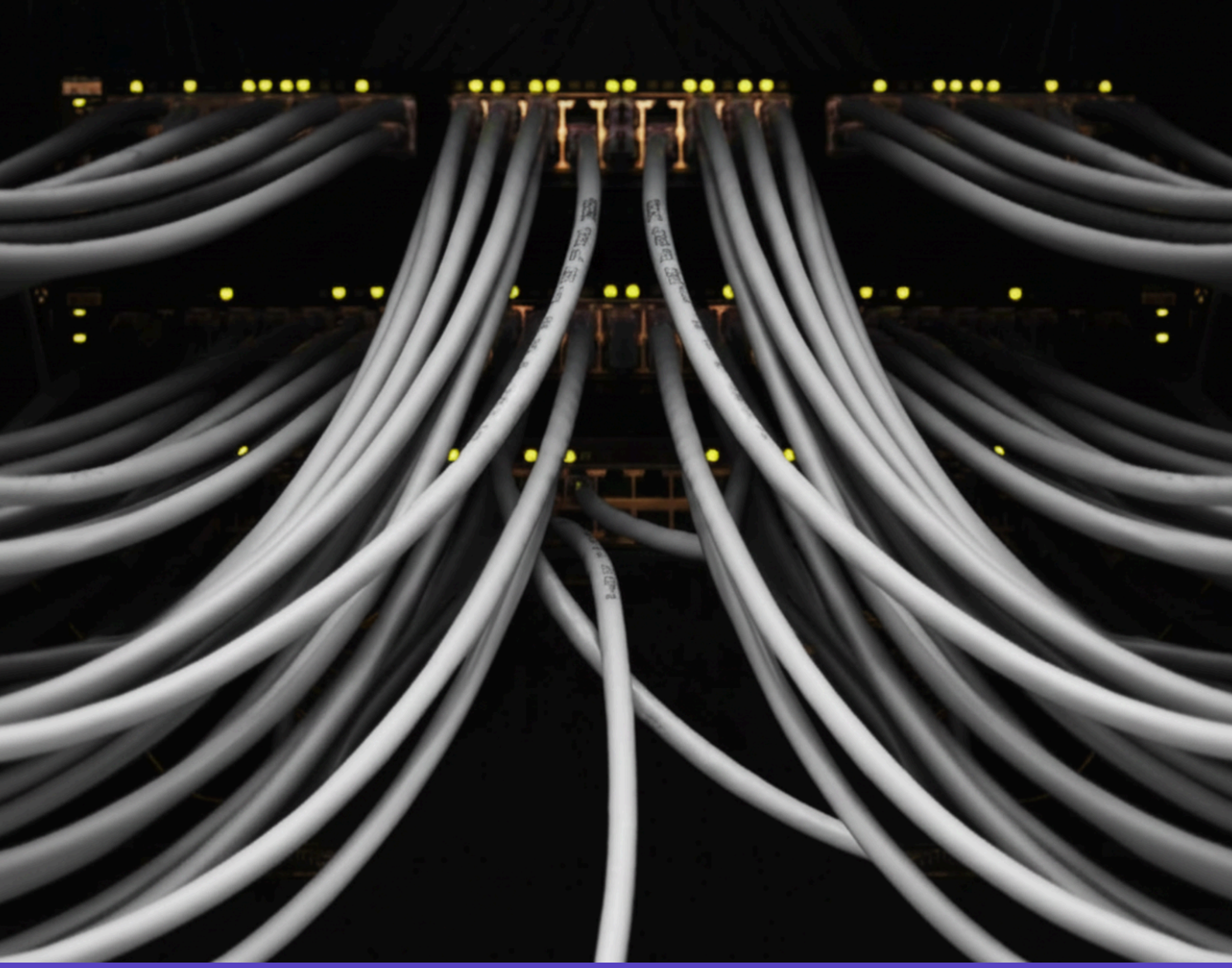

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CRITICAL INFRASTRUCTURE UNDER SIEGE

The 2026 Ransomware Impact Report

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Executive Summary

The Resilience Gap

In 2026, the ransomware landscape has transitioned from a series of isolated corporate breaches into a systemic assault on national and industrial resilience.

No longer content with stealing commercial data, threat actors have pivoted their focus toward Essential Services, where the cost of operational downtime is measured not just in revenue, but in public safety and national stability.

Intelligence gathered via Vysion, the advanced Cyber Threat Intelligence (CTI) platform by Byron Labs, reveals that 2025-2026 has marked the "Industrialization of Chaos." Criminal syndicates are now employing specialized teams to target the Zero-Downtime Dilemma, the critical reality that hospitals, energy grids, and water utilities cannot afford even an hour of disconnection. This systemic vulnerability has turned essential infrastructure into the ultimate high-margin target for multi-extortion campaigns, where the cost of operational paralysis far outweighs the price of the ransom.

Kinetic Impact

Targeting OT and SCADA systems

The Dual Pressure

Operational Paralysis and Massive Regulatory Fines

The "Pre-Attack Phase"

Intelligence as the Only Shield

Key Takeaways

The Shift to Kinetic Impact

Modern ransomware attacks are increasingly designed to have physical consequences. By targeting Operational Technology (OT) and SCADA systems, attackers are moving beyond the screen to disrupt production lines, energy distribution, and patient care.

Targeting OT and SCADA systems

Kinetic Impact

The "Essential" Premium

Threat actors are prioritizing sectors governed by strict availability requirements. This strategic targeting ensures a higher probability of ransom payment, as victims face the dual pressure of operational paralysis and massive regulatory fines (NIS2).

Operational Paralysis and Massive Regulatory Fines

The Dual Pressure

The "Pre-Attack Phase"

Analysis from Vysion's Dark Web monitoring confirms that the "pre-attack phase" – including the sale of industrial VPN access and targeted vulnerability research – is where the battle is won or lost. Identifying these signals weeks before encryption is no longer optional; it is a requirement for survival.

Intelligence as the Only Shield

The "Pre-Attack Phase"

Ransomware:

A Weapon Of Sistemic Paralysis

In 2026, ransomware has evolved beyond a simple encryption tool into a sophisticated instrument for administrative and operational coercion. This section analyzes the psychological and technical leverage used against critical infrastructure providers.

The "Zero-Downtime" Dilemma: Why Critical Sectors are Forced to Pay

For essential services such as power grids, metropolitan water systems, or emergency medical services, the concept of acceptable downtime is non-existent. Threat actors have shifted their tactics to exploit this absolute dependency. By targeting the availability of systems rather than just the confidentiality of data, they create a scenario where the immediate restoration of services becomes a matter of national security or public safety.

Operational Blackmail

Attackers now conduct pre-attack reconnaissance to identify "bottleneck" systems. Encrypting a single domain controller is no longer the goal; instead, they target the precise servers that manage load balancing for electricity or the routing of emergency calls.

The Cost of Inaction

In these sectors, the cost of a week of system reconstruction often far exceeds the ransom demand, creating a perverse economic incentive to pay despite official government recommendations.

Ransomware:

Analysis of the Multi-Extortion "Pressure Cooker" in Public Utilities

Level 4: Stakeholder Notification

Directly contacting regulatory bodies or the media to highlight the utility's failure to protect public interests, triggering immediate legal and political scrutiny.

Level 3: Operational Harassment

In 2026, we are seeing a rise in "Level 3" tactics where attackers leak evidence of their control over OT (Operational Technology) systems—such as screenshots of HMI (Human-Machine Interface) panels—to prove they can cause physical damage if the ransom is not met.

Level 2: Data Exfiltration

Threatening to leak sensitive blueprints of infrastructure or employee PII.

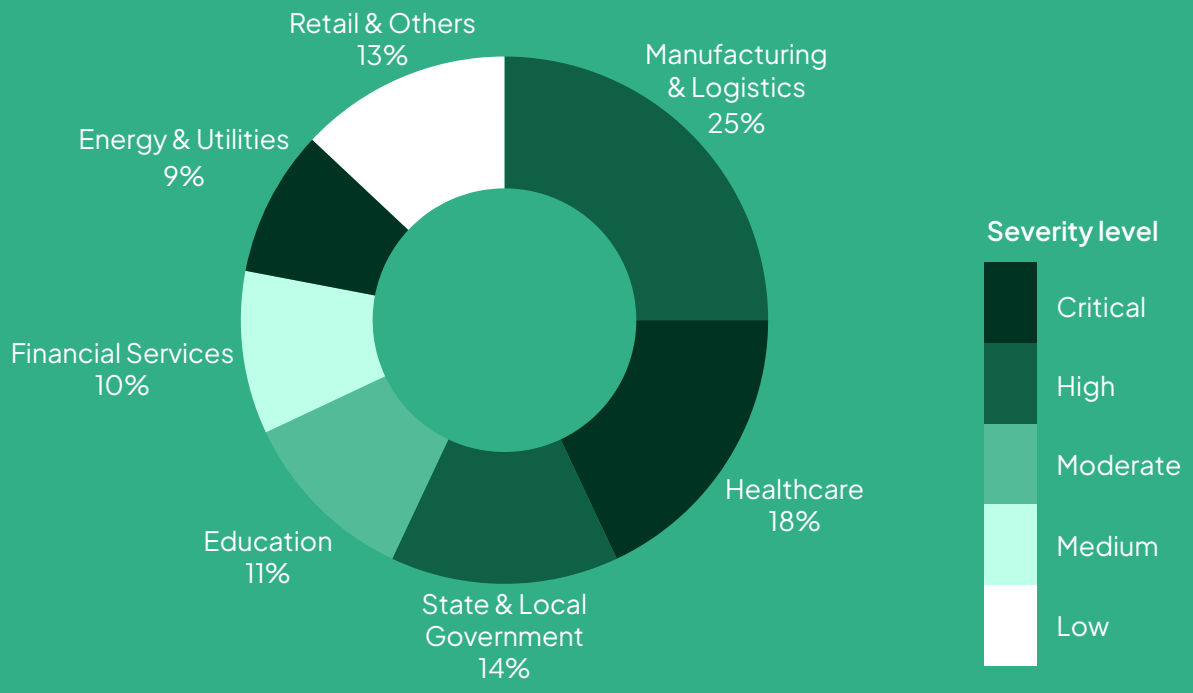
Level 1: Encryption

Immediate cessation of digital operations.

Sector-Specific Deep Dive

Impack & Operational Risk

This section explores how ransomware in 2026 has transitioned from a simple IT headache into a full-scale operational crisis. The following analysis details the real-world consequences as digital threats cross over into physical and life-critical systems.



Ransomware Attacks by Industry Sector (2025-2026 Data)

Technical Note: This data reflects published "successful" attacks (where the ransomware managed to encrypt or exfiltrate data) and not just intrusion attempts.

Healthcare

The Critical Failure of Care Continuity

While healthcare does not account for the highest volume of total attacks, it represents the most significant growth in severity. The danger in the medical sector has undergone a fundamental shift, moving away from the theft of personal records toward the direct interruption of patient care. In today's environment, the primary risk is the total shutdown of hospital operations. When attacks block the communication between life-support machinery and medical monitoring screens, patient safety is immediately compromised because doctors lose the ability to see vital signs in real-time. This digital paralysis forces hospitals to divert ambulances and cancel surgeries, creating a crisis where the risk to human life makes healthcare the most critical sector under pressure.

The Critical Failure

Sector-Specific Deep Dive

Impack & Operational Risk

Manufacturing & Logistics

The Engine of Economic Pressure

Manufacturing remains the most targeted sector due to its extremely low tolerance for downtime. Cybercriminals recognize that every hour a factory line is idle results in millions of dollars in losses, which significantly increases the probability of a ransom payment. This creates a powerful "domino effect" where the paslysis of one key production node or automated port means trucks cannot load and downstream factories do not receive parts. Within days, a single ransomware strike can halt production for hundreds of businesses across the supply chain. Attackers exploit this systemic vulnerability, knowing that for a logistics or manufacturing firm, the pressure to pay is driven by the urgent need to restart the engine of the economy.

The Economic Pressure

Energy & Water

Kinetic Consequences and Systemic Impact

The energy and water sectors face a unique threat where cyber-attacks manifest as physical infrastructure failures. Although this sector accounts for a smaller volume of total attacks, it carries a massive systemic impact and is considered a primary national security threat. A breach here can paralyze every other industry on this list. Modern threat actors aim to compromise the internal logic of Industrial Control Systems (ICS) to manipulate chemical balances in drinking water or disrupt power distribution. Because modern smart grids are highly interconnected, a localized breach in a single substation can trigger a cascading regional blackout, providing attackers with immense leverage for multi-million dollar ransom demands.

The Massive Impact

The Adversary Landscape

Specialized Infrastructure Predators

The threat landscape in 2026 is no longer occupied by general cybercriminals. It is now dominated by highly organized "specialists" who treat infrastructure attacks like a professional business. Understanding these predators is the first step toward defense.

Profiling Ransomware-as-a-Service (RaaS) with Industrial Experts

Modern ransomware groups operate as a franchise model known as RaaS. However, the groups targeting critical infrastructure now hire "Industrial Experts" to ensure their attacks cause the most damage possible.

The Goal

These experts don't just lock office computers; they know how to find and freeze the specific machinery that runs a factory or a power plant.

The Strategy

By ensuring the physical operations stop, they gain massive leverage. They know that if a company's machines are frozen, the pressure to pay the ransom becomes overwhelming.

The Adversary Landscape

Specialized Infrastructure Predators

Why Infrastructure is the New "High-Margin" Target

Modern cybercriminals have shifted their focus toward infrastructure because they have realized that utilities and logistics hubs are often more profitable and easier to compromise than traditional financial institutions. These organizations face immense pressure to pay ransoms quickly since society cannot function without essential services like water or electricity, making them high-priority targets. Furthermore, many of these industrial systems were designed decades ago without internet connectivity in mind, leaving them as vulnerable "soft targets" that lack the robust modern defenses found in other sectors.

The Role of Initial Access Brokers (IABs): The "Key Makers"

Before a ransomware attack happens, someone has to break in first. These individuals are called Initial Access Brokers (IABs). They are the "key makers" of the criminal world.

Specialized Infiltration

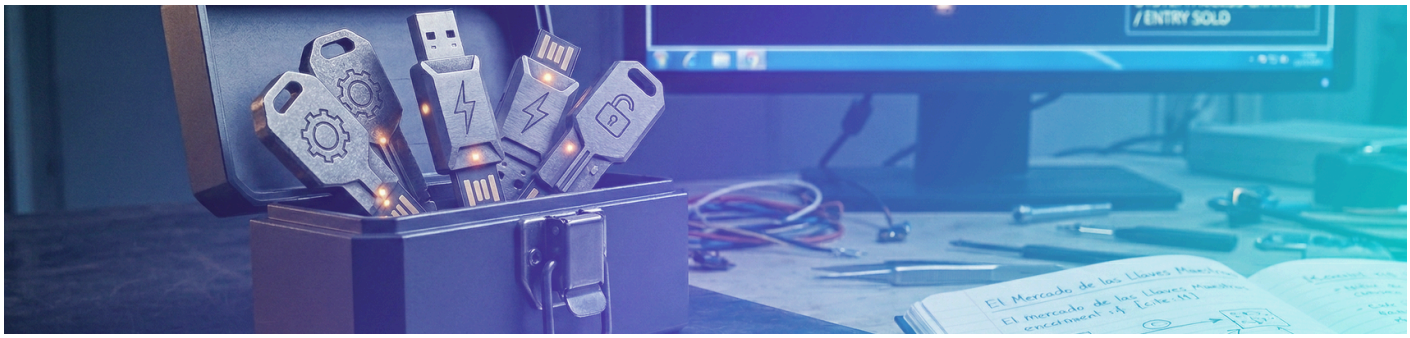
Instead of attacking everyone, these brokers spend months finding a single "open window" into a utility company or a hospital.

Selling the Entry

Once they have a "key" to a sensitive network (like a login for a power plant's remote access), they sell it to the highest bidder on the Dark Web.

High Value Targets

In 2026, access to "essential services" is sold at a premium. A "key" to a government energy provider is worth ten times more than a "key" to a standard retail store.



Global Impact

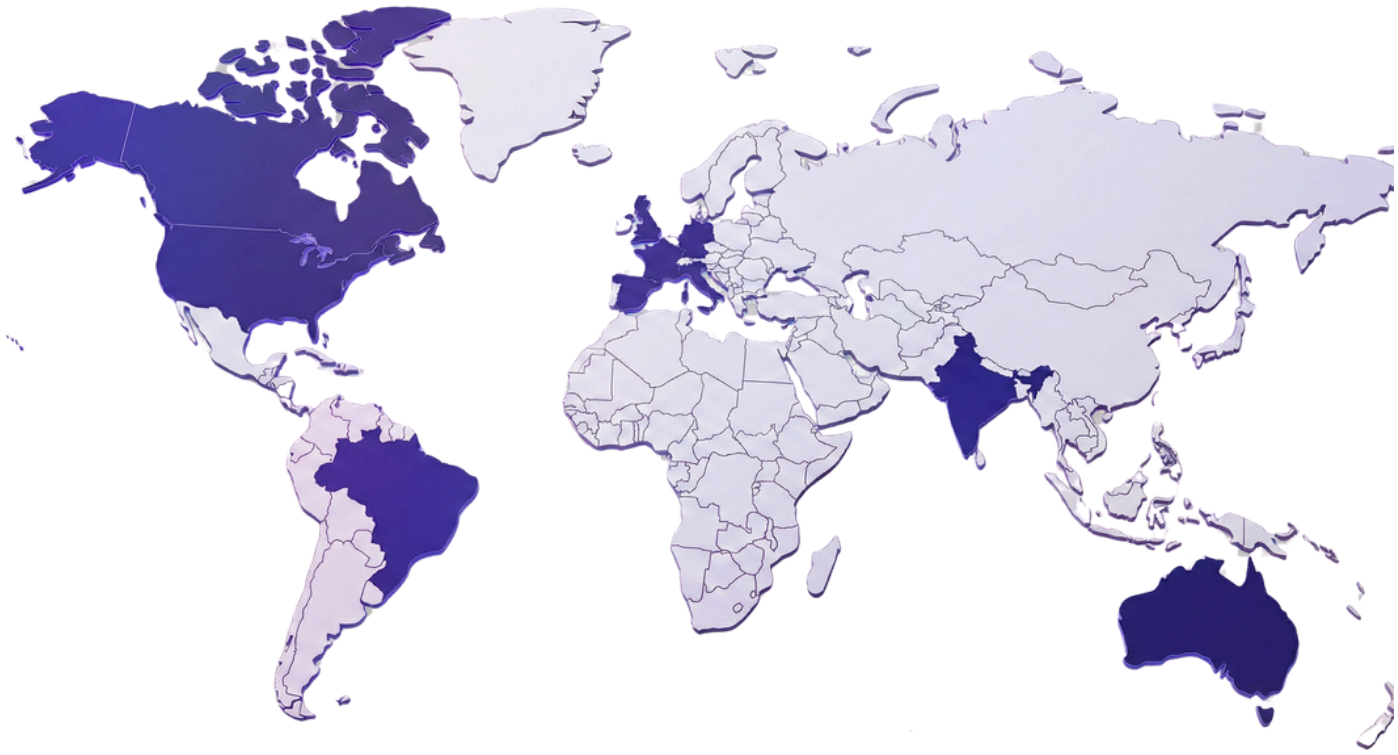
Nations Under Pressure

In 2026, the geography of ransomware is defined by the resilience of a nation's basic infrastructure.

While attacks happen everywhere, certain countries have suffered more severe "systemic shocks" due to the digitalization of their essential services. This section identifies the regions where the impact on public safety and national stability has been most acute.

Most Attacked Countries

8130	696	688	544	513
United States	Germany	United Kingdom	Canada	France



410	309	285	267	257
Italy	Spain	Brazil	Australia	India

Attacks per country vysion

Global Impact

Nations Under Pressure

Cybercriminals in Spain and Latam are paralyzing critical infrastructure to turn technical breaches into high-pressure social crises. This shift toward sabotaging essential services maximizes their extortion leverage against uneven digital resilience.

A High-Value Target in Southern Europe

Spain has emerged as a primary focus for infrastructure-based attacks within the European Union. Because the country has heavily digitalized its energy grid and water management systems, it offers a large "attack surface" for cybercriminals. Recent trends show that attackers are moving away from small businesses to focus on regional utility providers and municipal government networks. This shift means that a single successful breach in Spain often results in the immediate paralysis of local public services, creating a high-pressure environment for ransom negotiations.

The Vulnerability of Rapid Modernization

Across Latin America, countries such as Brazil, Mexico, and Colombia are facing a perfect storm of rapid digital growth and uneven security investment. Threat actors are exploiting this gap by targeting national healthcare systems and state-owned energy companies. In these regions, a ransomware attack often causes a total blackout of essential services that can last for weeks, as many organizations lack the mature backup protocols found in more established economies. The social and economic impact in these nations is profound, as the lack of digital resilience directly affects the population's access to basic needs.

Global Impact

Nations Under Pressure

Ransomware in North America and Southeast Asia has become a systemic threat, triggering global supply chain ripples. Firms now face a "double blow" of extortion and fines, as attacks on industrial hubs paralyze markets worldwide.

High Stakes and Heavy Regulation

In North America, the frequency of attacks remains high, but the nature of the "blow" is changing. While these countries have robust recovery protocols, the sheer complexity of their interconnected supply chains means that an attack on a single logistics hub can trigger a massive economic slowdown. Here, the pressure is not just operational but also regulatory, as companies face massive fines alongside the ransom demands. This double-edged sword makes North American infrastructure a high-margin target for sophisticated criminal groups who calculate their demands based on the victim's total financial exposure.

Emerging Hubs: The Strategic Shift

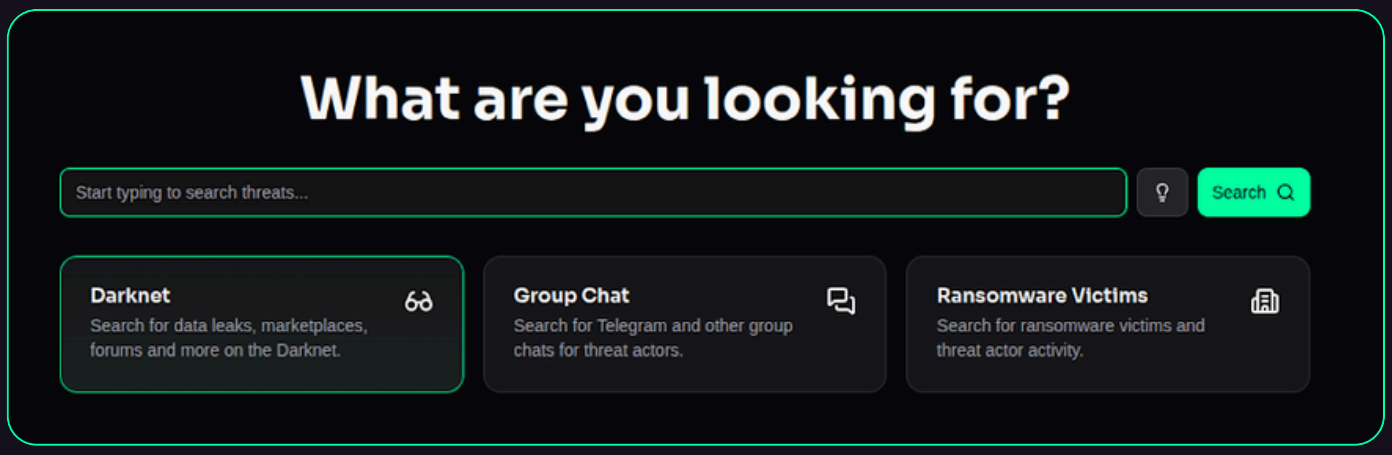
We are observing a notable increase in severe infrastructure hits across Southeast Asia. As countries in this region modernize their manufacturing and shipping sectors, they are attracting the attention of specialized ransomware predators. The impact here is felt primarily in the global supply chain; when a major port or automated factory in this region goes offline, the economic ripple effect is felt by consumers and businesses on the other side of the planet.

Unmasking The Pre-attack Phase

vysion Revelations

The Vysion platform serves as a specialized radar that transforms the chaotic noise of the Dark Web into clear, actionable intelligence.

This section details how we identify the digital breadcrumbs left by threat actors during their preparation and reconnaissance stages, detecting the threat long before a single file is encrypted.



Search Intelligence dashboard vysion

Unmasking The Pre-attack Phase

vysion Revelations

01

Predictive Credential Analysis

Identifying the Points of Entry

Most ransomware attacks do not start with a complex hack but rather with the use of stolen login information found in the underground. We utilize Vysion to scan automated data feeds and Telegram channels for leaked usernames and passwords specifically linked to critical infrastructure. By finding these compromised access points early, we enable organizations to reset security credentials for affected employees before their accounts can be exploited by a ransomware group. This proactive approach effectively stops the attack in its tracks by securing the network before an intruder can enter.

02

Vulnerability Intelligence

Monitoring the Digital Perimeter

Attackers are constantly looking for weaknesses in the software that guards the edge of a network, such as firewalls or backup systems. We monitor specialized forums and marketplaces for active discussions regarding flaws in critical devices like Fortinet gateways, Veeam backup servers, and Pulse Secure VPNs. Vysion allows us to see which software vulnerabilities are currently being targeted by criminals, which helps our clients prioritize their security updates to ensure they fix the most dangerous weaknesses first.

03

Strategic Signal Intelligence

Contextualizing the Chatter

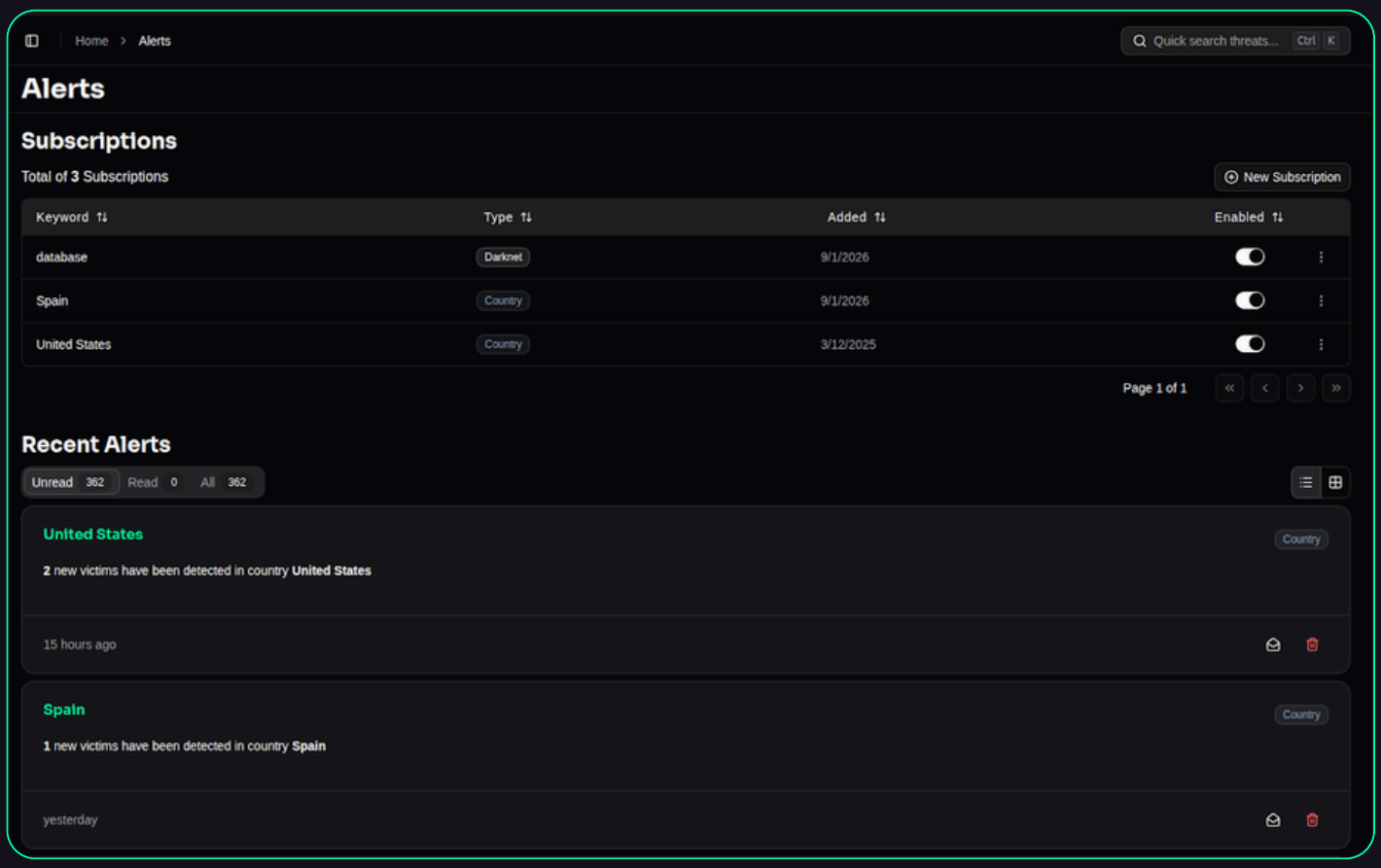
Major attacks are often preceded by discussions in restricted communities where criminals seek technical advice or specific data. Through Vysion, we listen to private discussions where threat actors inquire about the layout of specific energy grids, water treatment protocols, or hospital networks. To ensure this intelligence is relevant to each organization, the platform allows the user to personally configure and manage their own alerts. By choosing exactly which threats, regions, or protocols they want to monitor, users receive immediate notifications tailored to their specific interests. This gives our partners the strategic advantage of knowing exactly who is looking at them and what they are searching for.

Unmasking The Pre-attack Phase

vysion Revelations

The Ecosystem of Intelligence: Who Uses Vysion?

- Cybersecurity Companies (MSSP)
- Corporations & Enterprises
- Government & Public Administration
- Law Enforcement Agencies
- Cyber Insurance Companies

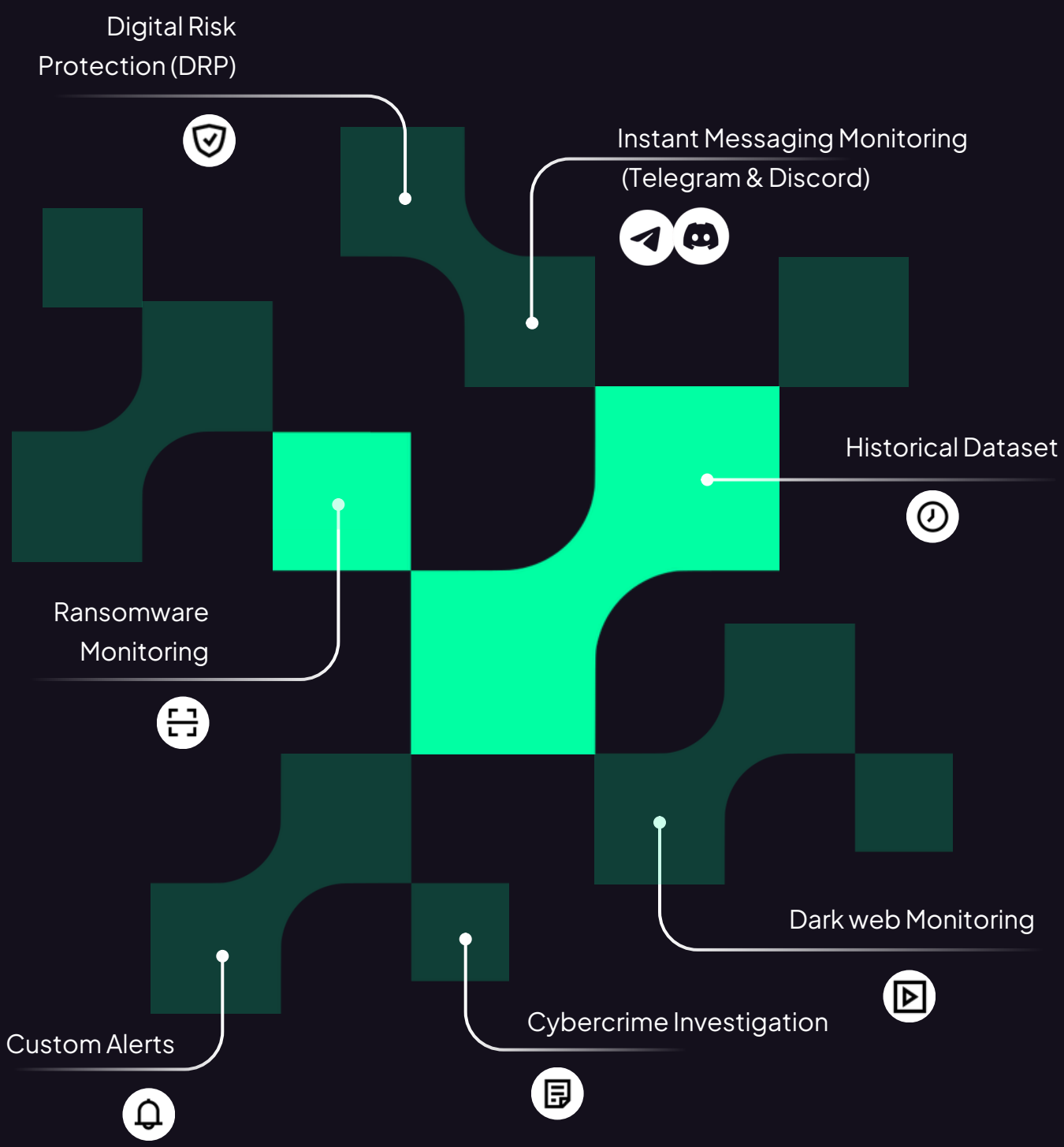


Alert dashboard vysion

Unmasking The Pre-attack Phase

vysion Revelations

Vysion Capabilities: From Raw Data to Actionable Intelligence



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vysion

Request a Demo

Cyber Threat Intelligence

Schedule a demo with our team and discover how Vysion can transform your threat intelligence capabilities.