C++, Java, Shellcode, LaTeX, PowerShell, CSS, JavaScript, Ruby, Python, Assembly
- Type I Hypervisors: Hyper-V, KVM, ESXi, BSD
- Type II Hypervisors: Docker, VirtualBox, VMWare
- Cloud Environments: Azure, Google Cloud Platform, Amazon / AWS

PROJECTS:

"Homelab"
VM Environment on ProxMox, w/ TrueNAS. ~40 vms for applications testing and development.
Windows AD 2019, w/ Self-hosted PiHole DNS, OPNSense (dual) firewalls, w/ Monero full-nodes. No mining (yet).
Machines: Cisco 1841, Palo-Alto PA-500, MacMini, Windows 10 Pro (AD & PowerShell).

"Cyboard" - Longboard Security System and Datalogger
Raspberry Pi "Smart skateboard", with on-device weather detection, key fob, motion and GPS.
Technologies: Python, SQLLite, GPS PA1616S, Raspbian, NeoPixel LED, Remote Control Encoder PT2262, SHT30 Sensor, ADXL343 - Triple-Axis Accelerometer

VOLUNTEER/LANGUAGES/AWARDS:

Languages: Studying Spanish, German (Pre-A1) and Portuguese, Awards: Best Senior Project 2008.