U.S. Department of Homeland Security

CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY

Infrastructure Assistance Coordinating Council (IACC)

Ransomware Threats and Mitigations

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Fear, Uncertainty, and Doubt

Awareness to make better decisions.

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Ransomware Defined

- Ransomware is malware that encrypts your data that the attacker can use for extortion or to demand a ransom.
- Phishing or drive-by hacked sites
- Get in by remote access
  - Unmonitored Internet access
- Claim to use “military-grade” encryption
- Control malware manually or remote control
- Attackers rely on no backup plans and no redundancy
- You can’t trust a hacker
  - They may never give you the decryption key
- Extortion
  1. Single - Encryption
  2. Double - Release financial data on the Dark Web
  3. Triple - Contacting your customers and extorting their data

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Who is targeting you?

Ransomware Demographics

Affected Industry

- Automobile & Parts
- Banks
- Chemicals
- Construction & Materials
- Consumer Goods
- Financial Services
- Gas, Water & Multi-utilities
- General Industrials
- Health Care Equipment & Services
- Industrial Transportation
- Legal
- Oil Equipment Services & Distribution
- Retail
- Technology

Target Geography

- Canada
- Turkey
- India
- Indonesia
- Singapore
- Switzerland
- Greece
- Italy
- Thailand
- United Arab Emirates
- New Zealand
- Taiwan
- Bulgaria
- Ireland
- South Korea
- Angola
- United States
- Spain
- Sri Lanka
- Brazil
- Puerto Rico
- Poland

Targeted Information

- Corporate Employee Info
- Customer Data
- Financial Data
- Intellectual Property
- Government Information
- IT Information
- Legal Documents

Ransomware in the Wild! – Sample from the week prior to 17 August 2021

AVOSLOCKER
- Moorfields NHS UK & Dubai (AE) - moorfields[.]ae.

BLACKMATTER
- Pine Labs (IN)
- HHCP Architects (US) - hhcp[.]com.
- Solar Coca-Cola (BR) - solarbr[.]com[.]br.

CLOP
- Zucchetti Rubinetteria S.p.A. (IT) - zucchettikos[.]it.
- ABCO Automation (US) - goabco[.]com.
- Rocky Mountain Instrument Co. (US) - rmico[.]com.
- AMPM Billing (US) - ampmbilling[.]com.
- Pension Benefit Consultants, Inc. (US) - penbens[.]com.

CONTI
- WEI (US) - wei[.]com.
- Enns Brothers (CA) - ennsbrothers[.]com.
- Welliver (US) - buildwelliver[.]com.

CUBA
- Quercus (PL) - quercus[.]pl.

HIVE
- Osprey Video (US) - ospreyvideo[.]com.
- Brakke (NZ) - brakke[.]eu.

LOCKBIT
- Smith, Gambrell & Russell, LLP (US) - sgrlaw[.]com.
- ESR Motor Systems (US) - esrmotors[.]com.
- Megawatts Engineering Services Pte Ltd (SG) - megawatts[.]com[.]sg.
- Accenture (IE) - accenture[.]com.
- The National Wild Turkey Federation (US) - nwtf[.]org.
- JINYANG OILSEAL (KR) - jy-oilseal[.]com.
- Audit Treuhand AG (CH) - audit-treuhand[.]ch.
- Seliner (CH) - selinerag[.]ch.
- Pike County Sheriff's Office (US) - pikecountysheriffsoffice[.]com.

LORENZ
- Sebastian (US) - sebastiancorp[.]com.

RAGNAROK
- Hitit Gümrük Müşavirliği (TR) - hititgumruk[.]com.
- DAE MYUNG RAINWEAR LANKA LTD (LK).

Released their decryption key and closed shop.

RANSOMEXX
- GIGABYTE (TW) - gigabyte[.]com.

SUNCRYPT
- Cornerstone Automation Systems, LLC (US) - casiusa[.]com.

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Mitigations You Can Do Now! (1 of 2)

- Network Segmentation
- Multi-factor authentication
- Strong spam filters to prevent phishing emails from reaching end users
- User training program
- Filter network traffic
- Update all software
- Limit access to resources over networks
  - Restrict RDP and block SMB
- Set antivirus/antimalware programs to conduct regular scans
- Risk-based and prioritized asset inventory
- Prevent unauthorized execution by:
  - Disabling macro scripts entering your org
  - Implementing application allow listing
  - Monitor and/or block inbound connections
  - Detect and/or block inbound connection from Cobalt Strike servers and other post exploitation tools
- Establish and test a robust backup program
  - Frequent backups (full and incremental)
  - 3-2-1 strategy – (3 copies, 2 different media onsite, and one copy offsite)
  - Test by recovering from backups on a set schedule

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Mitigations You Can Do Now! (2 of 2)

- CISA and FBI urge Critical Infrastructure (CI) owners and operators to apply the following mitigations:
  - Implement network segmentation between IT and OT networks
  - Define a demilitarized zone
  - Logical zones for OT assets
  - Define acceptable communication conduits between the zones
  - Deploy security controls to filter network traffic and monitor communications between zones
  - Prohibit industrial control system (ICS) protocols from traversing the IT network

Operational Technology (OT) – The SCADA and ICS that manage and control the critical mission and infrastructure of the organization.

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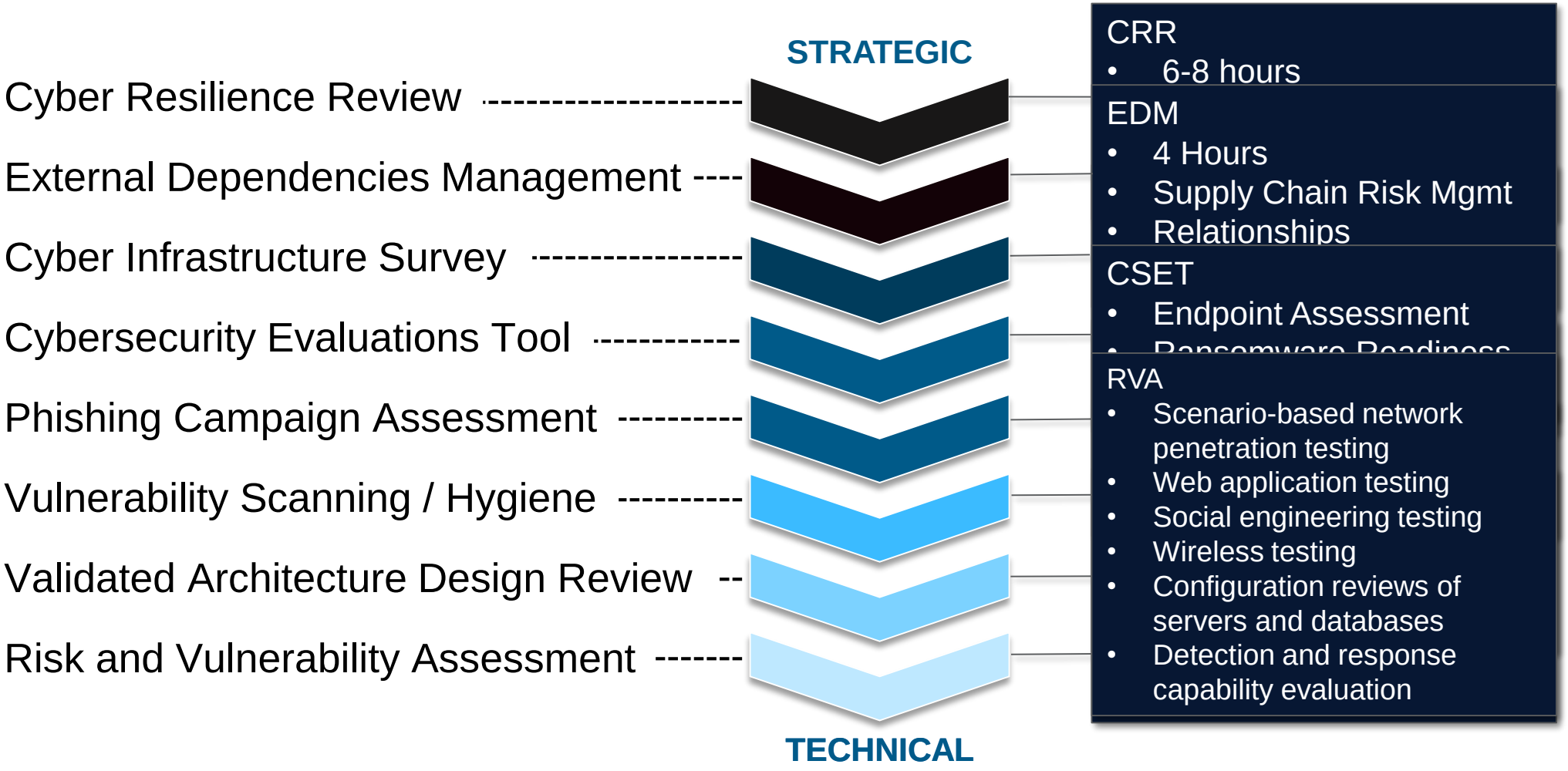
Cybersecurity Assessments and Services



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PISCES and ISACs

- Public Infrastructure Security Cyber Education System (PISCES)
  - Provides a data-sharing network to small communities in need of critical cybersecurity analysis.
  - Students get hands-on experience
    - Security monitoring of real-time data on local government networks
    - Providing a crucial service for small cities and counties that might not otherwise be able to afford it
  - Academic Partners: Western Washington University, Spokane Falls CC, Central Washington University, Eastern Washington University, and Alabama A&M University
- Information Sharing and Analysis Centers (ISAC)
  - Through CISecurity.org
  - Information sharing
  - Many free services

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https://pisces-intl.org/ / https://cisecurity.org

Conclusion

- Ransomware Defined
- Ransomware Demographics
- Who is Targeting You?
- Ransomware Threats in the Wild!
- Mitigations You Can Do Now!
- CISA Services
- PISCES & ISACs

Contacts and Questions?

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