Emerging Trends in Critical Infrastructure Protection

Session Facilitator:

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4:00 PM - 5:00 PM
Session presenters:

- Denise Anderson, Executive Director, The National Health Information Sharing & Analysis Center (NH-ISAC)
- Catherine Lotrionte, Director, Institute for Law, Science & Global Security, Georgetown University
- Parham Eftekharı, Senior Fellow, Institute for Critical Infrastructure Technology (ICIT)
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About ICIT

• Mission
• Non-Partisan, Advising to House & Senate, Federal Agencies, Critical Infrastructure Sector Stakeholders
• Initiatives
• Legislative Research & Briefings

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Challenges

• Evolving and Expansive Attack Surface
• Dependency on Archaic Legacy Systems
• Dedicated and Diversified Adversaries
• Turnkey Exploit Kits (MaaS, etc.)
• Absence of Cybersecurity Training
Attack Basics

1. Social Engineering
   - Collect Intelligence
2. Custom Exploit Kit
3. Spear Phishing Attack
4. Threat Actor Gains Access → Moves Laterally to Achieve Higher Levels of Admin Access
5. Data Exfiltration or Manipulation
What can we do?

People, Process, Technology

Education, Legislation, Technology
Education

- Business Leaders
- Training Employees
- Legislative Community
- Workforce Shortage
  - H1B Visa Dependency
- Public Awareness
  - Early Stage Education
- Bottom Line: Cultures of Cybersecurity!
Legislation

Legislative Education is Paramount!

• Targeting specific vulnerabilities
• IoT & Manufacturing Standards for Cybersecurity
• Reasonable Encryption Legislation
• Threat Information Sharing
• Re-Building Trust
Technology

Create a Virtual “Tar-Pit”

• Multi-Factor Authentication
• Biometrics
• Behavioral Analytics + Behavioral Biometrics
• Multilayered Encryption
  – Encrypt at File, Folder, and Source-code level

Part of Your Holistic Cybersecurity Strategy
Summary

• Attack Surface is Growing (IoT)
• Threat Actors Evolving
• Solution: Education, Strong Legislation, Multi-layered Security

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Questions?