

Navigating Cybersecurity in the AI Era: Key Insights and Strategies

AI is rapidly reshaping the cybersecurity landscape. This guide, drawing insights from the 2024 Microsoft Digital Defense Report, explores four key themes to strengthen your security strategy:

➤ [AI security fundamentals](#)

Learn how to implement AI responsibly and defend against emerging threats.

➤ [Identity protection](#)

Discover emerging approaches to authentication and access management in an AI-enabled world.

➤ [AI-powered threat response](#)

See how organizations are using AI to spot and respond to threats faster.

➤ [Securing the multicloud world](#)

Understand new challenges in protecting data across cloud environments.

The content that follows presents detailed data and trends related to these themes, offering actionable insights to bolster your cybersecurity strategy.

AI security fundamentals

How can organizations harness the power of AI for security while mitigating its inherent risks? Recent data reveals key focus areas for building robust AI security practices:

Governance

The rapidly evolving AI regulatory landscape necessitates international standards to ensure responsible AI use and mitigate safety risks.

2

international standards for AI security¹

Risk management

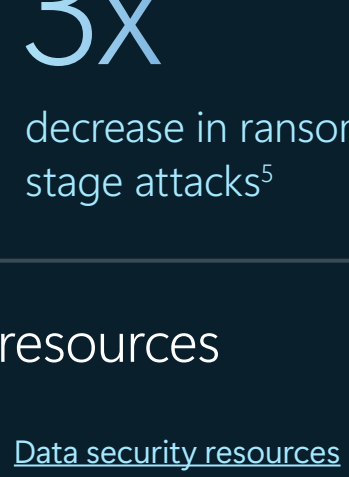
Microsoft's 1.6 billion risk evaluations highlight the ongoing battle against sophisticated e-commerce fraud, leveraging AI to detect and prevent unauthorized transactions effectively.

1.6 billion

payment fraud risk evaluations conducted in the last year²

Data protection

Threat actors target overprivileged cloud applications to access high-value resources. Secure development practices—including minimal permissions and protected test environments—can help mitigate these risks.



of workload identity permissions were unused in the past year³

Threat detection

Despite a sharp rise in ransomware attempts, improved automatic disruption capabilities helped reduce successful encryptions significantly. Most breaches occurred through unmanaged devices lacking proper security.

2.75x

increase in ransomware-linked encounters⁴

3x

decrease in ransom-stage attacks⁵

Integrated cybersecurity resources

[E-book: Four Imperatives to Secure and Govern AI: A Playbook](#)

Get step-by-step guidance on securing and governing AI while protecting sensitive data.

[Data security resources](#)

Improve your data security with expert guidance.

Microsoft Digital Defense Report 2024 (p. 105, 33, 40, 27)
Dive deeper into the data behind this section's featured insights.

Learn more about our AI-driven cybersecurity solutions

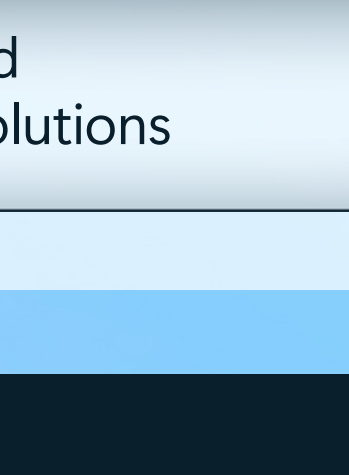


Identity protection

In the age of AI, robust identity protection is more critical than ever. Learn how AI-enhanced authentication and Zero Trust principles help organizations defend against increasingly sophisticated attacks:

Identity attacks

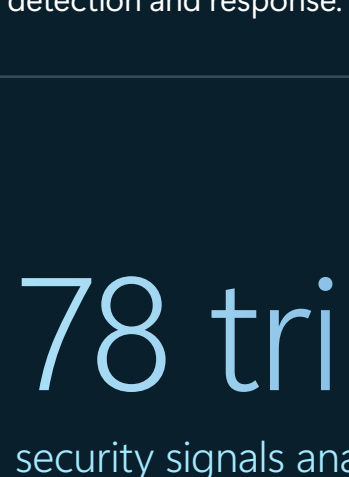
Cybercriminals launch 600 million identity-based attacks daily, primarily targeting cloud services through phishing and malware. AI-driven monitoring helps detect and block these threats in real time.



of identity attacks are password based⁶

AI-enhanced authentication

While MFA helps prevent breaches, attackers increasingly target authentication systems. Organizations are turning to AI-powered detection to protect their identity infrastructure from sophisticated bypass attempts.



MFA adoption rate among Microsoft customers⁷

Security defaults

Simple changes yield significant results: Enabling MFA and disabling legacy authentication reduce tenant compromises by 80%. These security defaults offer a clear starting point for strengthening identity protection.



fewer compromises in tenants using security defaults⁸

Integrated cybersecurity resources

[E-book: The Fundamental Guide to Zero Trust: A Leadership Approach to AI-enhanced Security](#)

Learn how to build a Zero Trust security framework that protects AI-enabled systems.

Microsoft Digital Defense Report 2024 (p. 41, 39, 43)
Dive deeper into the data behind this section's featured insights.

Explore our identity and access management solutions



Securing the multicloud world

Protecting data across multiple cloud platforms presents unique challenges. Explore recent data insights and best practices for securing your multicloud environment:

Unnecessary cloud risks

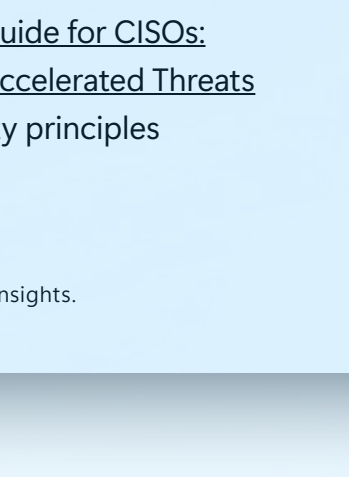
Microsoft's analysis reveals a concerning trend: Over half of cloud workload identities sit inactive while 1.5 million credentials remain exposed in repositories. This widespread overprovisioning creates unnecessary security risks. Organizations should prioritize regular reviews and deactivation of unused identities.



of workload identities are inactive¹²

Secure development in the cloud

Microsoft research revealed that nearly one in five code repositories contained exposed secrets last year. To mitigate this widespread risk, organizations should implement secure development practices like minimizing permissions and preventing credentials in code.



of code repositories exposed secrets¹³

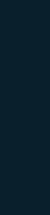
Integrated cybersecurity resources

[Executive Summary: The New Zero Trust Guide for CISOs: Perimeter-free Security for the Age of AI-accelerated Threats](#)

Learn how to implement Zero Trust security principles in an AI-accelerated threat landscape.

Microsoft Digital Defense Report 2024 (p. 40, 32)
Dive deeper into the data behind this section's featured insights.

Learn more about data security solutions and tools



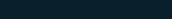
Strengthening your security posture in the age of AI

As AI transforms the cybersecurity landscape, organizations need a comprehensive approach that addresses both new opportunities and emerging threats. Success requires integrating AI capabilities thoughtfully across your security strategy while maintaining strong fundamentals in identity management, threat detection, and cloud security.

Start your journey today.

To strengthen your security posture and enhance threat detection, [explore our AI cybersecurity solutions](#).

To secure your cloud infrastructure and enhance visibility, [learn more about our cloud security posture management solutions](#).



For more details on the data points featured in these infographics, [please see the Microsoft Digital Defense Report 2024](#).

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¹ "Microsoft Digital Defense Report 2024," page 105, Microsoft, 2024
² "Microsoft Digital Defense Report 2024," page 33, Microsoft, 2024
³ "Microsoft Digital Defense Report 2024," page 40, Microsoft, 2024
⁴ "Microsoft Digital Defense Report 2024," page 27, Microsoft, 2024
⁵ "Microsoft Digital Defense Report 2024," page 27, Microsoft, 2024
⁶ "Microsoft Digital Defense Report 2024," page 39, Microsoft, 2024
⁷ "Microsoft Digital Defense Report 2024," page 39, Microsoft, 2024
⁸ "Microsoft Digital Defense Report 2024," page 43, Microsoft, 2024
⁹ "Microsoft Digital Defense Report 2024," page 5, Microsoft, 2024
¹⁰ "Microsoft Digital Defense Report 2024," page 11, Microsoft, 2024
¹¹ "Microsoft Digital Defense Report 2024," page 32, Microsoft, 2024
¹² "Microsoft Digital Defense Report 2024," page 40, Microsoft, 2024
¹³ "Microsoft Digital Defense Report 2024," page 40, Microsoft, 2024