

IT for the New Business Manager





Introductions



Furney Brown

Title

Plante Moran

Email@plantemoran.com



Matt McMahon

MiSecure Director

MAISA

MMcMahon@gomaisa.org



Nick Morse

Cyber Security Consultant

Kent ISD

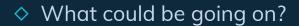
NickMorse@kentisd.org







Turn & Talk



- What's your role right now?
- ♦ How are you feeling?
- ♦ Next steps?







PREPARATION CONTAINMENT ERADICATION RECOVERY LESSONS LEARNED





BAD RABBIT

If you access this page your computer has been encrypted. Enter the appered personal key in the filed below. If susseed, you'll be provided with a bitcoin account to transfer payment. The current price is on the right.

Once we receive your payment you'll get a password to decrypt your data. To verify your payment and check the given passwords enter your assigned bitcoin address or your personal key.

Time left before the price goes up

41.18:14

Price for decryption:



Enter your personal key or your bitcoin address





Turn & Talk



- What happens if the Internet goes down?
 - What systems are impacted?
- Do you need to communicate with anyone?
- Can you hold school tomorrow?





PREPARATION DENTIFICATION CONTAINMENT ERADICATION RECOVERY LESSONS LEARNED





Two months ago...

- Coach received fake email requesting info for a tournament that had been posted to the website
- Entered credentials but errored out
- Never thought about it again
- Hacker used credentials to VPN into network (no MFA)
- Sat inside for 2 months gathering info
- Finally leveraged a vulnerability on VMWare and ransomed the server infrastructure.



Be prepared for questions

- ♦ How will you inform your staff? The public?
- ♦ Can we hold school tomorrow?
- Prepare a statement for the media
- What do you tell your board?
- ♦ How will you run payroll?





How prepared are





Michigan Headlines



Lansing Community College @LCCStars · 20h

In response to an ongoing cybersecurity incident, LCC will suspend all college classes, events, practices and activities beginning immediately and continuing through Thursday, March 16, and Friday, March 17.



LCC is back online! See lcc.edu/alert for details. Technical support begins at 8 a.m.









What is METL?





A "leadership network" within MAISA ISD IT Technology Directors, meeting monthly

Vision for the Future

The Michigan Education Technology Leaders will be a proactive, key decision-making group that fosters collaboration and efficiencies on projects, issues and policy regarding technology in education.

Mission

METL's mission is to provide leadership and direction focused on technology in education among Michigan's ISDs/RESAs.



http://MiSecure.org/

- November 2018: Essential Cybersecurity Controls for K12
- November 2019: Published & delivered
 - 18 CISA Controls
 - By MI K12 for MI K12
- 2019: MISecure website
- 2020: Cybersecurity talking points
- 2020: Cybersecurity training
- ♦ 2021: MiSecure Quick Self-Audit
- 2023: MiSecure SOC & MDR
- 2024: Incident Response Planning tools













About **Professional Learning** Contact Resources

Essential Cybersecurity Practices for K12



















Cyber Term: Phishing



 the fraudulent practice of sending emails or other messages <u>purporting to be from reputable companies in</u> <u>order to induce individuals to reveal personal information</u>, such as passwords and credit card numbers.

Example of abuse:

- Case Study: K-12 District Enrollment 5000k
 - Threat Actor Pretended to be superintendent
 - Wire transferred \$154,000 and \$169,000 to fraudulent vendor

Solution:

- Security training, fake phishing campaigns
- KnowBe4 (\$17/year/FTE), Wizer, SecureHalo

COST:

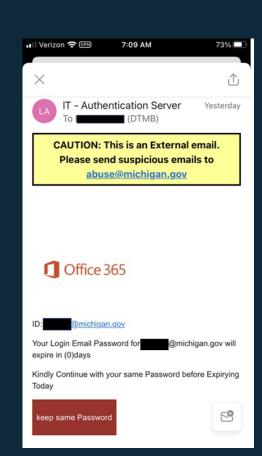
Subscription















Subscription

Cyber Term: MFA

Explanation

- Multi-Factor Authentication / 2FA
- Phone, email, text, app (e.g. Authy)

The "why"

- MFA protects you
- All critical systems, email, remote access
- Push back
 - Some systems require MFA *every* time
 - Use of personal devices → yubi keys ~\$25 ea.

Solution:

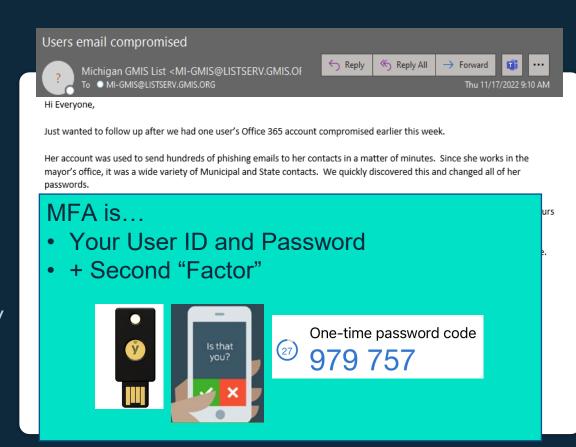
- Google/Microsoft included
- PowerSchool example SSO
- Duo for systems that don't support it
- \$36/account/year for RDP

Multi Factor Authentication

- ♦Something you Know:
 - Password
- ♦Something You Have:
 - Phone, Code, Token
- ♦"Included" in Most Apps:
 - GSuite
 - Microsoft 365
 - Munis via Azure
- **♦**Cost/Benefit
 - Slight Problem 4U
 - Major Problem 4 bad guy

Pro Tip:

Enable MFA wherever you can (personally):
Email, Bank Account, etc.









Cyber Term: Patch Management / End of Life

Explanation

 An attempt to mitigate software vulnerabilities by actively checking for updates or replacing hardware where the vendor is no longer actively closing software vulnerabilities.

Example of abuse:

- End of life (EOL) issues (unpatchable)
- Rogue/non-supported devices
- loT

Solution:

Microsoft Intune; PDQ Deploy & Inventory; PatchMyPC

COST: Typically by device or FTE.

Subscription





Explanation

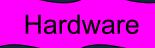
What is it?

Example of abuse:

- Cloud too
- Target for ransomware
- Offsite, off network, air-gap, encryption, immutable

Solution:

- Veeam
- Synology







Cyber Term: Incident Response Plan (IRP)

Explanation

• The documentation of a predetermined set of instructions or procedures to <u>detect</u>, <u>respond to</u>, <u>and limit consequences</u> of a malicious cyber attacks against an organization's information systems(s).

Example of abuse:

Panic

Solution:

- MiSecure IRP
- Michigan Cyber Partner IRP template
- Consultant

COST:

People Time



MiSecure IRP tools "CRAWL"

MiSecure	Incident Re	sponse Quick Refer	ence Last up	dated: [Date I
Where are the printed conic	s of the Incident Dec	ponse documents? [enter le	ncations herel	
vincie are are printed copie	3 of the incident res	ponse documents: [enter n	ocadono nerej	
Key Information				
Command Center Location				
Alternative Communications				
Location of Passwords				
Network Diagram				
List of IP Addresses, VLANs & Ros				
How to Disconnect from The Ir	ternet			
Incident Response Tear	n Members			
Role	Name	Email	Phone	Cell
Cyber Inc. Res. Management				
Cyber Inc. Res. Coordinator				
Lead Tech Engineer				
Admin Support / Inc Recorder				
Cyber Security Analyst				
Cyber Security Arialyst				
Response Contacts				
Role	Name	Email	Phone	Other
Cyber Insurance				
Legal Representative				
Board President				
ISD Support				
тар заррот				
External Resources				
Role	Name	Email	Phone	Other
Michigan Cyber Command Center (MC3)	Michigan State Police	mc3@michigan.gov	1-877-642-9237 1-877-MI-CYBER	
		soo@cisecurity.org	1-866-787-4722	
MS-ISAC Cyber Incident				
MS-ISAC Cyber Incident Response Team (CIRT)				
MS-ISAC Cyber Incident				
MS-ISAC Cyber Incident Response Team (CIRT)				
MS-ISAC Cyber Incident Response Team (CIRT) Internet Service Provider	Name	Email	Phone	Other
MS-ISAC Cyber Incident Response Team (CIRT) Internet Service Provider Support Systems	Name	Email	Phone	Other
MS-ISAC Cyber Incident Response Team (CIRT) Internet Service Provider Support Systems Role	Name	Email	Phone	Other
MS-ISAC Cyber Incident Response Team (CIRT) Internet Service Provider Support Systems Role EDR / MDR / XDR	Name	Email	Phone	Other



MiSecure IRP tools "WALK"



Incident Response Worksheet v2.0

Last updated: [Date Here]

Where does this document live?

Digital location: [Enter the on-line location]

Physical location: [Enter the location of a printout of this document, often in the Emergency Operations Plan]

Key Information

The resources listed below will almost certainly be critical during a cybersecurity incident. You should list where both physical and digital versions of this information exist. You should develop a process to keep an off-network version up-to-date.

Resource	Purpose / Note
Command Center Location [Enter Here]	This is the physical location in the building, away from technical operations, where the incident response team can eat, meet & retreat. This should not be in the IT operational area.
Out-of-band (OOB) Communication Method [Enter Here]	Define how you will communicate during the event. Members of the team will need access to devices that are secured, probably not attached to the local domain. All members will need access to a site such as Slack, Where messages can be securely exchanged and files shared. Make sure your team does not use work email accounts on systems such as Slack. This should be tested regularily.
Location of Passwords [Enter Here]	Where are your passwords for key systems stored and/or backed up? This may be a backup of a Bitwarden or KeePass system or a simple printout of each team member's passwords.
Network Diagrams [Enter Here]	Where is the most recent print out of your network diagram. Network diagrams should include important IP and VLAN information as well as the physical location of MDF and IDF locations.
IP Addresses, VLANs & Routing Tables [Enter Here]	This should be a print of a digital backup of your IP address database. Your core routing table should also be included
How To Disconnect From The Internet [Enter Here]	This should list the physical location of the router / switch port(s) that need to be physically disconnected in order to disconnect from the Internet.

1. Incident Response Team Members

Enter the name of the person that will be primarily responsible for each role. You may consider adding a secondary person if feasible. One person may fill multiple roles. Individuals from other partner organizations may also fill roles. Make sure each member is notified and reminded regularly of their role and understand their responsibilities. Enter the name here and the contact information in the Appendix.

Role	Contact(s)	What They Do	
Cyber Incident Response Management Usually the superintendent, associate superintendent or principal. They need to have the authority to make major operational decisions for the district.	Name Email Phone	Decide whether to cancel school Provides authorization for major steps such as whether to contact legal or insurance Works very closely with the Coordinator to make these decisions Support the ongoing effort to recover from an event Coordinate the effort of the entire team.	
Cyber Incident Response Coordinator Usually the IT Director. For smaller districts or bigger crises, this may be the ISD IT Director	Name Email Phone	Provide overall support to the entire team. Make sure the right people are doing the right things. Communicate to Administration.	
[Lead] Technical Engineer(s) Whoever manages the servers, backups, networks and firewalls.	Name Email Phone	Review extent of compromise Able to change passwords and policies Review EDR reports / alerts Access user activity logs	

Role	Contact(s)	What They Do		
Technical Support Team Multiple names may go in here. Google Workspace admins, Field technicians. This team will change depending on the specifics of the event	Name Email Phone	Review user email activity Access server logs Manage firewalls and review logs Check various servers and systems for compromise and manage those servers		
Administrative Support / Incident Recorder Usually an administrative assistant familiar with the technology department	Name Email Phone	Maintains the incident logs Provide lunches Run errands Manage public communications Manage staff communications Manage parent/student communications In the staff communication methods for parents Set up a call certifier Talk to press or prepare talking points for other leaders Lodates accidal media for front-line communications		
Communications / Media Team The PR or HR Director if there is one or someone from the Business Office. Could also be a principal or other administrator	Name Email Phone			
Data Governance Usually principals or guidance counselors. Whoever manages student data imports and exports	Name Email Phone	Determine severity of data leaks Identify most likely data sources that may have been breached Contact appropriate reporting authorities		
Business / Finance The Business Manager and possibly other staff from the business department	Name Email Phone	Review financial systems Contact Cyber Insurance Authorize emergency spending Place holds on accounts		

2. Response Contacts

These are individuals/organizations that you will likely need to notify and/or work with, but not part of the IRT.

Role	Contact(s)	What They Do	
Cyber Insurance If you have cyber liability insurance, they can provide legal representation, forensics, mitigation and recovery resources.	Namo Email Phone	Immediately. They should be contacted as soon as you determine you have a serious cyber incident. The business office will be able to identify whether you have cyber fability insurance and the proper contact procedures.	
Legal Representative All communication with staff and the public needs to be reviewed by your district's legal This may be provided by your cyber insurer	Name Email Phone	You can get this from your business manager and/or superintenden As soon as an incident is confirmed	
Board President Typically contacted by the Superintendent or the Cyber Incident Response Manager.	Name Email Phone		
ISD Technology Director If you are a local district and utilize the ISD for technology services (networking frewalls, Internet, etc), they will play a critical role at all stages in the event and need to be contacted in order to protect other networked entities.	Name Email Phone	As soon as an incident is confirmed	

3. Extended Resources

You may not need all of these resources



MiSecure IRP tools Download

https://misecure.org/incident-response-planning-tools/





Cyber Term: Disaster Recovery (DR) Plan

Explanation

• A written plan for processing critical applications in the event of a major hardware or software failure or destruction of facilities.

Example of abuse:

My systems are ransomwared. What do I do?

Solution:

Find a template or work with your ISD

COST:





Cyber Term: Business Continuity Planning (BCP) or Continuity of Operations

Explanation

• The documentation of a predetermined set of instructions or procedures that describe how an organization's mission/business processes will be sustained during and after a significant disruption.

Example of abuse:

How do I continue to operate if my systems are down?

Solution:

- Find a template or work with your ISD
- METL is currently working on a guide

COST:





Cyber Term: Assessments / Pen Test

Explanation

• What is it?

Example of abuse:

Solution:

- MiSecure Quick Self-Audit
- TetraDefense
- CISA Cyber Hygiene
- MIDEAL Assessments
- Arctic Wolf
- Cyber insurance audits
- Financial audits

People Time



MISecure Quick Self - Audit

Based on *Essential Cybersecurity Practices for K12*

Single page, 21 questions in 5 categories

By MI K12 for MI K12

Encourage conversations: low bar, no right/wrong, easy entry, **informal**

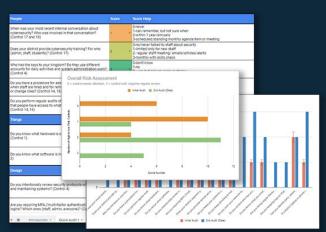
Can be done in minutes, not days

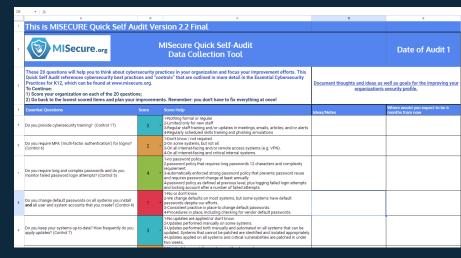
Get it: https://misecure.org/selfaudit/





MISecure Quick Self - Audit





Get it: https://misecure.org/selfaudit/







Cyber Term: EDR/xDR/MDR

EXPLANTATION

 Detect Security Incident, Contain the Incident, Investigate and Remediate

EXAMPLE:

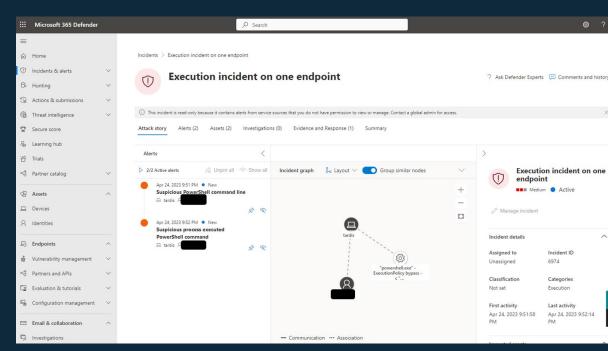
Our example (detection)

SOLUTION/VENDOR:

 Microsoft Defender, Sophos intercept X, CrowdStrike Falcon

COST:

Subscription





Cyber Term: EDR/xDR/MDR

EXPLANTATION

 Detect Security Incident, Contain the Incident, Investigate and Remediate EDR: Endpoint Detection Response

EXAMPLE:

Our example (detection)

SOLUTION/VENDOR:

 Microsoft Defender, Sophos intercept X, CrowdStrike Falcon XDR: Extended Detection and Response

NDR: Network Detection and Response

COST:

Subscription

MDR: Managed Detection and Response



Section 97g funding

Background

- Section 97g of 23-24 SoM budget
- K12 funding for \$9M for at least 3 years
- Began Oct 1, 2023
- Purchasing Apr 29, 2024

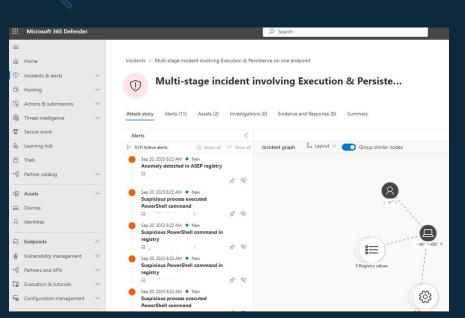
Key language

- Form a Statewide Security Operations Center (SOC)
- Form an Advisory Board
- Provide Managed Detection and Response (MDR)
 - for Critical Technology Infrastructure
- Train, monitor and track district progress
- Prepare a summary report to fiscal agencies









What is Managed Detection and Response (MDR) software?

MDR is a software service which combines technology and human expertise in monitoring and responding to digital threats 24x7



MiSecure K - 12 Operations Center Incident Response Stages

LEARNED

LEARNED

LEARNED

LEARNED

LEARNED

CONTAINMENT

ERADICATION

IDENTIFICATION

PREPARATION

LESSONS

RECOVERY



Cyber Term: SOC/SIEM

Explanation

- Security Operations Center (SOC); a team of experts that proactively monitor an organization's ability to operate securely.
- Security Information and Event Management (SIEM) tool

What is it?

• Usually a managed service that monitors your organization

Solution:

• Achilles Shield, Arctic Wolf, Rehmann, VDALabs, BitLyft

COST:

Subscription



Cyber Term: SOC/SIEM

Explanation

- Security Operations Center (SOC); a team of experts that proactively monitor an organization's ability to operate securely.
- Security Information and Event Management (SIEM) tool

What is it?

• Usually a managed service that monitors your organization

Solution:

• Achilles Shield, Arctic Wolf, Rehmann, VDALabs, BitLyft

MiSecure

COST:



No cost



How to Pay for it All

How many of you leverage or rely on bond funding for technology projects?

How many of you have an ISD that provides or could provide some of these services for you?

The main focus: Do what you can as you can - do something!

Bond funding...

- CapEx items are acceptable (including appliances and operating systems)
- OpEx items are generally not acceptable (software and subscriptions)



How to Pay for it All

How does this impact your cloud strategy?

How does this impact your cyber strategy or technology roadmap?

Managed services or subscriptions...

- Cyber tools and initiatives often rely on both
 - Exceptions: appliances with perpetual licensing
- XaaS



Cybersecurity is a process

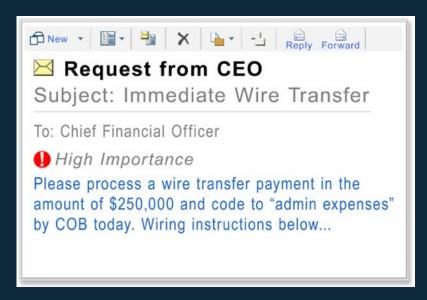
Keep polishing...



Less technical threats

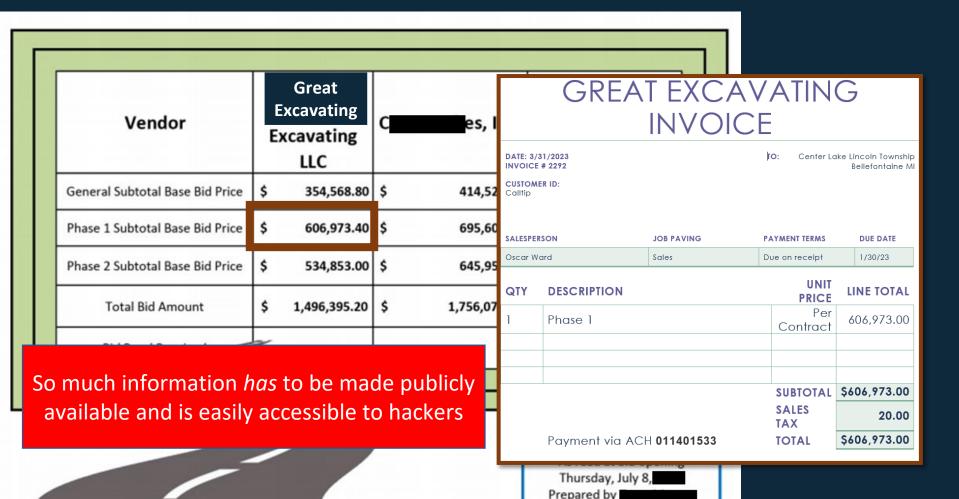
♦Largest Losses = Online Fraud aka Business Email Compromise

♦Largest Disruption of Operations = **Ransomware**





Scams can also take advantage of public information:



Preventing Email Scams

- ♦ Develop good internal processes
 - Talk about it regularly
 - Training
 - MFA
 - Confirmation via secondary channel
 - Require multiple people to process payments
 - Thank people fo being cautious





Conclusion

- A lot to digest!
- MANYthings that cost money
- SOME can be done with existing tools, but require effort
- ♦ Every district that has been hit, has then made the investment
- Drastically reduce your risk with a planful approach
- ♦ Start somewhere... anywhere
- Little fires will happen, let's keep them contained



- 1. Use tri-fold to start talking about cybersecurity
- 2. Schedule a MiSecure Quick Self Assessment today
- 3. Ask about how to get MDR on your key devices

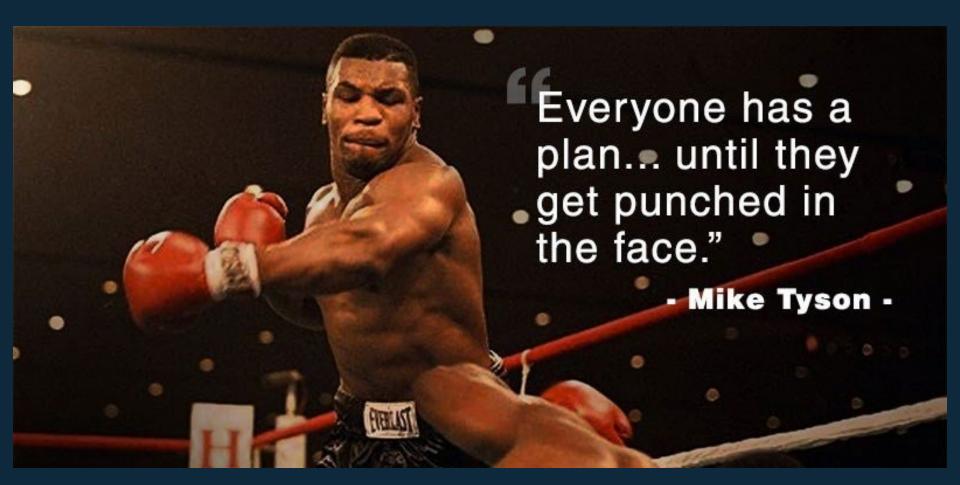




There are only two types of companies: those that have been hacked, and those that will be. Even that is merging into one category: those that have been hacked and will be again.

— Robert Mueller —

AZ QUOTES





Contact Information



Furney Brown

Title

Plante Moran

Email@plantemoran.com



Matt McMahon

MiSecure Director

MAISA

MMcMahon@gomaisa.org



Nick Morse

Cyber Security Consultant

Kent ISD

NickMorse@kentisd.org