

// Cyber Security Architect // PKI / ICAM SME //

- 20+ years of professional experience in Information and Physical Security management, architecture, and administration
- Expertise in design, implementation, and management of Public Key Infrastructure (PKI) and other crypto systems
- GRC and Cyber Security Frameworks, including HIPAA, FISMA, GDPR, CCPA, HITRUST, ISO 27001, NIST 800 Series
- Extensive business development, sales engineering, architecture, design, and implementation experience
- Highly effective translator of complex technical concepts for executive and non-technical audiences
- GEORGE WASHINGTON UNIVERSITY College of Professional Studies Cyber Security Advisory Board – [2017 – Present]

EXPERIENCE

Principal Security Architect, [EPHELIAN SECURITY SOLUTIONS] – [2019 – Present (2024)]

Embedded Security Architect, HITRUST Assessor and GRC Advisor, [Various Clients]

- Security Architect for pre-audit compliance preparation
- Certified HITRUST assessor for e1, i2, and r2 assessments

Embedded CyberSecurity Architect, [Sempra Utilities]

Critical infrastructure protection (IT) architecture, engineering, and governance

- Sole cryptography/PKI SME for the enterprise
- Designed, engineered, and implemented a PKI-based solution for the secure migration and retention of 40 million customer financial records as part of a new \$350M customer information system (CIS)
- Assisted CyberArk team with certificate- and SSH-based PAM solutions
- Developed, oversaw, and managed root CA key rotation and internal PKI rebuild
- Architected solutions for cloud and hybrid-cloud cryptography integration with AWS, SAP, Google Cloud, and Azure

Director of Innovation Engineering / Acting CISO, [Knox & Associates] – [2018 – 2019]

- Member of Board of Directors
- Focused on improving the Knox product suite for cloud enablement, increased revenue, and future-proofing
- Led new cloud-friendly IoT product development; research and ideation through to prototyping and production
- Identified and helped remediate potentially fatal vulnerabilities in new electronic lock system

Product Owner / Product Development Manager, [FORNETIX, LLC] – [2016 – 2018]

Product Owner and Product Manager for Fornetix' key management appliance and related products

- Increased product offering from one flagship product to an eight-product suite within twelve months
- Introduced virtual, cloud, and IoT features and offerings to the product suite
- Introduced PKI automation tools to the product line
- Member of OASIS KMIP working group

Principal Security Architect, [EPHELIAN SECURITY SOLUTIONS] – [2015-2019]

Embedded Cybersecurity Architect (IoT / Cloud / HIPAA), [Various Clients]

- Developed and implemented new cloud-based medical service for IoT medical devices
- Worldwide patent for secure delivery system for digital prescriptions issued
- Developed a cloud architecture, including Compute, SDN, IAM, MFA, and cryptographic subsystems
- Medical IoT (MIoT) / Healthcare IoT (HCIoT) device security design and secure Software Lifecycle integration
- Designed and developed a secure networking laboratory to test wired and wireless compatibility for Class I medical devices
- Led EPA's Enterprise Identity and Access Management project. SME for LACS and PACS

Security Business Development Specialist, [WORLDWIDE TECHNOLOGY, INC. (WWT)] – [2014 – 2015]

SME in crypto/PKI, Identity and Access Management, and Network Access Control.

- Top annual producer out of 15 team members, recording 58% (\$29million) of the overall team gross profit (GP) revenue
- Consultations with American Express, Microsoft, and similar clients for security architecture of cloud infrastructure conversions

Lead Security Architect, [CITRIX SYSTEMS, INC.] – [2013]

PKI/Cryptography SME

- Tasked with securing code-signing keys for the entire Citrix product suite
- Led selection committee for Hardware Security Modules (HSMs) from Thales and SafeNet
- Designed and architected fully featured key protection and use mechanism
- Documented full solution, including architectural blueprint and Key Management Infrastructure and policy texts

Lead Security Architect, [FOOD AND DRUG ADMINISTRATION (FDA)] – [2010 – 2013]

PKI & Cisco ISE SME; Network Security Architect

- Managed FDA's PKI, and designed and implemented cryptography-based security solutions
- Designed, built, and deployed 802.1x authentication/authorization solution for agency-wide wireless
- Led team during architecture, design, testing and implementation of Cisco NAC/ISE infrastructure
- Coordinated and oversaw re-initialisation of entire Public Key Infrastructure
- Rollout of HSPD#12 (PIV/CAC) badges to FDA workforce

Information Systems Security Officer (ISSO), [FEMA MAP SERVICE CENTER (MSC)] – [2009 – 2010]

- Managed FISMA compliance, audits and other regulatory assertions and certifications
- Wrote policies and procedures governing security requirements

ISSO, Common Working File (CWF), [CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)] – [2007 – 2009]

- Conducted Phase I of FISMA audit within a month of hire with zero POA&Ms generated
- Ensured confidentiality and integrity of CWF development process and HIPAA data
- Managed FISMA compliance, audits and other regulatory assertions/certifications
- Wrote and conducted company-wide security-awareness training

Director, Global Information Security, [THE DISCOVERY CHANNEL / DISCOVERY COMMUNICATIONS, LLC] – [2006 – 2007]

Director of Information Security. Founded Global Information Security (GIS) group

- Security architecture, design, and migration of critical systems from on-prem to hybrid and full-cloud
- Eliminated 50,000+ active vulnerabilities, reducing unpatched vulnerabilities by 95% in first three months
- Maintained an average of less than one vulnerability per system company-wide for two years

Senior Social Engineer / Architectural Consultant, [CYBERTRUST, INC.] – [2005 – 2006]

Highest grossing Sales Engineer, 2005 & 2006 – Cybersecurity Consulting & Engineering

Identity Management / Cryptographic Specialist, [CONSTELLATION ENERGY GROUP] – [2003 – 2004]

Security architect/project manager for all credentialing and authentication systems

- Designed and implemented enterprise Certificate Authority infrastructure

PKI Architect / Security Architect, [WACHOVIA BANK] – [2000 – 2002]

Designed and implemented enterprise and public-trust PKIs.

- Saved more than \$15 million in licensing and infrastructure costs
- Designed SCIF for housing root and sub-CAs

AWARDS AND RECOGNITIONS

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|---|------|
| • Securely Distributing Medical Prescriptions: US Patent No. 10623188 | 2020 |
| • First Place Team in DEFCON 31 Scavenger Hunt [Black Badge eligible] | 2023 |
| • Detected and alerted Equifax to "2017" Equifax Breach | 2015 |
| • Detected and alerted Smithsonian regarding its 2011 database compromise | 2011 |
| • First researcher to discover "WAP-gap" vulnerability in WAP 1.0 | 2001 |

CERTIFICATIONS

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| • Certified Information Systems Security Professional (CISSP) | Awarded: | 2004 |
| • Certified CyberSecurity Framework Practitioner (CCSFP) [HITRUST] | | 2023 |
| • Certified Advanced School Resource Officer (Incident Response and Management; De-escalation; and Armed Response) | | 2018 |

FOR THE BOTS

PKI, X.509, KMIP, OpenSSL, ACME, NDES, SCEP, Azure AD, Azure, AWS, KEK, EJBICA, Sectigo, SCM, KayFactor, IAM, ICAM, PAM, HIPAA, CMMC, FISMA, GDPR, CCPA, HITRUST, ISO 27001, NIST 800-53, NIST 800 series, GRC, SCADA, AES, OT, FPGA, IoT, Medical IoT, SAP, Google Cloud, 802.1x, Going Cross-Eyed Yet?, CodeWord, Blockchain, Crypto, Cryptocurrency, CryptSoft, OpenSSL, SSH, CyberArk, Okta, SailPoint, DigiCert, SafeGuard, E-Quip, Clearance, Public Trust, Prompt Engineering, AI, ChatGPT, Adversarial Model, LLM, NLP