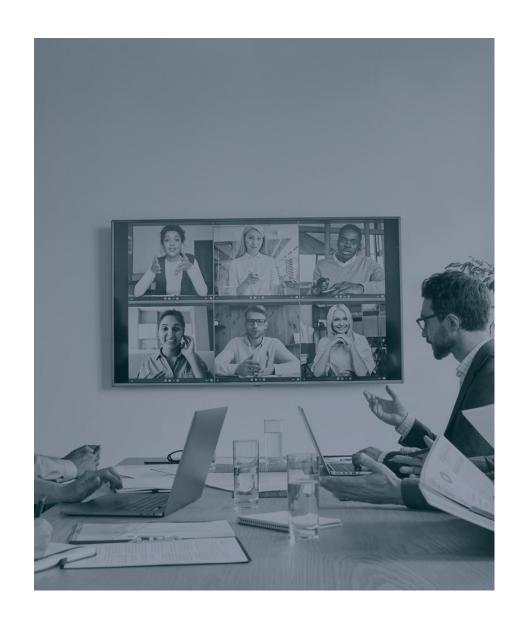




Trends and Defenses Against Ransomware

Understanding ransomware threats and your response





Your Commentators





David Branscome

Global Partner Solutions - Security
Architect





Micah Linehan

Field CTO, Security

eGroup | ENABLING TECHNOLOGIES



Chris Stegh

CTO Microsoft MVP



Agenda Items



- Recent Ransomware Headlines and TTPs
- Microsoft's 2024 Digital Defense Report
- NIST CSF Basics and Microsoft Tools
- MITRE Integration in Microsoft Threat Intelligence
- Final Thoughts for Enterprise Defenders

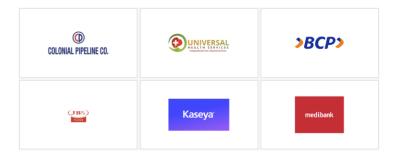


Medusa – Turning Your Files into Stone





- Targeted Attacks Medusa ransomware is known for its selective and strategic targeting of specific organizations and individuals.
- Advanced Tactics The ransomware employs sophisticated techniques and tools to infiltrate systems and encrypt files, making it a formidable threat.
- **Complex Encryption** Medusa utilizes advanced encryption algorithms to lock victim's files, making it difficult to recover data without paying the ransom.
- **Evolving Tactics** The Medusa operators continuously update their methods to adapt to new security measures and bypass defenses.



Asked to MovelT elsewhere, ClOp clips Cleo



Clop announcement. We have data of many companies who use cleo. Our teams are reaching and calling your company and provide your special secret chat. If you are not sure if we have your data. emails us here. YOU HAVE UNTIL FRIDAY IF ALL THE DATA IS PUBLISHED AFTER THAT Below you can find a list of companies that were notified but ignored and did not contact us: ER.COM - WILL BE PUBLISHED 18.01 SATURDAY . .SPLIN - WILL BE PUBLISHED 18.01 SATURDAY DX.COM - WILL BE PUBLISHED 18.01 SATURDAY AS.COM - WILL BE PUBLISHED 18.01 SATURDAY AC.COM - WILL BE PUBLISHED 18.01 SATURDAY EBANK COM - WILL BE PUBLISHED 18.01 SATURDAY COM - WILL BE PUBLISHED 18.01 SATURDAY EDU - WILL BE PUBLISHED 18.01 SATURDAY LEDBO COM - WILL BE PUBLISHED 18.01 SATURDAY COM - WILL BE PUBLISHED 18.01 SATURDAY

- ClOp is a Russian-speaking cybercriminal gang
- Known for large-scale ransomware and extortion campaigns
- In 2023, C10p compromised MovelT file transfer service
- In 2025, C10p exploited **CVE-2024-50623**, in Cleo file sharing and transfer service (are you detecting a theme?)
- Attack on Cleo compromised data on 60+ organizations

24x7 MXDR for Manufacturer

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ENABLINGTECHNOLOGIES



•Industry: Food products

•Challenge: FDA compliance and securing critical IT infrastructure at multiple plants each with \$1M daily business

Technical Solution: Microsoft E5 Defender Suite, Sentinel

Services: ThreatDefender (Managed Security Services)

Path To Success

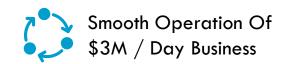
- Steady migration to M365 E5 security
- Setup of Defender Suite and Sentinel

Breach Thwarted:

- 1. Our team detected high-severity events tied to a known ransomware group using automated monitoring systems.
- 2. A compromised shared account with additional privileges was executing unauthorized actions.
- 3. Our team swiftly contained the threat by disabling compromised accounts, shutting down the Remote Desktop Web Server, and enhancing monitoring.
- 4. Collaboration with the client's Forensic Incident Response Team ensured thorough investigation containment.
- 5. The attack was stopped before any data encryption occurred.

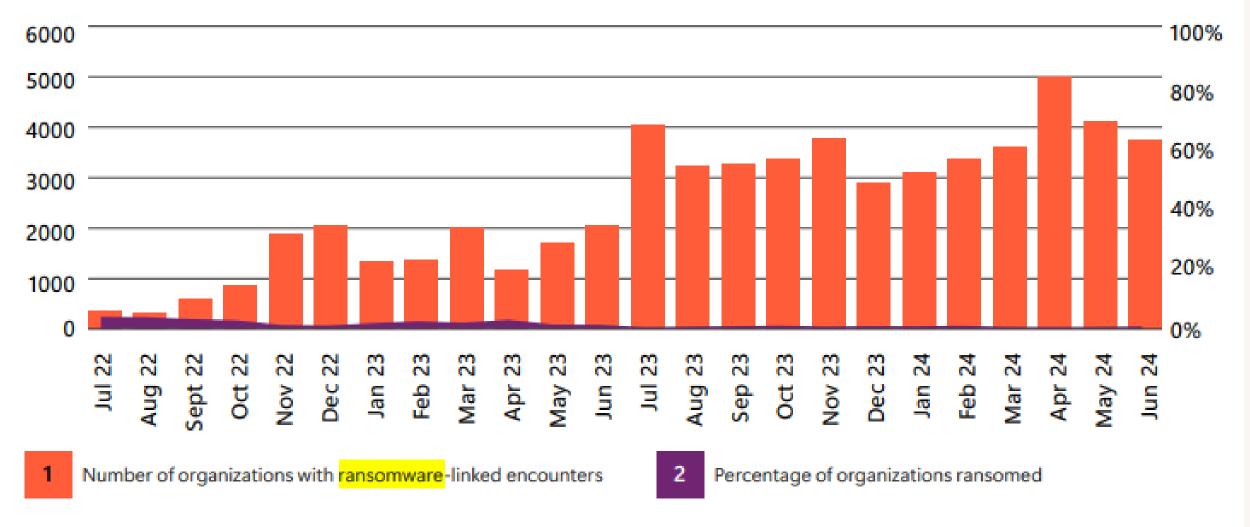
Results:







Organizations with ransom-linked encounters continues to increase while the percentage of those ransomed is decreasing (July 2022–June 2024)



Although organizations with ransom-linked encounters continues to increase, the percentage that are ultimately ransomed (reaching encryption stage) decreased more than threefold over the past two years.

Source: Microsoft Defender for Endpoint

Microsoft's 2024 Digital Defense Report



Overview of Microsoft's Digital Defense Report





- People are still too predictable
- Al is a double-edged sword
- Must address technical debt and outdated security controls

MITRE and Microsoft Defender Products

Microsoft Defender for Endpoint

Initial Access	Execution	Persistence	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Lateral Movement	Collection	Command and Control	Exfiltration	Impact
Drive-By Compromise	CMSTP	Accessibility Features	Access Token Manipulation	Access Token Manipulation	Account Manipulation	Account Discovery	Application Deployment Software	Audio Capture	Commonly Used Port	Automated Exfiltration	Data Destruction
Exploit Public-Facing Application	Command-Line Interface	Account Manipulation	Accessibility Features	Binary Padding	Brute Force	Application Window Discovery	Distributed Component Object Model	Automated Collection	Communication Through Removable Media	Data Compressed	Data Encrypted for Impact
External Remote Services	Complied HTML File	AppCert DLLs	AppCert DLLs	BITS Jobs	Credential Dumping	Browser Bookmark Discovery	Exploitation of Remote Services	Clipboard Data	Connection Proxy	Data Encrypted	Defacement
Hardware Additions	Control Panel Items	AppInit DLLs	Applnit DLLs	Bypass User Account Control	Credentials in Files	Domain Trust Discovery	Logon Scripts	Data from Information Repositories	Custom Command and Control Protocol	Data Transfer Size Limits	Disk Content Wipe
Replication Through Removeable Media	Dynamic Data Exchange	Application Shimming	Application Shimming	CMSTP	Credentials in Registry	File and Directory Discovery	Pass the Hash	Data from Local System	Custom Cryptographic	Exfiltration Over Alternative Protocol	Disk Structure Wipe

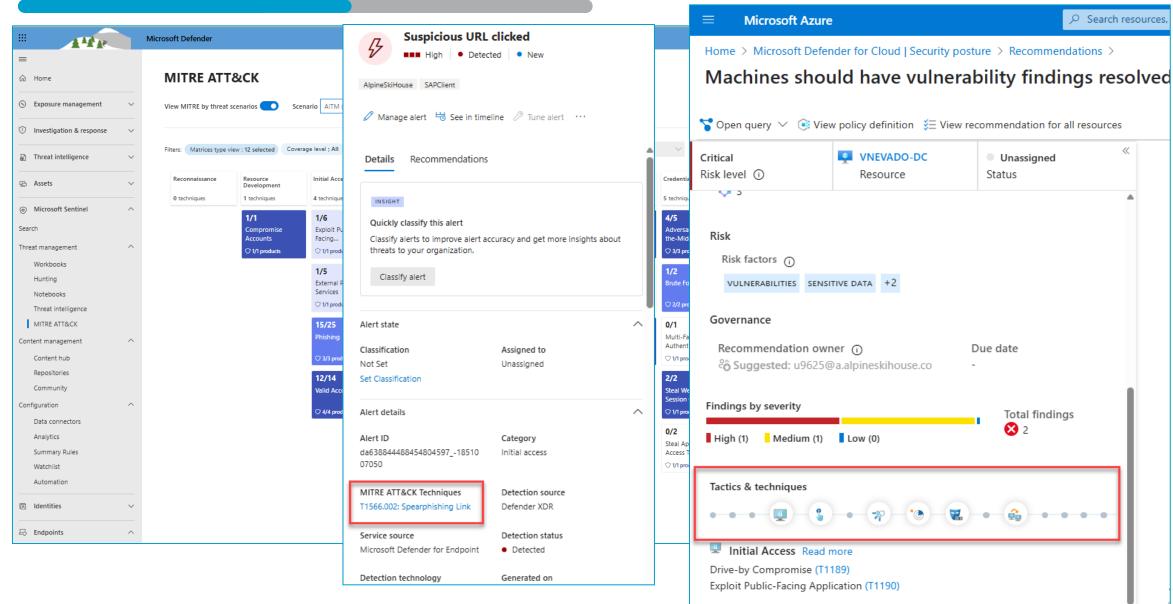
Microsoft Defender for Office 365

Microsoft Defender for Identity

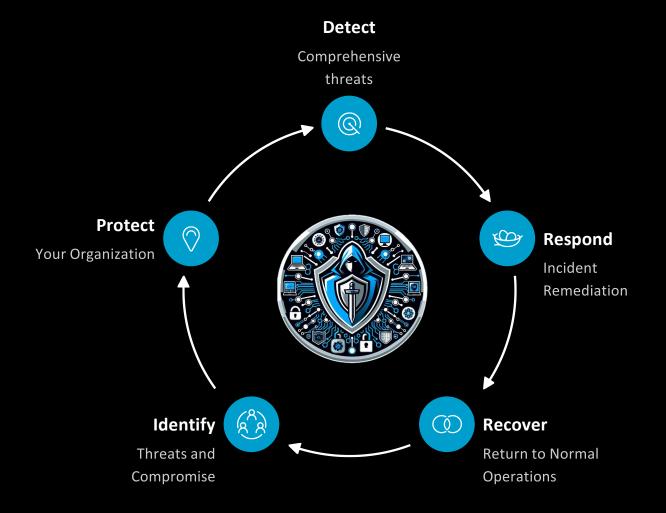
Microsoft Defender for Cloud Apps

Where ATT&CK TTP's are referenced





MITRE ATT&CK with ThreatDefender MXDR



24x7 MXDR for Carolina Eastern

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Microsoft

- •Line of Business: \$600M ag-business with over 40 locations and 500 employees
- •Challenge: "We were always in a reactive state with our security. Our outlook was 'We are not trying to get hacked.' We thought we were doing fine, but we didn't know. We were hacked, and it was a lot of pain." -CFO

Breach Background:

1. Prior to eGroup Enabling Technologies' involvement, client was hacked.

Technical Solution: Microsoft E5 Defender Suite, Sentinel

Services: ThreatDefender and IT Managed Services

Path To Success

 Post-breach, we rapidly deployed the Microsoft Defender Suite and Sentinel

Results:

"I feel a lot more secure. I know every company's going to get hacked. Just being able to react is key."

-CFO Tom Hallex



NIST CSF and Microsoft Tools





What is the NIST Cybersecurity Framework?

A voluntary, risk-based set of guidelines, standards, and best practices to manage cybersecurity risk for critical infrastructure organizations.



Purpose of the NIST CSF

Helps organizations manage and reduce cybersecurity risk through a flexible, repeatable, and costeffective approach.



Five Core Functions

The NIST CSF consists of five core functions: Identify, Protect, Detect, Respond, and Recover.



Adoption and Implementation

The NIST CSF can be customized and implemented by organizations of all sizes and industries to address their unique cybersecurity needs.

The NIST Cybersecurity Framework provides a comprehensive and flexible approach to managing cybersecurity risk, helping organizations of all sizes and industries strengthen their security posture and enhance their overall resilience.



Purview Compliance Manager Microsoft Secure Score **Defender for Cloud** Sentinel

Defender for Endpoint Defender for Servers Defender for Cloud Apps

Entra ID Intune

Purview Information Protection

Azure Site Recovery OneDrive File Restore

Defender for Endpoint Defender for Identity Defender for Cloud Apps Defender for Office 365

Entra ID Purview Sentinel

Azure Backup

Intune

NIST RESPOND Cybersecurity PROTECT Framework

DETECT

GOVERN

Defender for Endpoint Defender for Office 365 **Defender for Cloud Apps Defender Vulnerability Management Defender for Cloud Defender for Servers** Entra ID Intune

Microsoft

Security

Defender for Endpoint Defender for Identity Defender Threat Intelligence Entra ID

Defender for Office 365 **Defender for Cloud Apps Defender for Storage** Sentinel Purview



NIST CSF Core Functions

Identify

Protect

Detect

Respond

Recover

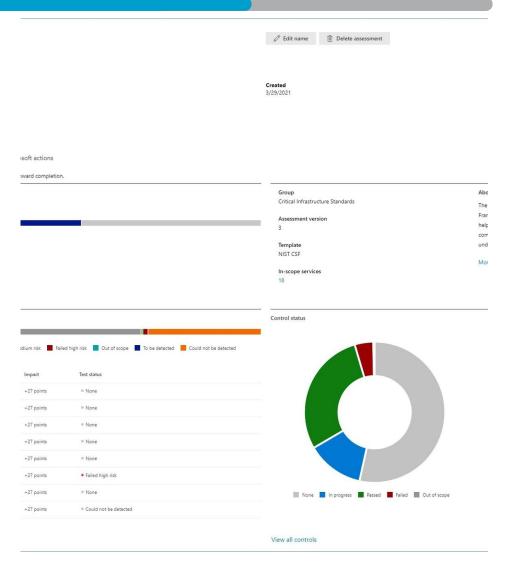
Develop the organizational understanding to manage cybersecurity risk to systems, assets, data, and capabilities.

Develop and implement the appropriate safeguards to ensure delivery of critical infrastructure services. Develop and implement the appropriate activities to identify the occurrence of a cybersecurity event. Develop and implement the appropriate activities to take action regarding a detected cybersecurity incident.

Develop and implement the appropriate activities to maintain plans for resilience and to restore any capabilities or services that were impaired due to a cybersecurity incident.

Leveraging Microsoft for NIST CSF





Comprehensive Security Coverage

The Microsoft Defender Suite provides a unified platform that addresses multiple aspects of cybersecurity, including endpoint protection, threat detection, and response, aligning with the various NIST CSF categories.

Streamlined NIST CSF Implementation

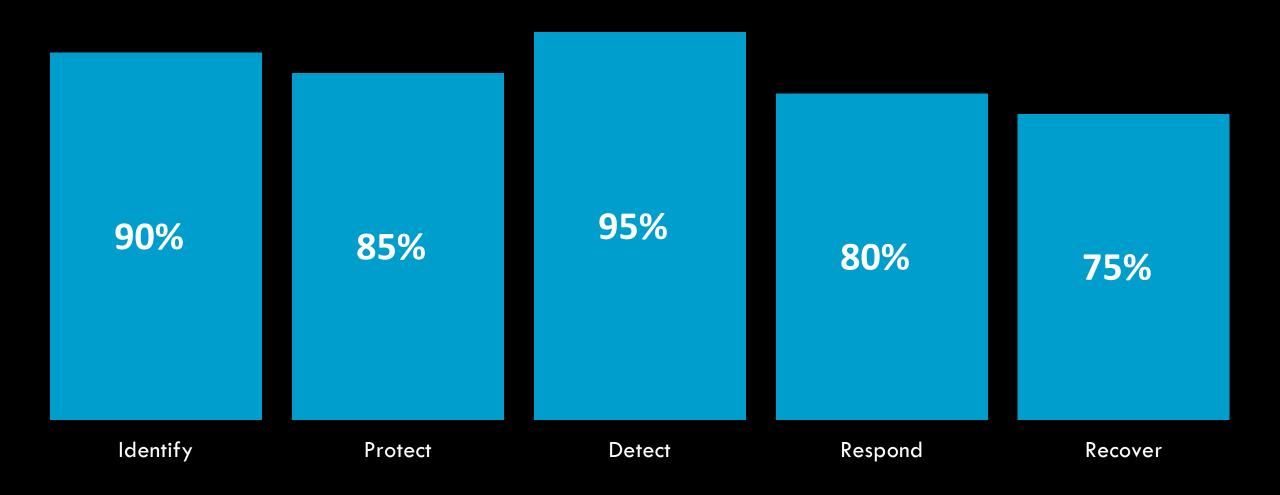
The integration of the Microsoft Defender Suite tools with the NIST CSF categories enables organizations to efficiently implement the framework, leveraging the suite's capabilities to address the required security controls.

Improved Visibility & Threat Detection

The Microsoft Defender Suite's advanced threat detection and analytics capabilities provide organizations with enhanced visibility into their security posture, enabling them to quickly identify and respond to potential threats.

Aligning Microsoft Defender Suite to NIST CSF

Percentage of NIST CSF categories covered by Microsoft Defender Suite tools



24x7 MXDR for Charleston Stevedoring

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ENABLINGTECHNOLOGIES



•Industry: Shipping / Receiving Port

•Challenge: Limited IT control, bottlenecks in operations, and weak security measures.

Technical Solution: Microsoft E5 Defender Suite, Sentinel

Services: ThreatDefender (Managed Security Services)

Path To Success

New tenant

Ongoing improvements

- •Data center → Azure migration
- Setup of Defender Suite and Sentinel

Breach Thwarted:

- 1. A high-level manager was phished.
- 2. IT Manager sits just 30 feet away from them
- 3. eGroup's team alerted IT Manager first.
- 4. "It was an adversary in the middle attack," Kevin recalled. "It could have been bad, but eGroup blocked their device and isolated the account before they were even able to tell me."
- 5. By acting quickly, no exfiltration nor further phishing attacks occurred.

Results:

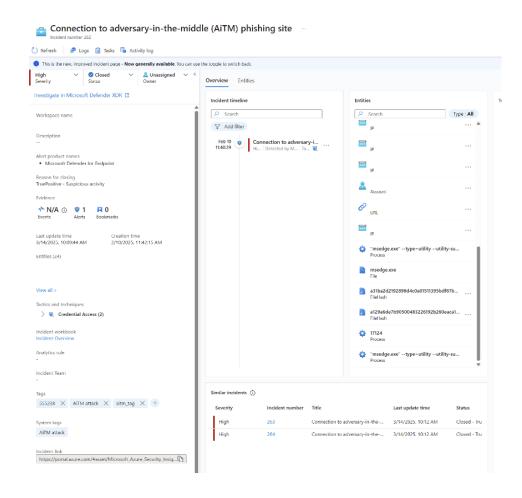






AiTM Detected by Defender XDR





How They Do It

- Attack-in-The-Middle The attacker positions themselves in the middle of the communication path between the legitimate parties, intercepting and manipulating the data exchange.
- Active Manipulation The attacker can actively modify the communication, altering the content, redirecting traffic, or even impersonating one of the legitimate parties.

How it is Visualized

- Indicators of Compromise The system identifies key indicators of compromise (IOCs) such as malicious URLs and IP addresses that pose security threats.
- Intelligence Delivery The intelligence gathered is delivered in a format that security teams can easily understand and act upon to enhance security measures.

24x7 MXDR for Becket & Lee

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- Industry: Legal (Bankruptcy Servicing)
- Challenge: One Security Pro, Securing sensitive data and compliance requirements from clients

Technical Solution: Microsoft E5 Defender Suite, Sentinel

Services: ThreatDefender (Managed Security Services)

Breach Thwarted:

- Misconfigured work-from-home device (firewall inactive), allowing an RDP spray attack
- •ThreatDefender alerted and prevented potential breach
- •"That's a true 'save your bacon' incident. Who knows what would have happened before we were going down this MSSP path?"

Results:

- •Improved security posture
- •Faster incident detection and response
- Compliance with client requirements
- Averted breach(es)

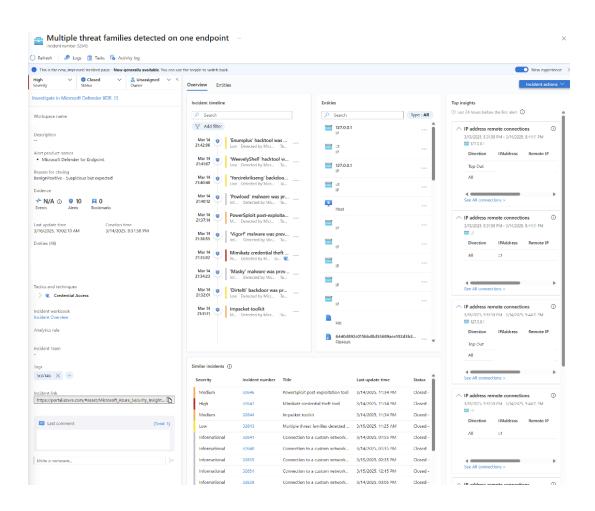
Path To Success

- Onboarding workshop
- •Integration with existing Microsoft 365 E5 licenses
- Setup of Defender Suite and Sentinel



Multiple Threat Scenario that used RDP Spray Attack





- RDP Exploitation The RDP Spray Attack leverages the Remote Desktop Protocol (RDP) to gain unauthorized access to multiple systems by attempting to guess weak or commonly used credentials.
- Leaked Credentials The attacker uses a list of common or previously leaked credentials to systematically attempt logins across a range of target systems that have RDP enabled.
- Lateral Movement Once the attacker gains access to a system through a successful RDP login, they can then move laterally across the network, compromising additional systems and resources.
- **Data Exfiltration** The attacker can then leverage the RDP access to steal sensitive data, deploy malware, or carry out further malicious activities within the network.

Next Steps for Enterprise Defenders



Things to do Tomorrow (David)



Deploy ransomware protection







Things to do Tomorrow



Leverage Microsoft Defender's Comprehensive Protection

Utilize the robust security capabilities of Microsoft Defender to shield yourself from a wide range of cyber threats, including malware, phishing, and advanced persistent threats.



Implement NIST CSF Best Practices

Adopt the NIST Cybersecurity Framework (NIST CSF) to establish a holistic, risk-based approach to cybersecurity, ensuring your security measures are aligned with industry standards.



Integrate Microsoft Defender and NIST CSF

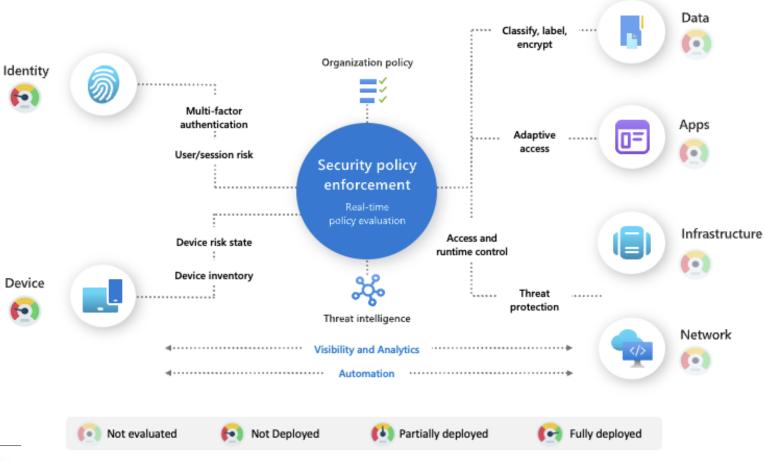
Combine the power of Microsoft Defender's advanced security tools with the guidance of the NIST CSF to create a comprehensive, layered defense against evolving cyber threats.

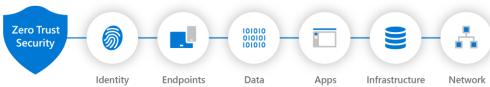
Protect yourself today by embracing the powerful combination of Microsoft Defender and the NIST Cybersecurity Framework. Secure your digital life and stay ahead of the curve in the ever-evolving landscape of cyber threats.

Zero Trust Assessment



- Pinpoint areas where your organization's security measures may be lacking, enabling targeted improvements.
- Assess current security metrics and receive actionable recommendations for enhancement.
- Create a structured plan that outlines a phased implementation of Zero Trust principles.





Visibility, Automation, Orchestration

"The best way to prepare for a cyberattack is to simulate one."

MICROSOFT SECURITY TEAM

Microsoft Defender Attack Simulation



Phishing Simulation

Showcasing the Attack Simulator's ability to create and launch realistic phishing campaigns to test employee awareness and response.

Credential Harvesting

Demonstrating how the Attack Simulator can simulate credential theft attacks to uncover vulnerabilities in user authentication processes.

Ransomware Simulation

Illustrating the Attack Simulator's capability to mimic ransomware attacks and assess an organization's readiness to respond and recover.

Insider Threat Scenario

Showcasing the Attack Simulator's ability to simulate insider threats, such as data exfiltration or unauthorized access, to test security controls and user behavior.

24x7 MXDR for Genesis Healthcare

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ENABLINGTECHNOLOGIES



- •Industry: Regional Healthcare Provider
- Challenge: Staff limited IT control, bottlenecks in operations, and weak security measures.

Technical Solution: Microsoft E5 Defender Suite, Sentinel

Services: ThreatDefender (Managed Security Services)

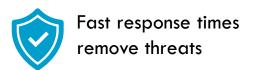
Path To Success

- Transition from old MSP
- •SentinelOne → Defender migration
- •Setup of Defender Suite and Sentinel

Breach Thwarted:

- 1. A potentially critical incident involved suspicious activity on a CxO's account.
- 2. eGroup's quick response averted a potential breach preventing a major disruption to operations.
- "If that account had been compromised, it would have been a very bad day for everybody involved."
- 4. By acting quickly, no exfiltration nor further phishing attacks occurred.

Results:





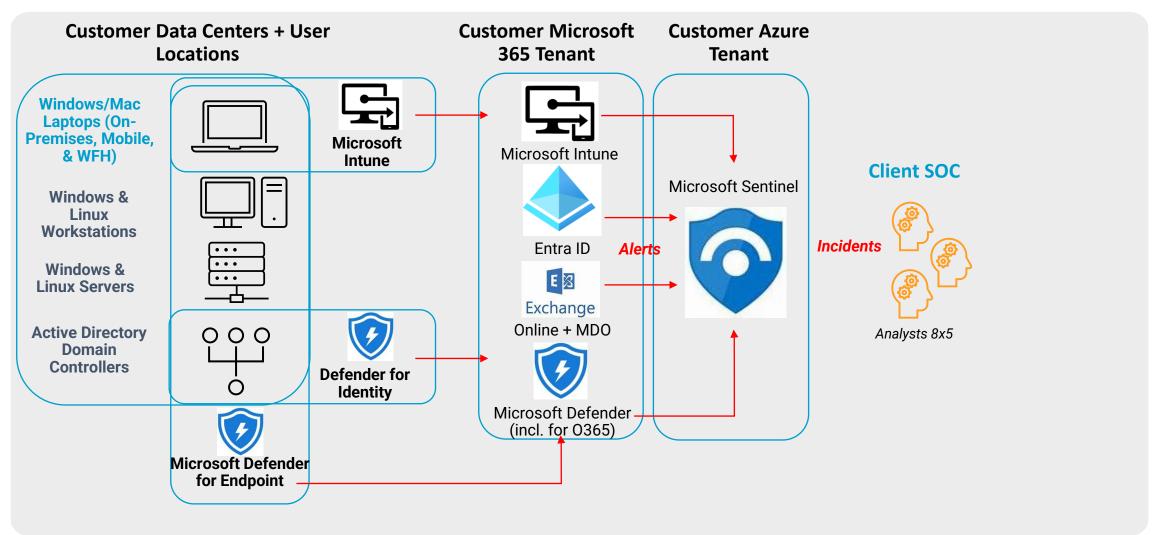
Higher Secure and Compliance Scores

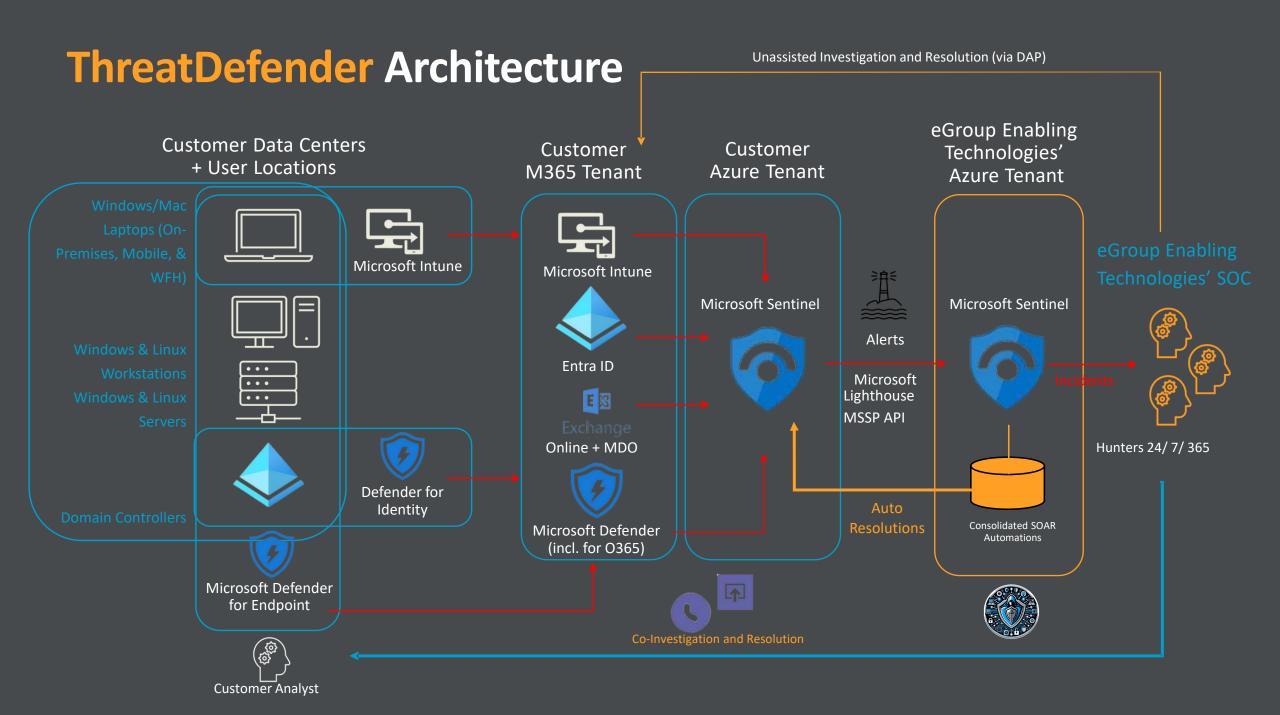


Less noise. Actionable insights.

XDR Architecture







Potential ways to Get Started



THREAT PROTECTION ENGAGEMENT

WE'LL GUIDE YOU THROUGH DEVELOPING A STRATEGIC PLAN CUSTOMIZED FOR YOUR ORGANIZATION BASED ON THE RECOMMENDATIONS OF MICROSOFT SECURITY EXPERTS.

Organizations today are managing a growing volume of data and alerts while dealing with tight budgets and vulnerable legacy

Achieve your broader security objectives and identify current and real threats with eGroup Enabling Technologies and the Threat Protection Engagement.

Our team of security experts can help you develop a strategic plan customized for your organization. Gain visibility into immediate threats across email, identity, and data, plus clarity and support on how to upgrade your security posture for the long term,

By Attending, You Can:



THREATS

Identify current. ongoing security threats in your cloud



STRATEGY

Document your the benefit of key

JOURNEY Better understand

how to accelerate your security journey using the latest tools

STEPS Walk away with actionable next steps based on your specific needs and objectives

Given the volume and complexity of identities, data, applications, devices, and infrastructure, it's essential to learn how secure your organization is right now, and how to mitigate and protect against threats moving forward.

Workshop Highlights

Review your security gnals and objectives

Identify real threats in your cloud en

Map identified three

MODERN SECOPS ENGAGEMENT

WITH THIS MICROSOFT SECURITY WORKSHOP, YOU'LL OBTAIN AN OVERVIEW, ALONG WITH GAINING INSIGHTS ON ACTIVE THREATS TO YOUR MICROSOFT 365 CLOUD AND ON-PREMISES ENVIRONMENTS.

As IT becomes more strategic, the importance of security grows daily.

Security Information and Event Management (SIEM) solutions built for vesterday's environments struggle to keep pace with today's challenges – let alone tomorrow's unimagined risks. To help combat these risks, Microsoft developed Microsoft Sentinel – a fully cloud-native SIEM.

We recognize that every organization is different, so this engagement can be customized to fit your environment and goals. We can provide either of two scenarios:



REMOTE MONITORING

tasks, we will demonstrate how our team can perform remote SIEM? We will work with your SecOps team and provide monitoring and threat hunting for you.



JOINT THREAT EXPLORATION

If your organization doesn't have its own Security Operations Interested in learning how to integrate Microsoft Sentinel in Center (SOC) or if you want to offload some monitoring your existing SOC by replacing or augmenting an existing additional readiness to bring them up to speed.



BENEFITS OF MANAGED SIEM



HANDS-ON EXPERIENCE

If you choose Remote Monitoring, you will experience the If you choose Joint Threat Exploration, you will learn how to benefits of a managed SIEM with a true cloud native SIEM, discover and analyze threats using Microsoft Sentinel and how to automate your Security Operations to make it more

Engagement Objectives





MITIGATE THREATS

DATA SECURITY ENGAGEMENT

LEVERAGE THE DATA RISK CHECK TO IDENTIFY ANY POTENTIAL THREAT AREAS IN YOUR ORGANIZATION

The Data Risk Check is the core activity of this workshop. It is spread out over several weeks to allow time to run on top of your cloud infrastructure, surface privacy, and regulatory risks in organizational data. Data Risk Check leverages automated Microsoft 365 tools and services to discover data stored in the Microsoft Cloud and identify potential problem areas.

Automated Discovery Process Will Analyze Your Data For:







Our Experts Will Work With You To:



DOCUMENT





Conclusion



Ransomware Trends

Understanding current ransomware trends is crucial for organizations to stay ahead of potential threats and vulnerabilities.

Microsoft Security Tools

Leveraging Microsoft's security frameworks and tools can significantly enhance an organization's defenses against ransomware attacks.

Proactive Strategies

Implementing proactive strategies and maintaining ongoing vigilance are essential for safeguarding organizational data and resources.