

| Principal Security Architect |  
| IoT / PKI / Cryptography / Identity SME |

- 20+ years of professional experience in Information and Physical Security management, architecture, and design
- Expertise in design, implementation, and management of Public Key Infrastructure (PKI) and other crypto systems
- GRC and Cyber Security Framework SME, including HIPAA, FISMA, GDPR, CCPA, HITRUST, ISO 27001, NIST 800-53
- Extensive business development, sales engineering, architecture, design, and implementation experience
- Highly effective translator of complex technical concepts for executive and non-technical audiences

SKILLS

PKI, X.509, KMIP, OpenSSL, ACME, AWS KEK, Sectigo, IAM / ICAM, HIPAA, FISMA, GDPR, CCPA, HITRUST, ISO 27001, NIST 800-53, GRC

RELEVANT EXPERIENCE

Principal Security Architect, [EPHELIAN SECURITY SOLUTIONS]

[2023 – Present]: Embedded HITRUST Assessor and GRC Advisor

- vCISO for behavioral health and HIE (Health Information Exchange) clientele, advising in CISO-equivalent roles for organizations without a formal CISO position to improve their overall security posture
- HITRUST e1, i2, and r2 consulting and assessments

CyberSecurity Engineer/Architect, [Sempra Utilities]

[2019 – 2023]: Critical infrastructure protection (IT) architecture, engineering, and governance

- 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)
- Sole cryptography/PKI SME for the enterprise; assisted CyberArk team with certificate, SSH, and AES 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, Innovation Engineering, [Knox & Associates]

[2018 – 2019] Acting CISO and Member of Directors' Board

- Focused on improving the Knox product suite for sales enablement, increased revenue, and future-proofing
- Led new product development; research and ideation through prototyping and production
- Managed vulnerability assessments of new electronic lock and key system; team identified at least twelve critical vulnerabilities
- Prevented system from being the subject of a DEFCON talk by mitigating flaws prior to production

Product Owner / Product Development Manager, [FORNETIX, LLC]

[2016 – 2018] Product Owner and Product Manager for Fonetix' key management appliance and related products.

- Introduced PKI automation tools to the product
- Member of OASIS KMIP working group as part of the Fonetix Team
- Increased product offering from one flagship product to an eight-product suite within a year
- Introduced virtual, cloud, and IoT features and offerings to the product suite
- All products were released on or ahead of schedule

Principal Security Architect, [EPHELIAN SECURITY SOLUTIONS]

[2015-2019]: Embedded Cybersecurity Architect (IoT / Cloud / CE / HIPAA)

- Developed and implemented a new cloud-based medical service for IoT medical devices.
- US /Worldwide patents issued for secure delivery system for digital prescriptions
- Cloud architecture, including Compute, SDN, IAM, MFA, and cryptographic subsystems
- Medical IoT (MIoT) / Healthcare IoT (HCIoT) device security design and secure Software Lifecycle integration
- Secure communications procedure design for cloud, sneakernet, and user interfaces
- 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

Cryptographic Architect, [CITRIX SYSTEMS, INC.]

[Consulting, 2013] SME for securing Authenticode and other code-signing keys for the Citrix enterprise. Led engineer group of selection committee for Hardware Security Modules (HSMs) from Thales and SafeNet

- Designed and architected fully featured key protection and use mechanism conforming to industry best practices
- Documented full solution, including architectural blueprint and Key Management Infrastructure and policy texts

Cisco ISE Engineer / Network Security Consulting Architect, [FOOD AND DRUG ADMINISTRATION (FDA)]

802.1x and PKI Consulting Architect/SME, [U.S. FOOD AND DRUG ADMINISTRATION]

[2010 – 2013] Managed FDA’s PKI; designed/implemented cryptography-based security solutions.

- Led twelve-member team in architecture/design, testing and implementation of NAC and ISE infrastructure
- Coordinated re-initialisation of entire Public Key Infrastructure
- Rollout of new HSPD#12 (PIV/CAC) badges to FDA workforce
- Designed, built, and deployed authentication/authorization solution for EAP-TLS 802.1x for agency-wide wireless

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

[2009 – 2010] Managed FISMA (Federal Information Security Management Act) 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] 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.

- Conducted Phase I of FISMA audit within a month of hire with zero POA&Ms generated.

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

[2006 – 2007] First Director of Information Security. Founded Global Information Security (GIS) group

- Security architecture, design, and migration of critical systems from on-prem to cloud implementations.
- Eliminated 50,000+ active vulnerabilities, reducing unpatched vulnerabilities by 95% in first three months.
  - o Group maintained post-implementation average of less than one vulnerability per system company-wide.

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 / Information 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
- Discovered “WAP-gap” vulnerability in Blackberry mobile device infrastructure

## AWARDS AND RECOGNITIONS

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Member: GEORGE WASHINGTON UNIVERSITY College of Professional Studies CyberSecurity Advisory Board

Patents: *Securely Distributing Medical Prescriptions*: No. 10623188 (USPTO Awarded 2020, pending worldwide award)

DEFCON 31: SCAVENGER HUNT [2023], First Place Team “Missing DEFCON Badges” [NOT A BLACK BADGE YEAR, UNFORTUNATELY]

## 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 |