2019 Cybersecurity Trends to Watch

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Michael Levin is a nationally known cyber security professional who spent over twenty-two years in the U.S. Secret Service protecting Presidents and Heads of State. Michael retired from the U.S. Department of Homeland Security - as the Deputy Director of the National Cyber Security Division in Washington DC. He enjoyed a distinguished thirty-year career in public service and law enforcement. After this distinguished career and seeing the need, Michael founded the Center for Information Security Awareness – www.CFISA.com The CFISA was created to explore ways to increase cyber security awareness among many audiences, including consumers, employees, businesses and law enforcement. CFISA provides online and on-site cyber security awareness training services to businesses and organizations of all sizes.
Ted Shorter is the chief technology officer and co-founder of Keyfactor (formerly, Certified Security Solutions). A renowned Public Key Infrastructure (PKI) expert, Ted has provided oversight to hundreds of private-sector enterprise PKI deployments, in multiple vertical markets including: Healthcare, Finance, Manufacturing, Aerospace, and e-Commerce. Ted has worked in the security arena for over 25 years, in the fields of cryptography, application security, authentication and authorization services, and software vulnerability analysis.
Jim Rutt, CISSP, CISM, CISA, CGEIT, CRISC, C|CISO, CCSK, is the Chief Information Officer at the Dana Foundation. His responsibilities include providing strategic planning for information and technology management and overseeing all back office technology operations necessary to support the Foundation. Jim is an early adopter of cutting edge cloud security solutions, having led Dana through a complete cloud transformation three years ago. Jim has frequently spoken to peer organizations on corporate cybersecurity strategy and risk management, and also advises early stage technology companies on their sales strategy to the financial and healthcare sector. Jim is a graduate of Stetson University, where he received a B.B.A. degree. He has 21 years of technology experience (spanning financial, healthcare and pharmaceutical sectors) and has been at Dana for eight years. Jim has presented at multiple CIO and leadership conferences, and has been quoted in the Wall Street Journal (among other publications) for his view on mobile security and governance. Jim is President and Chairman of the Board of Technology Affinity Group (TAG) and is Vice President and Board Director for the New York Metro Chapter of the Cloud Security Alliance. and is a member of Society for Information Management, SIM Foundation of NJ, CIO4Good, as well as a founding advisory board member of BWG Strategy LLC, a Work-Bench Venture Capital Mentor/Advisor, advisor to Lightspeed Ventures, a Silicon Venture capital company, and board advisor to multiple startups including Baffle, Axonius, Minerva Labs and Pixm.
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KEYFACTOR COMMAND
SECURE DIGITAL IDENTITY FOR THE ENTIRE ENTERPRISE

KEYFACTOR CONTROL
THE END-TO-END SECURE IDENTITY PLATFORM FOR CONNECTED DEVICES
Trend 1: Quantum Computing

Scientists find a way to enhance the performance of quantum computers.

Source: post-quantum.com

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Crypto-Agility & Quantum

➢ **Know what you have**
  • Gather and maintain an inventory of all certificates and keys

➢ **Develop response plans for crypto events:**
  • Normal expiration / rotation / re-encryption
  • Algorithm breakage
  • Public root breach
  • Quantum breakthroughs
Trend 2: IoT Insecurity

2018 was a bad year for Internet-of-Things Security

IoT security at Black Hat 2018: The insecurity of things

2019 will likely be worse
Trend 3: IoT Security

The first step is admitting **you have a problem...**
Trend 4: Cloud-First and Containerization

➢ Cloud IT
  • Enterprise PKI in the cloud is acceptable – and even preferred – by an increasing number of customers

➢ Cloud density of IT assets increases

➢ Impact on DevOps, DevSecOps
  • Certificate & key orchestration, securely – at scale
More Trends to Watch in 2019

➢ Cryptocurrencies & Blockchain
   • Is the recent coin crash just a “bump in the road”?  
   • How intertwined are the fates of Blockchain and Cryptocurrencies?

➢ Data breach legislation

➢ IoT security legislation
Thank You

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About Keyfactor

Keyfactor, formerly Certified Security Solutions (CSS), is a leading provider of secure digital identity management solutions that enables organizations to confirm authenticity, and ensure the right things are interacting in the right ways in our connected world. Learn more at keyfactor.com
QUESTIONS?
Key cyber trends for 2019
Jim Rutt, CISSP, CISM, CISA, CGEIT, C|CISO, CRISC, CCSK
CIO, The Dana Foundation
My background

➢ CIO of the Dana Foundation
➢ President/Chairman of the Board of Technology Affinity Group (TAG)
➢ VP of the NY Metro Chapter of the Cloud Security Alliance
➢ Advisor to multiple VCs and dozens of startups
Key trends for 2019

- Zero Trust Networks/CARTA
- NaaS (Network as a Service)
- Rapid increase in use of SOAR
- CV (Computer Vision) supplementing End User Awareness
- Focused AI/ML as opposed to shotgun approach
**Seven CARTA Imperatives**

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<th>Imperative</th>
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<td>1</td>
<td>Replace one-time security gates with context-aware, adaptive and programmable security platforms.</td>
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<td>2</td>
<td>Continuously discover, monitor, assess and prioritize risk — proactively and reactively.</td>
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<td>3</td>
<td>Perform risk and trust assessments early in digital business initiatives.</td>
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<td>4</td>
<td>Instrument infrastructure for comprehensive, full-stack risk visibility, including sensitive data handling.</td>
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<td>5</td>
<td>Use analytics, AI, automation, and orchestration to speed the time to detect and respond and to scale.</td>
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<td>6</td>
<td>Architect security as an integrated, adaptive programmable system, not silos.</td>
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<td>7</td>
<td>Put continuous data-driven risk decision making and risk ownership into BUs and product owners.</td>
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Source: Gartner (April 2018)
Zero Trust Networking

➢ Prevents lateral movement within networks
➢ One key driver is micro-segmentation
➢ Breaks away from traditional perimeter defense posture
➢ Assumes threat actors are already in proximity.
SOAR (Security Orchestrations, Analytics and Response)

- Use and expansion of use of SIEM (Security Incident and Event Management) to collect, correlate and analyze incidents
- Creation of incident workflows for rep
- Reduction of reliance on SOC analysts, who are hard to recruit and even harder to train
- One caveat: “chicken or egg” scenario where you need qualified staff to enable these platforms effectively
NaaS (Network as a Service)

- Enhances and enables zero-trust methodologies on the network side
- Focused on intelligent analysis of demarcation points at the application level, not just IP level
- Fits as a complement to the CARTA approach
The closest we can get to emulating true end user experiences, in order to mitigate social engineering wherever possible

Practical application of Neural Networks

Example: Pixm (antiphishing tool using CV)
➢ Apex of marketing hype
➢ Shotgun approach yields little differentiation
➢ What is marketed as AI may not truly be AI ("novel knowledge")

➢ ML Use cases (Supervised and Unsupervised)*
  ❑ Malware/spam classification
  ❑ DNS Analytics
  ❑ Threat Intelligence
  ❑ UBEA

*”AI & ML in Cyber Security - Why Algorithms Are Dangerous”-Raffael Marty
Other general trends

- Increase in use of MFA
- Increase in use of Biometrics, despite common objections
- Focus on data protection in anticipation of wider adoption of GDPR-like regulations here in the US.
ISSA
Information Systems Security Association
International

www.issa.org

QUESTIONS?