MSBO Annual Conference

Cybersecurity –
A School's Journey

Ramifications

Covered

- Cyber forensics
- Legal
- Notification costs (call center, credit monitoring, etc.)
- Public relations
- Data recovery
- Ransom payments
- Resulting lawsuits

Not Covered

- Downtime
- Disruption
- Community relations
- Staff relations
- Reputational damage

Contact

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Who Is SET SEG?

The risk management experts providing solutions to help meet the unique needs of Michigan public schools

Property/Casualty Pool

530+ members

$170 million in net asset returns

Provides: property, liability, auto, school violent acts, cyber protection

Workers' Compensation Fund

520+ members

$301 million in contribution reductions

$550,000 in Safety Program returns

Employee Benefits

Healthcare, dental, vision, long-term disability

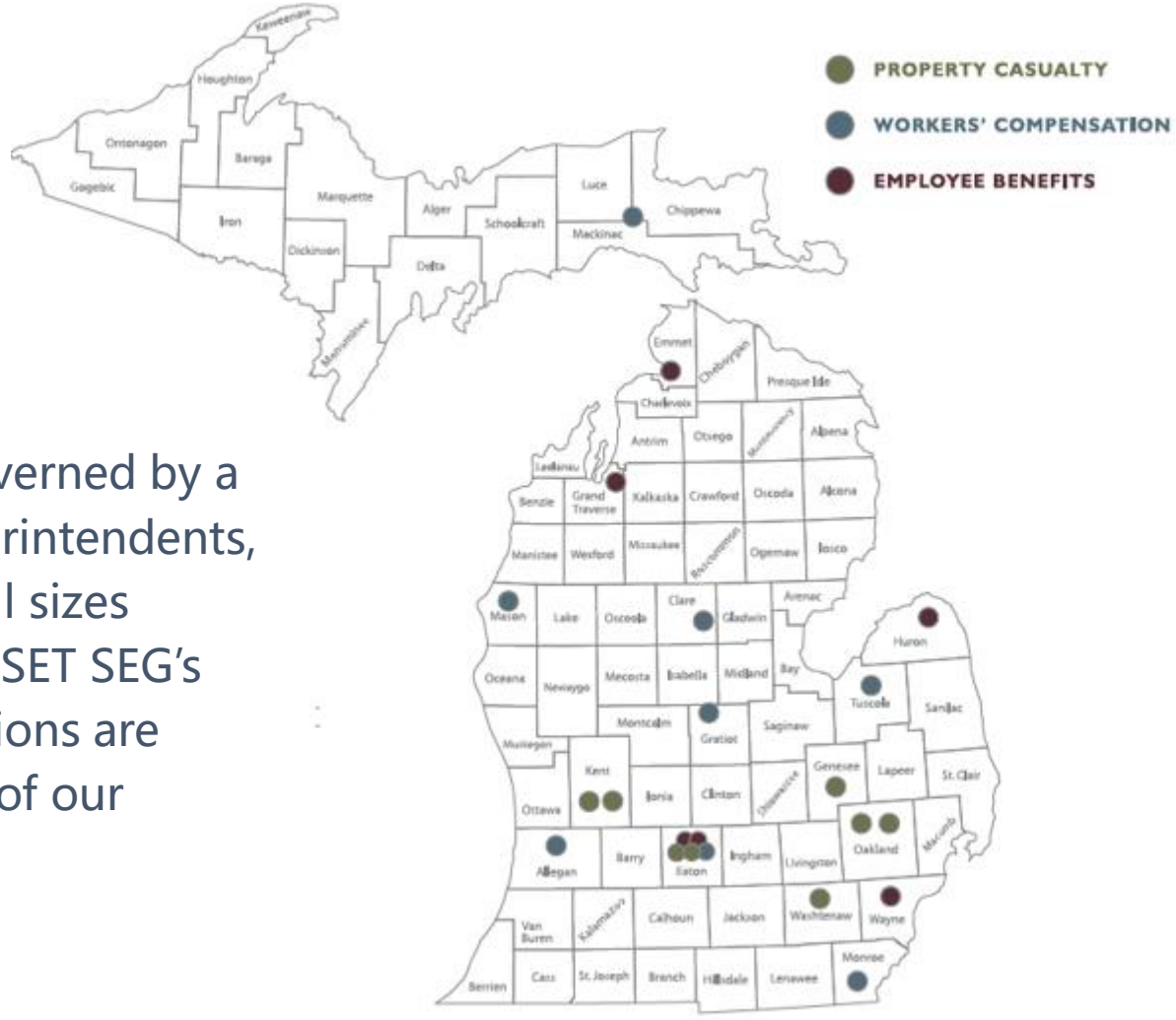
Consulting, compliance, and administration services

SET SEG Foundation

$710,000+ in student scholarships and grants

Promotes opportunities in student leadership, expanding educational programs, skilled trades, and risk management studies

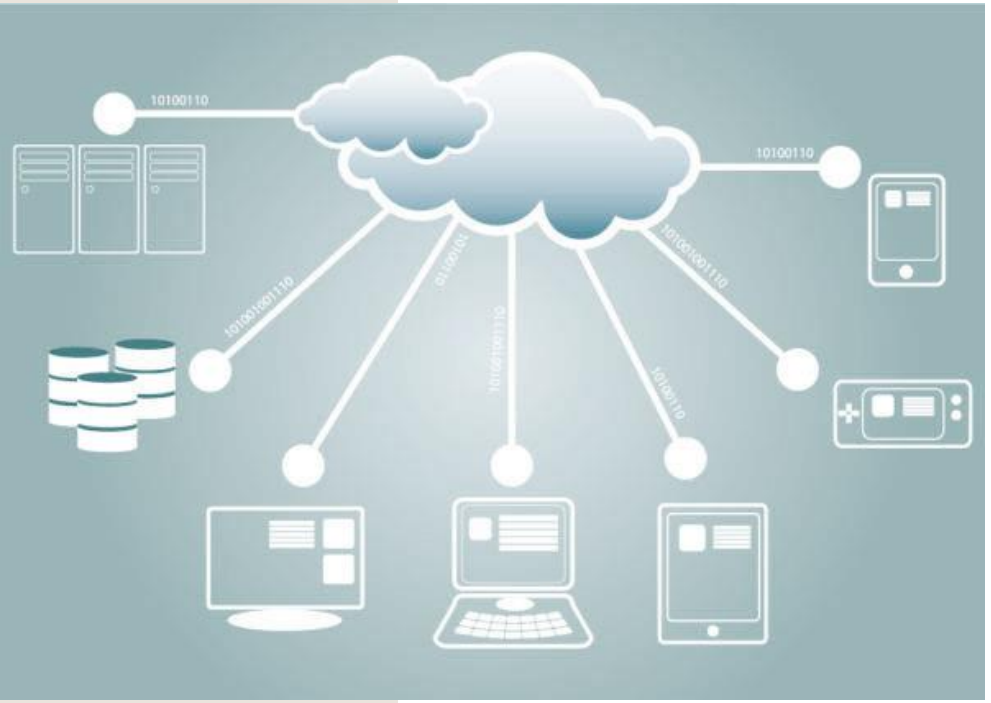
Governance & Service



SET SEG programs are governed by a board of your peers. Superintendents, representing districts of all sizes across the state, serve on SET SEG's boards to ensure all decisions are made in the best interest of our public school members.

Cyber Risk

Why is this topic so important?



- Reliance on technology
  - HVAC, phones, security, etc.
- Complex technology infrastructures
- Remote learning
- Massive amounts of data
- Strained resources, funding, and staff

Why So Challenging?

ANN ARBOR

‘Data-rich, resource-poor.’ Why Michigan schools can be a ‘soft target’ for ransomware attacks

Updated: Mar. 06, 2023, 2:44 p.m. | Published: Nov. 20, 2022, 6:30 a.m.

Current State of Cybersecurity

LOCAL

Lansing Community College suspends most classes for 'ongoing cybersecurity incident'

Ken Palmer
Lansing State Journal

Published 6:32 p.m. ET March 15, 2023 | **Updated 4:05 p.m. ET March 16, 2023**

As hackers increase ransomware attacks, Michigan schools try to respond

Michigan Radio | By Doug Tribou, Lauren Talley
Published January 31, 2023 at 12:26 PM EST

▶ LISTEN · 6:40

University of Michigan shuts down school's internet connections following 'significant' cybersecurity incident

By Sean Lyngaas, CNN
2 minute read · Updated 7:46 PM EDT, Tue August 29, 2023

Raymond Boyd/Michael Ochs Archives/Getty Images/File

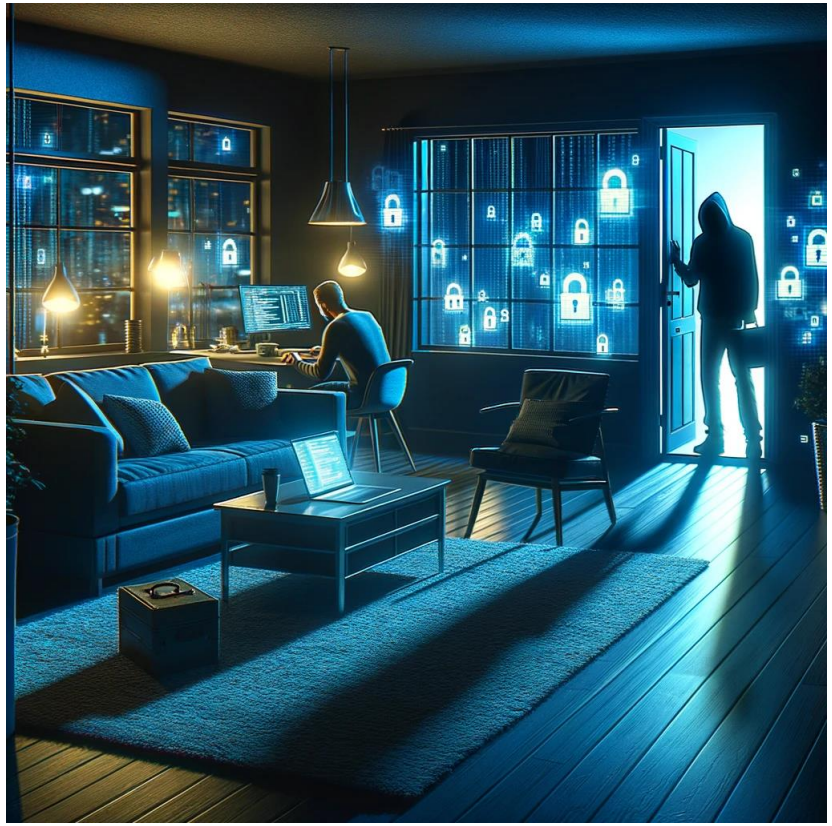
The Incident

- Overview
  - Experienced tech staff
    20+ years of experience
- November – The Call
  - Systems compromised
    - 125 servers
    - Downtime - 3 instructional days
  - Ransomware
    - $700,000
- Immediate Response
  - Every second counts
  - Act swiftly and shut everything down
  - IT admin authority

Understanding Cyber Incidents

- Nature of the Threat
  - Feels like a home invasion
  - Intruder still in your home
  - Treat it like a crime scene

- Communication
  - Cautious communication
  - Alternative communication plans
  - Bad news travels fast



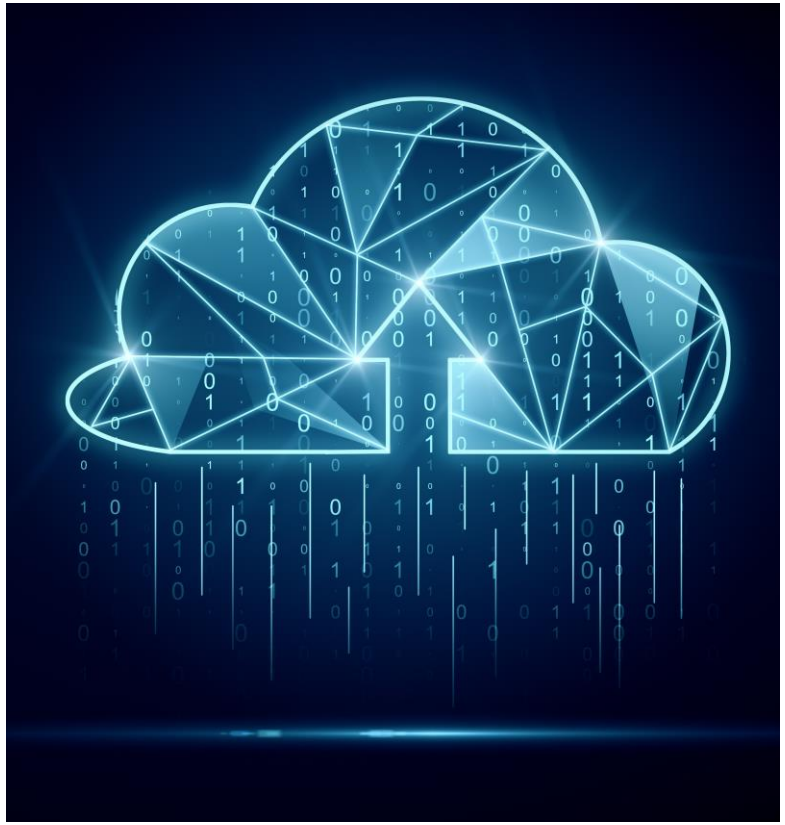
Steps in a Cyber Incident

- First Call
  - Cyber insurance provider
    - We have the experts to help
    - Have emergency phone numbers ready
  - MSP – Cyber Command Center
  - FBI

- Steps to Take During a Breach
  - Refer to your written plan
  - Set up a command center
  - Insulate your tech team
  - Communicate to stakeholders
  - Food
  - Staff health

Challenges of Recovery

- Restoring From Backups
  - Restoration can be time-consuming
  - Average downtime – 10 days
  - Backups are not the solution to cyber breaches/incidents
- Policy Review and Updates
  - Regular review of your written plan(s) is crucial
    - Incident response plan
    - Business continuity plan



Experience and Lessons From the District

- Initial Ransomware Interaction
  - Extortion group – friendly and helpful
  - Don’t open the ransom!
- Key Measurers Adopted
  - Managed detection and response – continuous monitoring for vulnerabilities
  - Endpoint detection response – protect their devices

Post-Incident Changes

- Infrastructure and Policy Enhancements
  - MFA mandatory
  - Comprehensive password management
  - Geofencing and disabling macros

- Organizational Changes
  - Increased security training and awareness
  - Hired dedicated cybersecurity personnel

New Reality – Post-Breach

- Operational Impacts
  - Increased operational costs and restrictions
  - Stringent control measures
  - Less convenience
- Continued Vigilance
  - Maintain robust security measures
  - Be prepared for repeat attacks

Impact to Schools

Attack Vectors

- Email phishing
- Clicked on malicious link
- Social engineering
- Gaining student credentials
- Monitoring and access open RDP port

Issues

- Secondary attack – manage breach yourself
- Wire transferring money to fraudulent vendor
- Servers, workstations and backups non operable
- Disruption and loss of student data

Reminders

- Timely reporting
- Phishing Training
- Use VPN/MFA
- Have & follow business office process
- Backups segregated and tested
- Network segmented/ EDR detection

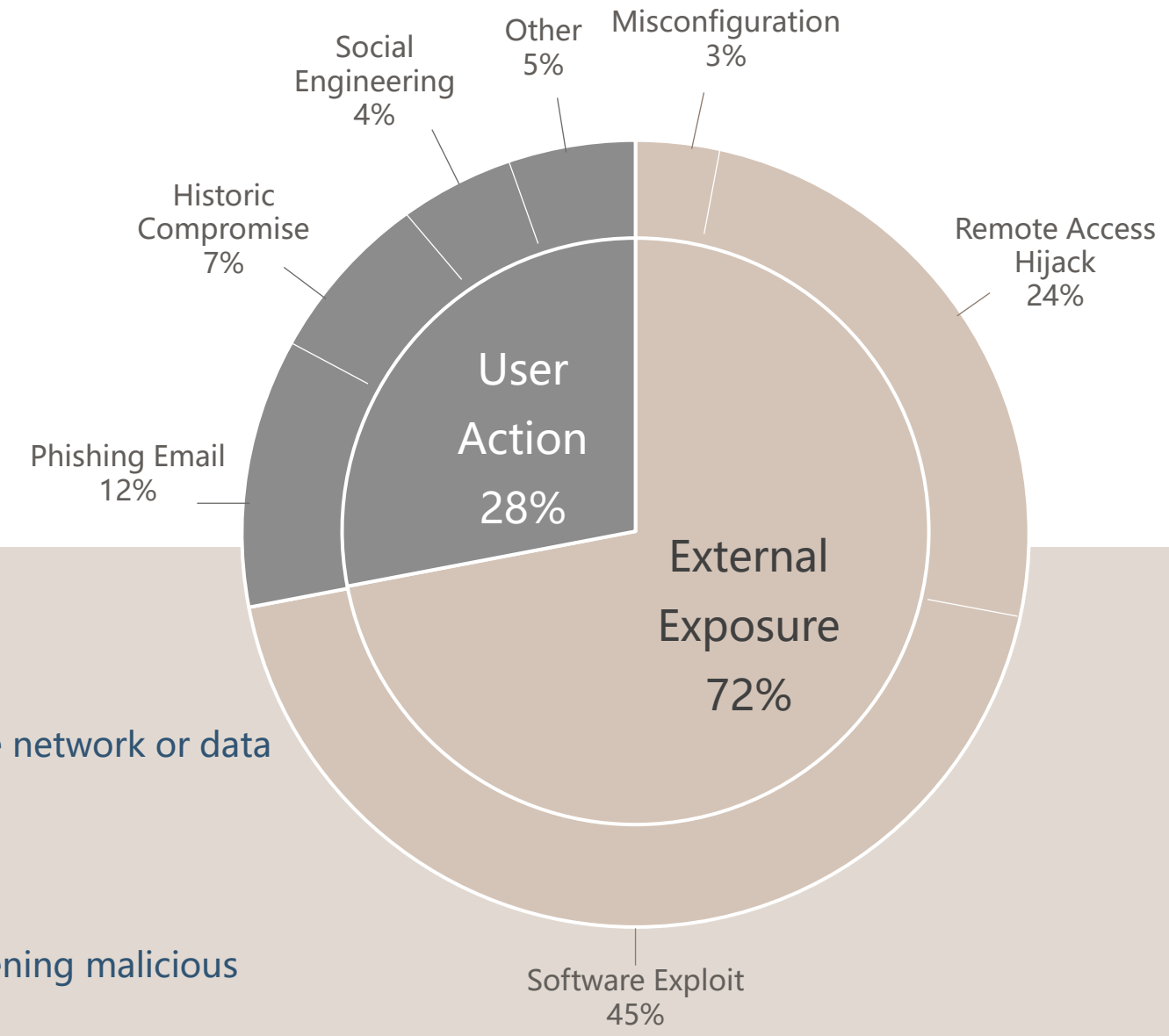
Results

- Ransom demand increase with more systems locked up or secondary attack
- Wire transfers can be risky
- Higher deductibles upon renewal
- Time and reputational damage

Organizations of different types, sizes, and budgets have had breaches:
K-12 w/ enrollments of 1,200-10,000+
ISDs w/ annual revenue of $20M-$170M

Root Point of Compromise

The root point of compromise (RPOC) is the initial entry point or a threat actor – how they gained initial access to a victim

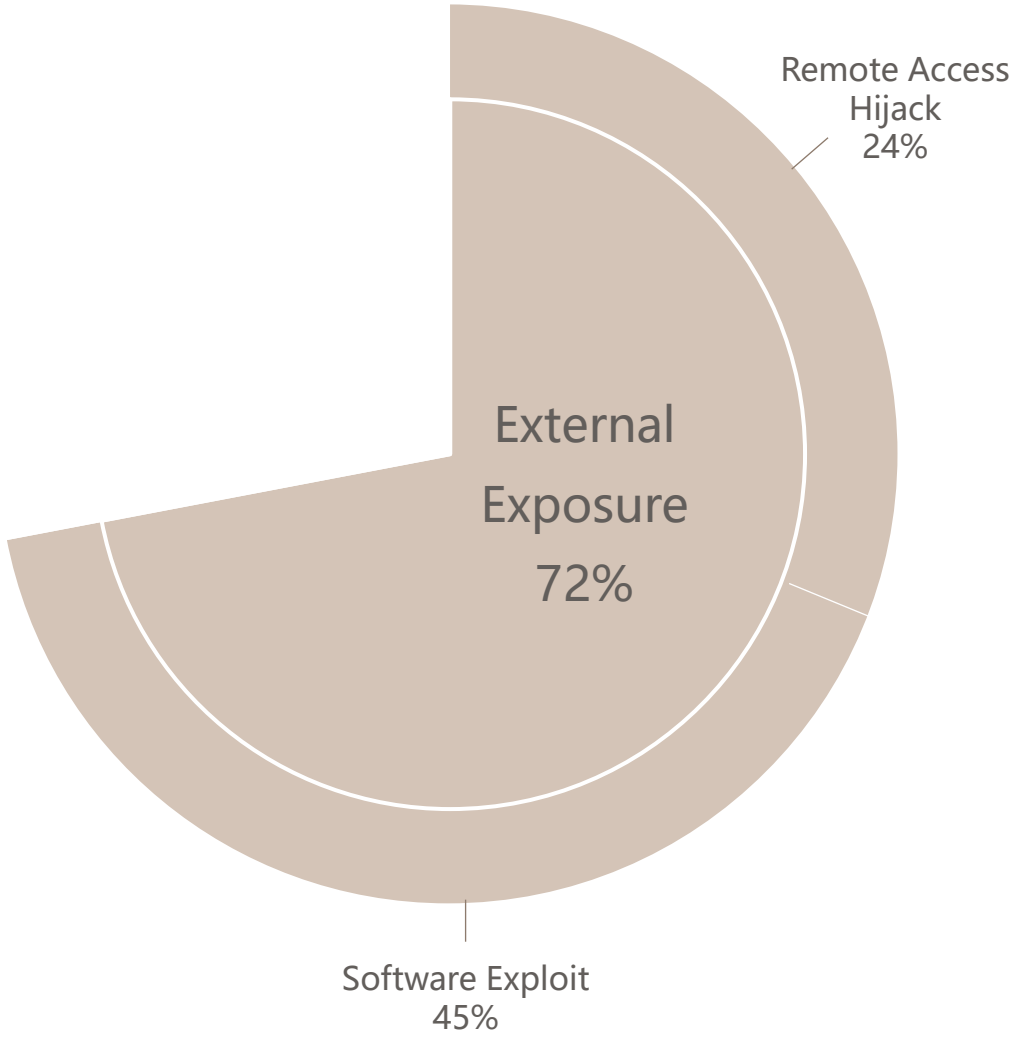


RPOC can be categorized in two ways:

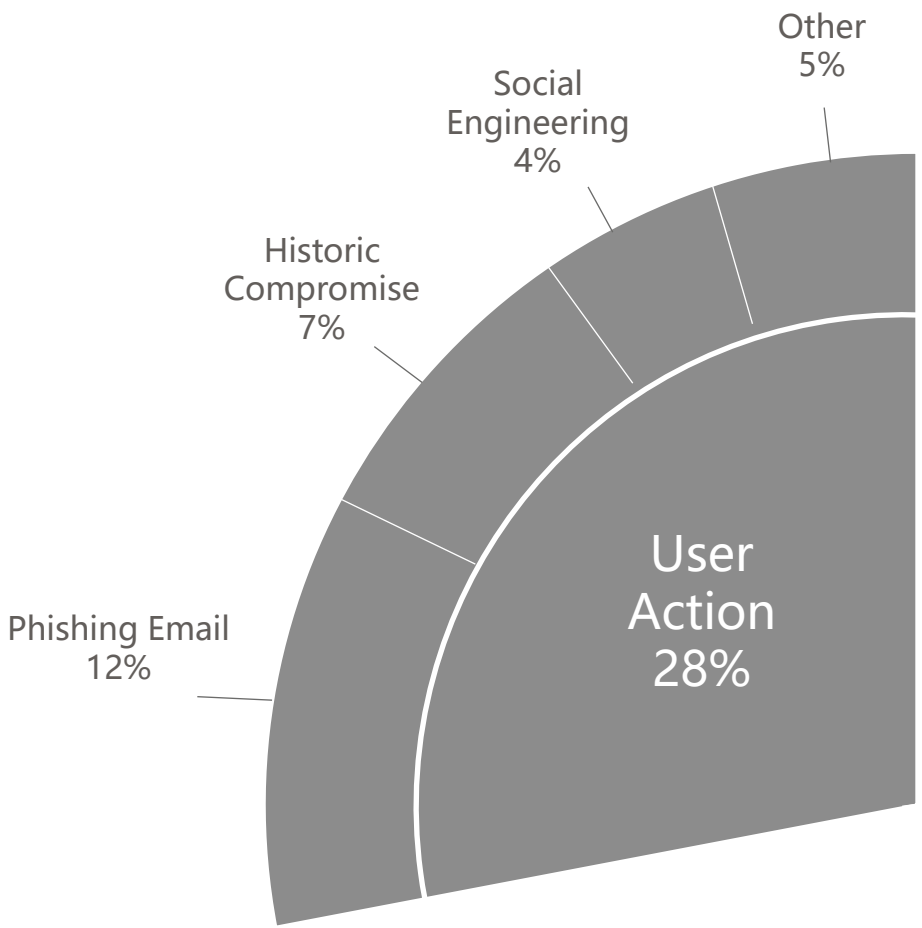
- External Exposure
  - Attacker targets a victim and gains access to the network or data
  - Easiest method, widely used
- User Action
  - Attacker gains access due to a user's action (opening malicious files, re-using passwords, social engineering)

External Exposure

- Software Exploit
  - 45% of incidents caused by vulnerabilities that could have been mitigated through security updates
- Remote Access Hijack
  - 24% of incidents caused by IT practices that allowed remote access from outside the network
- Misconfiguration
  - 3% of incidents caused by misconfigurations of IT systems



User Action



- Phishing email
  - An email containing malicious links or attachments
- Historic compromise
  - Attackers had credentials from previous breaches and used them to access accounts
- Social engineering
  - Scam phone calls (vishing), text messages (smishing), and other deceptive means
- Other
  - Mistakenly downloading malicious, spoofed software in “drive-by” attacks
- IT teams can thwart these attacks with email filters, security training, etc.

The Process of a Ransomware Claim

Do you have your insurer's contact info ready?

Let the cyber mitigation specialists take over

Who are you contacting within your team?

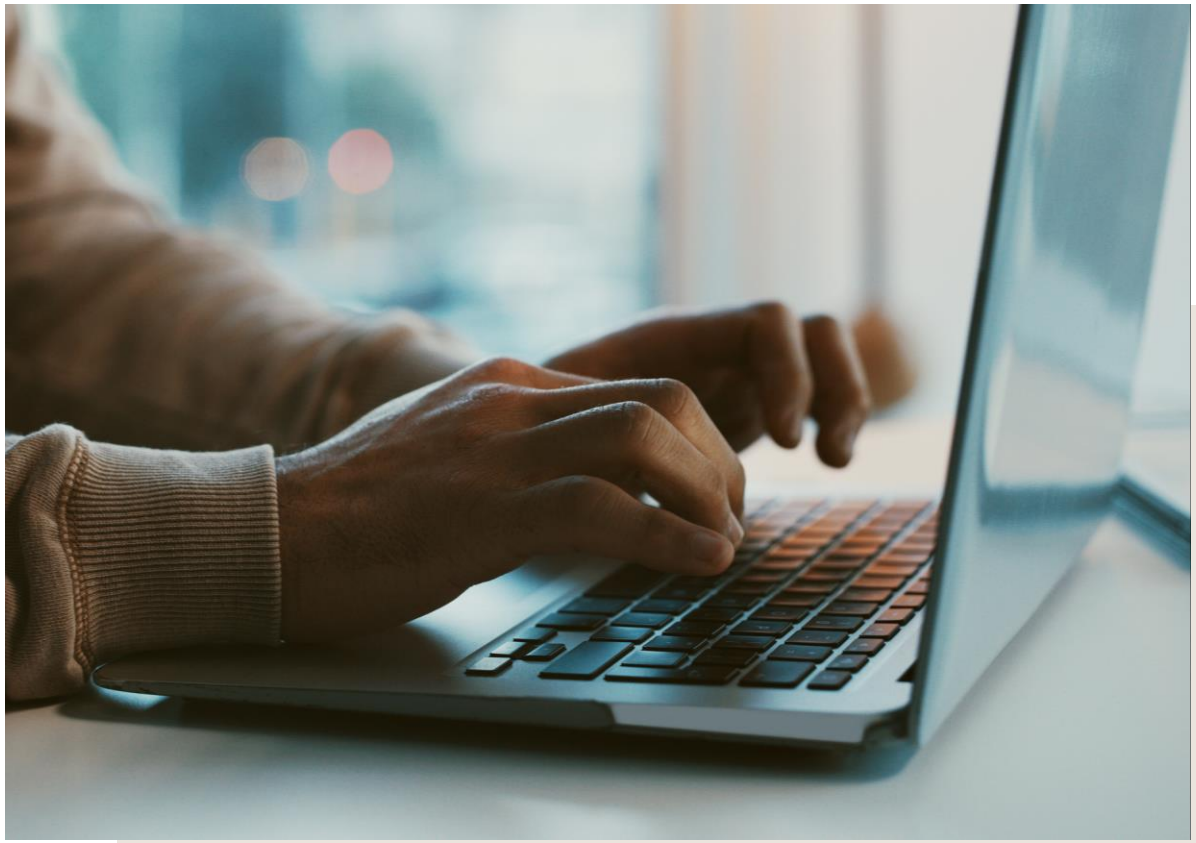
Incident Response Plan

Ransomware Guide

Technology

- Multifactor authentication (MFA)
- Offline, encrypted backups
- Phishing training for staff
- Business office training for verifying requests
- Engage experts immediately

Resources



EduPaths
Helping educators navigate their professional growth.

MISecure.org

KnowBe4
Human error. Conquered.

Cybersecurity for Educators – How to Become a Human Firewall

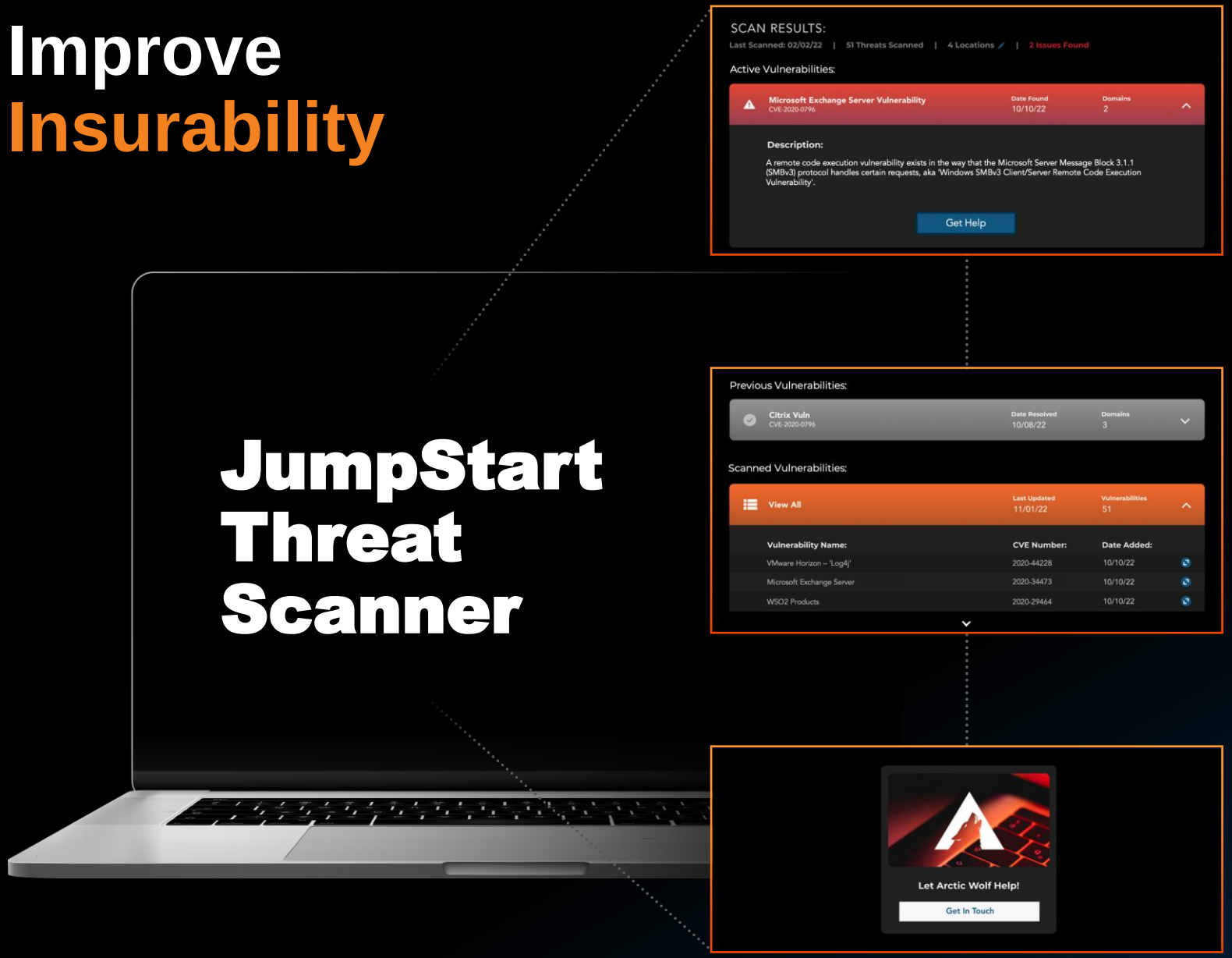
Course #01
- Passwords, Phising, MFA, …
- 1 SCECH credit
- FREE

Course #02
- PII, Sharing Data Securly, Recognice, Respond and Report
- .75 SCECH credits
- FREE

VECTOR SOLUTIONS | SafeSchools

Improve Insurability

JumpStart Threat Scanner



IDENTIFY

Our prioritized approach allows you to clearly see, remediate, and understand the most current and active threats that are present in your network.

Backed by Arctic Wolf Labs threat intelligence, Incident Response investigations, trillions of datapoints aggregated weekly across 4000+ client environments, and best-in-class 3rd party data sources, you can confidently find and fix the most severe threats first.

REMEDIATE

Neutralize imminent threats in your network with our guidance through education, resources, or additional assistance from the Arctic Wolf team.

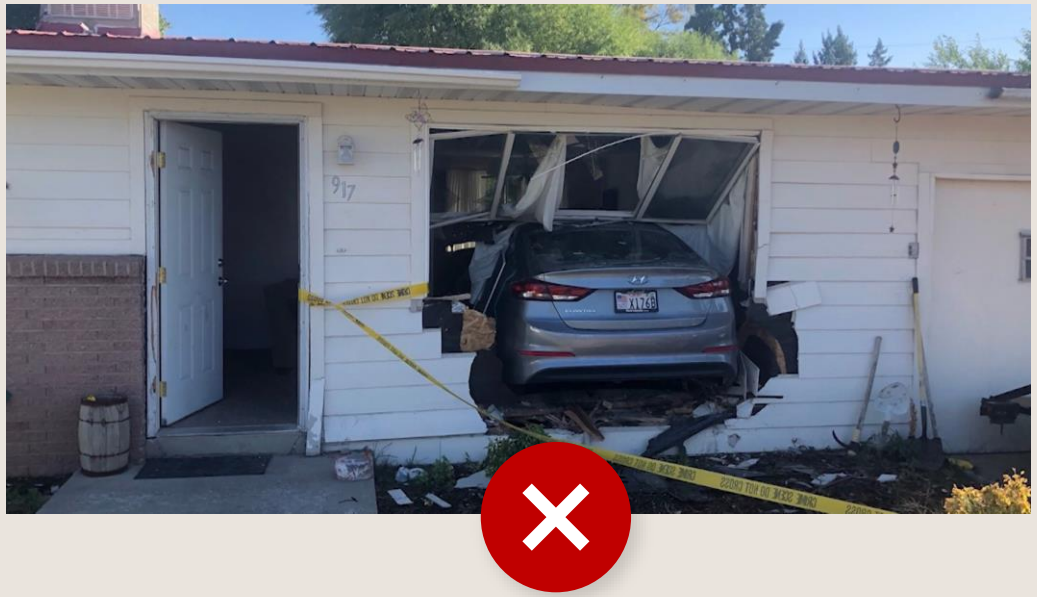
CONNECT TO EXPERTS

Seamlessly connect to the Arctic Wolf team and trusted partner network for any additional assistance in implementing security controls.

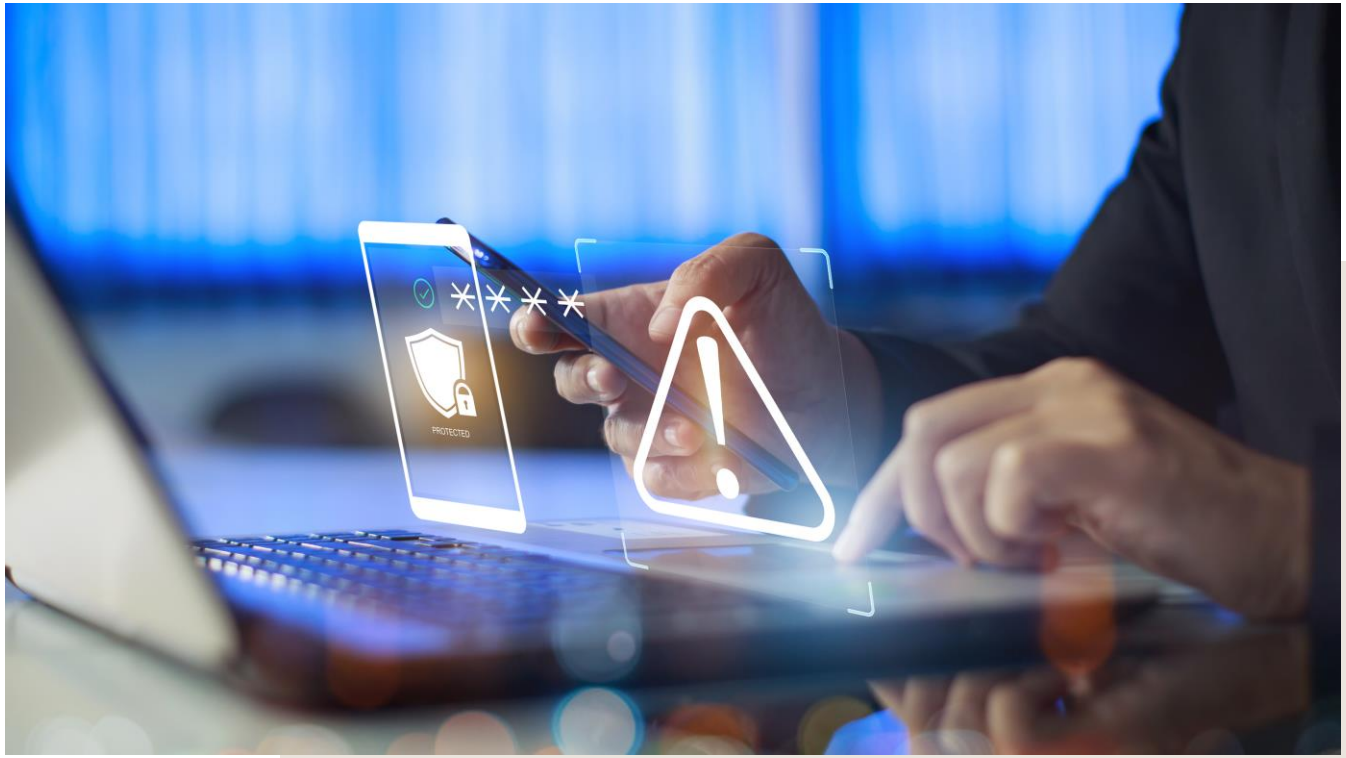
Arctic Wolf

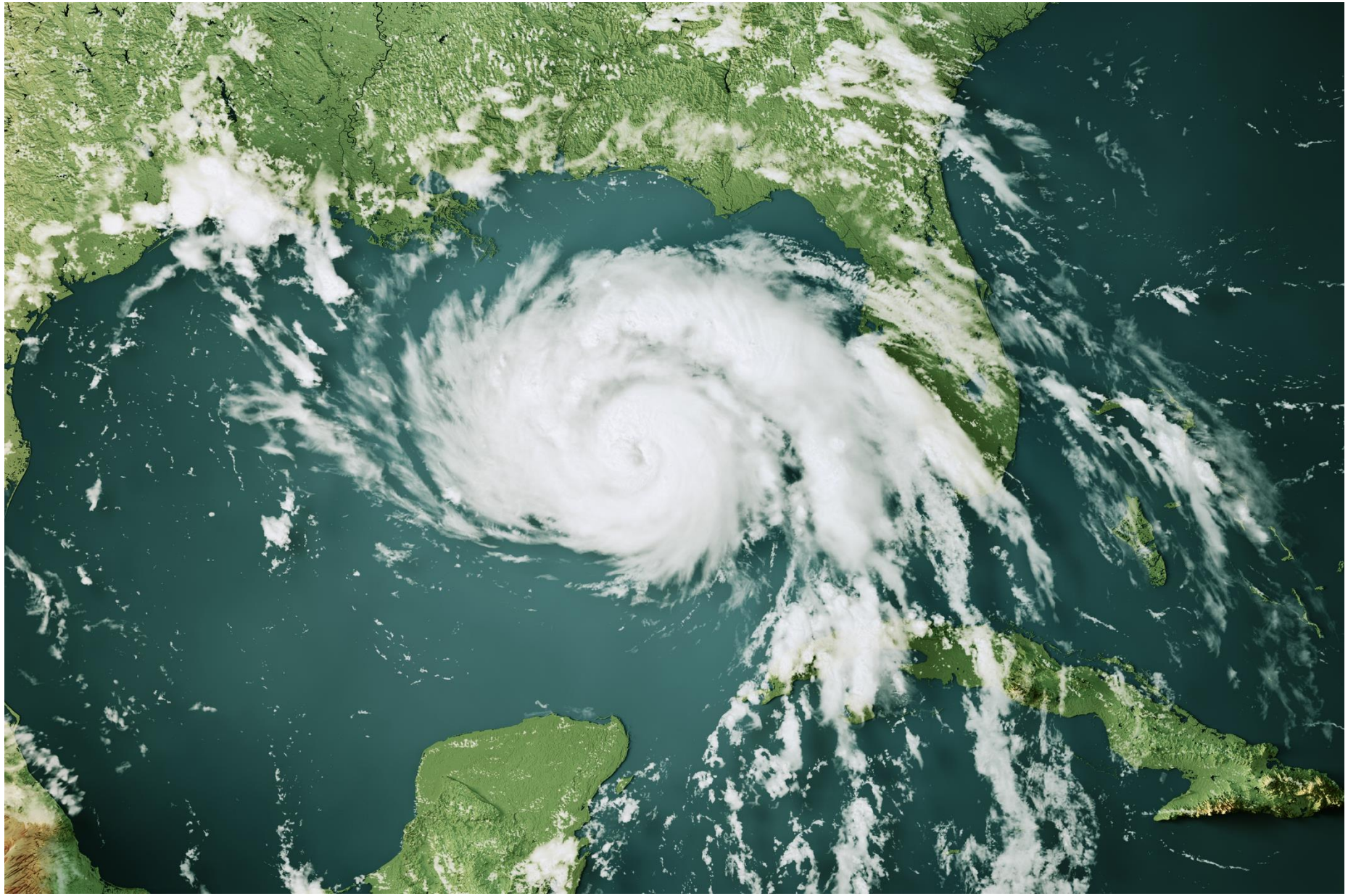
Cyber JumpStart Platform

External vulnerability scans are …



Cyber Security Landscape





What Is Cyber Insurance?

Cyber Insurance Changes?

- Renewals
  - Application process more challenging
- Lower Limits
  - Creating sublimit on amount of coverage
- Extortion/Ransom
  - Coverage may cease to exist in the future

Cyber Insurance Changes?

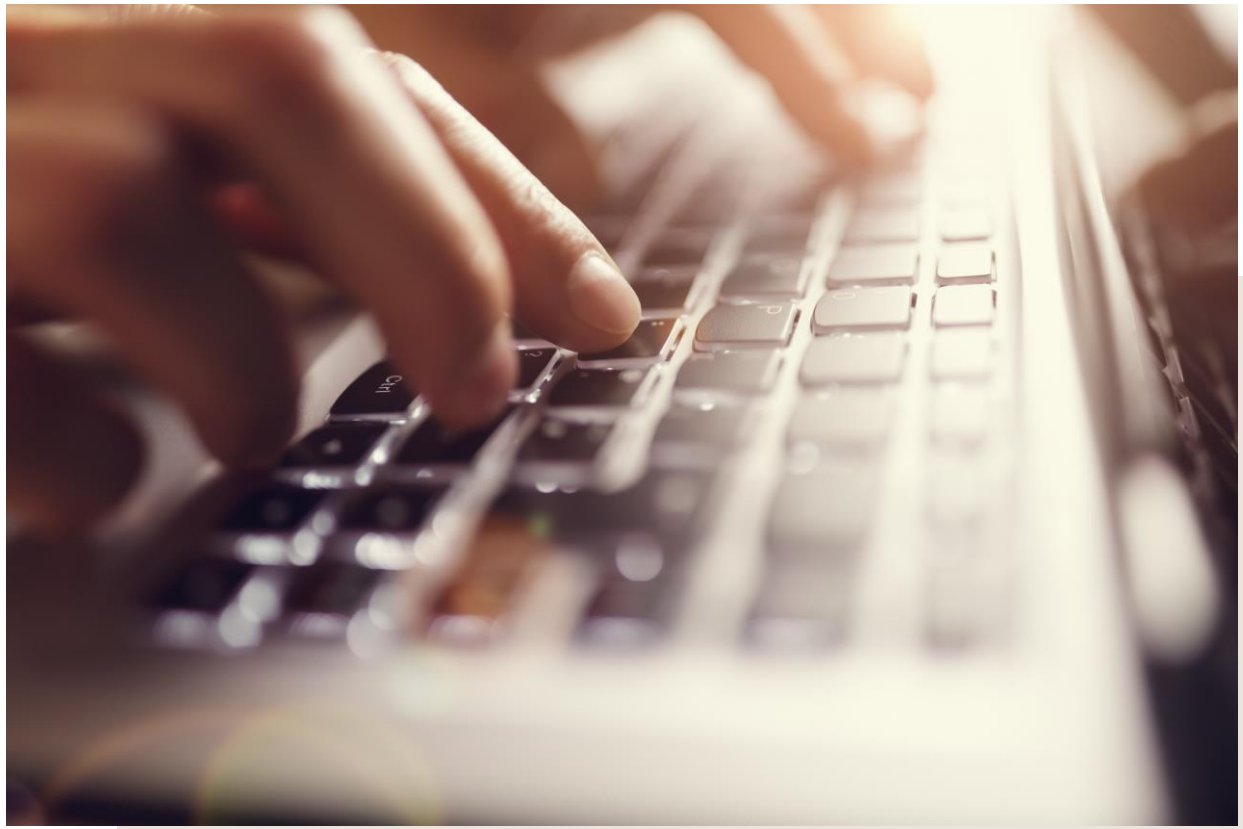
- Limited Market
  - Less appetite in the marketplace – will drive increased costs
- Increase Deductibles
  - Substantial increase in the marketplace
- Coinsurance
  - District paying for portion of claim cost
- Vulnerability Testing
  - Testing to conduct risk analysis

Future Requirements

From the Insurance Industry

- Phishing training
- Multifactor authentication (MFA) – remote access/critical information
- Backups offline/inaccessible to outsiders/encrypted/ regularly scheduled
- Endpoint protection and response (EDR) and/or managed detection and response (MDR)
- Limiting administrative access
- System security patches updated
- Close open ports
- **Vulnerability scans are coming…**

Financial Impact



The Cost

The impact of a breach extends beyond insurance costs

Relations

- Staff engagement
- Community frustration (paying ransom)

Insured Costs

- Deductible
- Premium

Disruption

- Downtime can be days to weeks
- Cancelled school
- Reconstruction of data

Non-Insured Costs

- IT security upgrades
- Employee wages (except overtime)
- Legal expense for updating cyber policies
- If ransom exceeds limit

Insurer Requirements

Deductible correlates to security

- No MFA for email
- No MFA for privileged users
- No EDR
- No advanced threat protection – O365
- End of life not segregated
- Users have local administrative rights
- No phishing tests
- No SOC
- No vulnerability scans
- Ad-hoc patching cadence

Questions?

Thank You!