Understanding Cryptography and Auditing Public Key Infrastructures

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Professional Strategies – S31

Session Abstract

The rate of change and advancements in technology, as well as the heightened level of competition and desire to meet customers' changing demands has led companies to pursue agile secure technology. This accompanied with increased regulatory scrutiny and concerns over data privacy and protection has made the use of cryptography (encryption keys and certificates) common across various sectors within the corporate landscape.

In this session we will discuss:
- The history behind cryptography
- Key terms and principles associated with cryptography and certificate management
- Certificate types and self-signed certificates
- Explanation of a traditional public key infrastructure (PKI)
- Cryptographic Key & Certificate Lifecycle Management
- Methods of auditing:
    o   Encryption key generation processes
    o   Physical security controls surrounding PKI
    o   Certificate issuance and revocation

Target Audience

Technology auditors that have a desire to learn about cryptographic key and certificate management infrastructures, processes and how to audit them.

COBIT Objectives or Processes

DS1 Define and Manage Service Levels
DS4 Ensure Continuous Service
DS5 Ensure Systems Security

Speaker Bio

Rami Elkinawy is a Senior Audit Manager within the Technology Audit team at eBay, Inc.

Rami has a diverse array of audit and consulting experience. He started his career with Wells Fargo Internal Audit performing technical infrastructure layer audits. Additionally, Rami has worked as a manger in the IT Advisory Services group with Ernst & Young International. During his time with EY, Rami managed projects associated with data migrations, system implementations and developing technology security strategies for companies across Asia and North Africa. Rami is currently a Senior

Audit Manager of Technology Audit for eBay Inc., and is responsible for managing and leading technology audits across eBay Marketplaces, PayPal, StubHub, eBay Enterprise and company adjacencies.

Rami holds a Bachelor's Degree in Economics from UCLA, studied UNIX Systems Administration at UC Berkeley and currently holds various professional certifications, including the CISM, CISA, CIA and CSM.

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