Fraud detection platform

Mitigating digital fraud through advanced analytics and real-time tracking

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CYBERSECURITY

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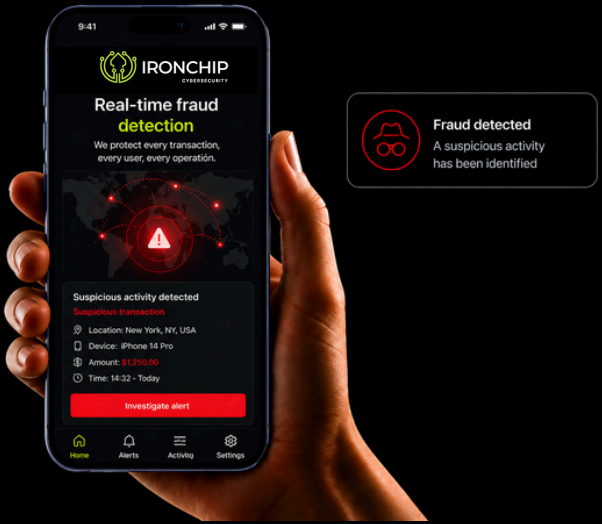
Who are we?

Ironchip is a **leading global cybersecurity company specializing in identity protection and fraud detection.**

We use a unique technology based on Location Intelligence that validates user identity, providing real-time visibility, traceability, and control over every access attempt.

In this way, we guarantee **360° security**, connecting the physical world with digital protection and ensuring continuous, effective, and frictionless access for employees, customers, and third parties.



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Cybersecurity is in our DNA

At Ironchip, security isn't just a word—it's our **commitment**. That's why we hold certifications such as LINCE from the National Cryptology Center (cpstic.ccn.cni.es).

Our solutions have been certified at the HIGH level and included in the **CCN-CERT** Security Products Catalog, which endorses their use in critical environments. Additionally, we have defined secure usage procedures for high-security scenarios (ccn-cert.cni.es).

The Spanish government supports the company through its investment, making us a key strategic enterprise at the national level.

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Technology

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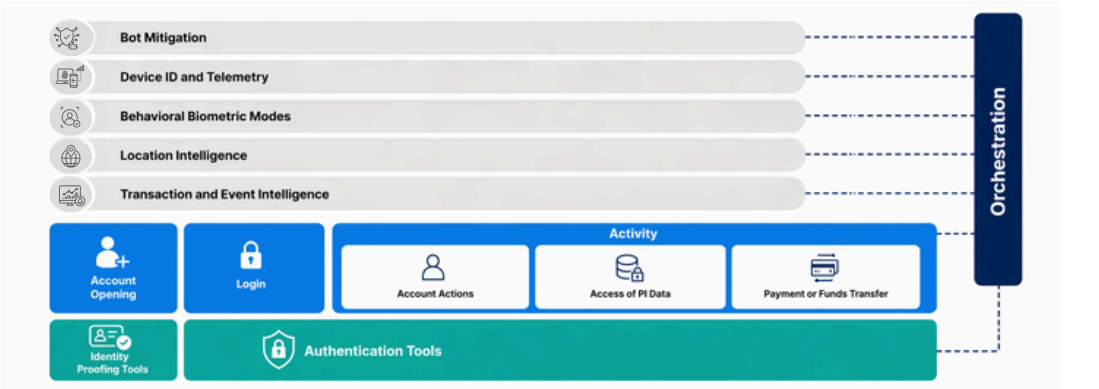
Location intelligence - Location identity proof

Scope of online fraud detection capabilities throughout a typical customer journey.

Gartner



Source: Gartner
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Location-based detection technology

Common Operation Zones

The majority of identity processes take place in trusted locations.

Untrusted Location

92% of attacks occur remotely, from a location the user has never been in.

99% of fraudsters commit fraud from the same location at least twice.

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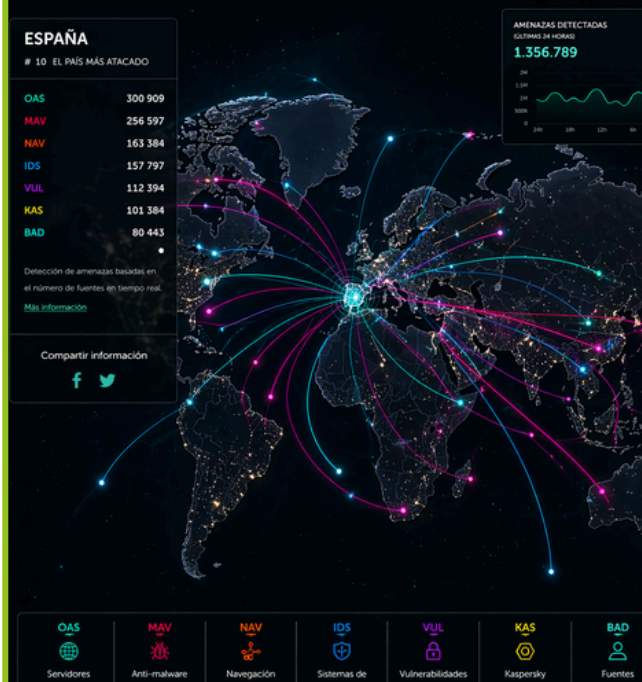

Trading-Based Allocation - Types of Protected Transactions

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Secure and localized transactions

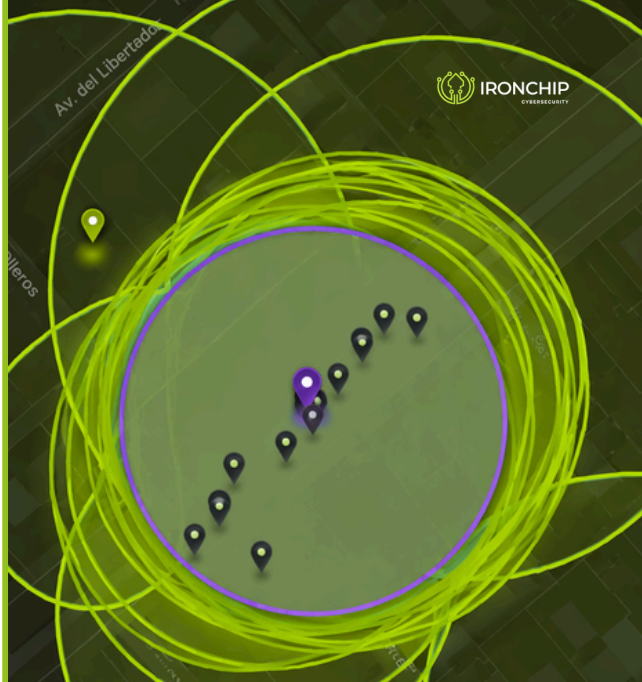
What is a Safe Zone?

A safe zone is a unique, familiar, and tamper-proof location for each user.

How is a safe zone generated?

A safe zone is generated using AI, after capturing and analyzing the following signals every time a user interacts with a mobile or web app:

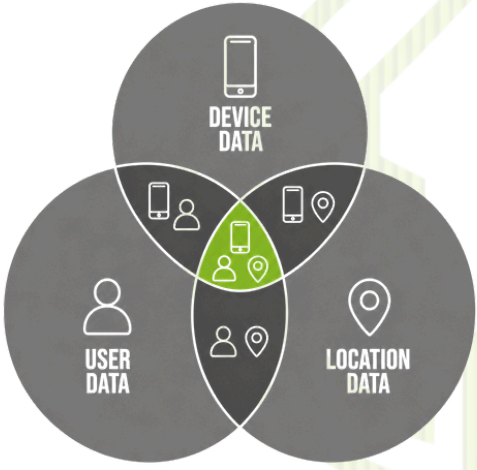
Mobile signals: 2G, 3G, 4G, or 5G.
Surrounding Wi-Fi signals and favorite Wi-Fi network.
GPS and IP.
Geolocation based on latency.
Internet service provider (ISP) and connection to cell towers.
Native SIM card in use.
Location spoofing via VPN and TOR networks.



Behavioral localization

Our technology uniquely links the device to its actual location using artificial intelligence and environmental signals (Wi-Fi and cellular networks).

This approach allows us to **model precise behavioral patterns**, which are essential for the secure identity of the future. The ability to understand where the user is and how they interact with their resources offers unprecedented control, setting the definitive standard for security and authentication in digital systems.



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Fraud Detection **Platform**

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Unusual behavior: detected fraudulent activity

We detect the most advanced frauds

SIM SWAPPING

VISHING

PHISHING

SYNTHETIC IDENTITIES

MONEY MULE

With a set of unique methods

DEVICE FINGERPRINT

LOCATION INTELLIGENCE

DEVICE SWAPPING

TAMPERED DEVICE

TAMPERED APPLICATION

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SDK & API Installation

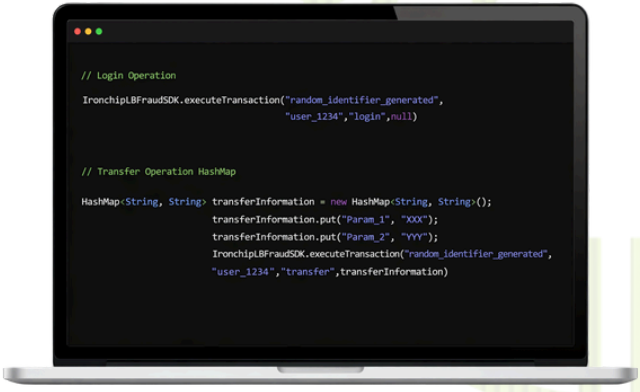
Datasource SDK

An iOS/Android/JavaScript library that can be integrated into any mobile or web application to capture the necessary information.

Fraud Detection API

An HTTP API for retrieving results, which can be integrated with any BPM or SIEM.

Documentation



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Transactions to be protected

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Advanced security rules engine

Risk Placement Rules

- Origin locations in FATF countries.
- Connection via the TOR network or a VPN.
- If RF geolocation does not match GPS or SIM data.
- Presence of a residential proxy.
- High-risk or blacklisted ISP.
- Location spoofing.
- The SIM carrier differs from the location or ISP origin.
- Impossible travel.
- Public Wi-Fi network (high).
- Private Wi-Fi network.
- Locations associated with confirmed attacks on other entities.
- Blacklisted or high-risk IP.

Rules for High-Risk Devices

- Malware installed.
- Debugging process active.
- Device blacklisted.
- High-risk device (ALPS, TECNO, INFINIX, Fairphone, Nothing, MobiWire).
- Rooted or jailbroken device.
- Outdated device in the update history.
- Unexpected roaming.

Rules of Conduct

- Roaming + Virtual SIM.
- Language switching without changing devices or usual location.
- Call transfer or active call forwarding.
- Device associated with more than 3 users.
- Cyrillic languages from locations where the device is not in use.
- Multiple connections within short time windows.
- Patterns consistent with known attack campaigns.

Thanks to the intelligent combination of variables, **our rules engine establishes highly precise behavioral policies tailored to each scenario**

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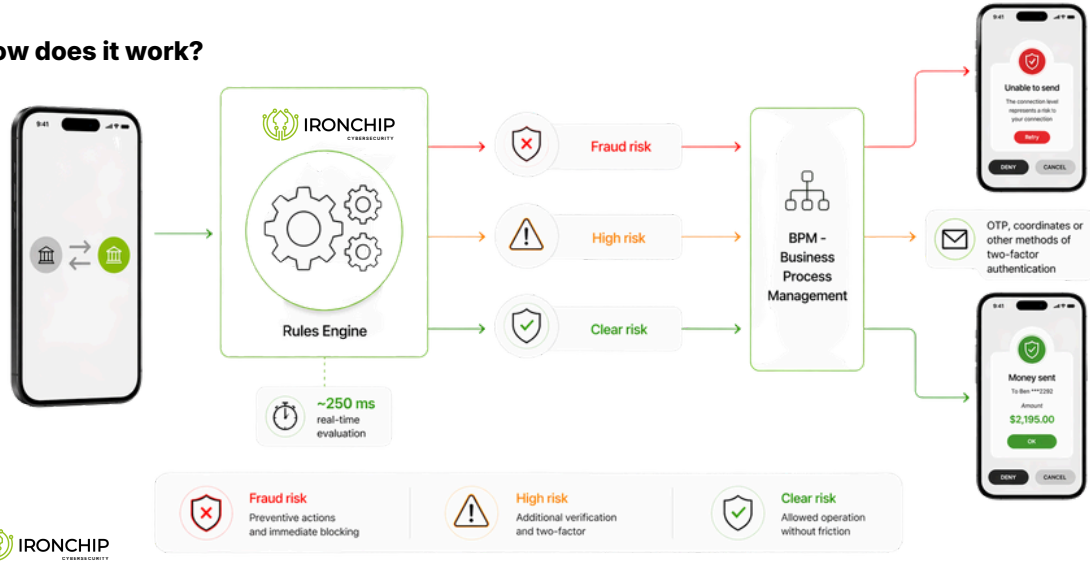
How does it work?



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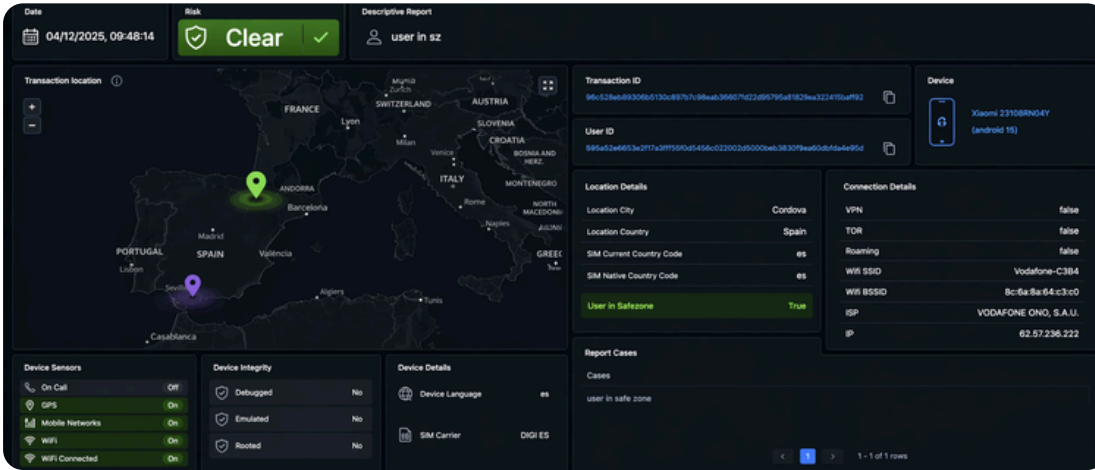
Normal and safe behavior



Anomalous behaviour - Money mule

Sudden use of a VPN

On September 12, a connection via a VPN—specifically NordVPN—was observed for the first time. This represents a significant deviation from the user's usual behavior.

Changing the SIM Card Carrier

The device went from being connected in Spain to another location, also reported as Spain, but with a SIM card originally from Benin. This was made possible by switching mobile service providers from DiGI (Spain) to MTN Benin.

Anomalous behaviour - Money mule

An Impossible Journey

In 5 minutes, I'll be traveling from Spain to Benin. Such a drastic change of location in such a short time is logistically impossible without using technology to manipulate the location.

Changing ISPs

In addition, a change in internet service provider was identified. The user switched from connecting via Red Digital de Telecomunicaciones de las Islas Baleares S.L. (Spain) to connecting via NordVPN, which coincides with the appearance of the SIM card from Benin.

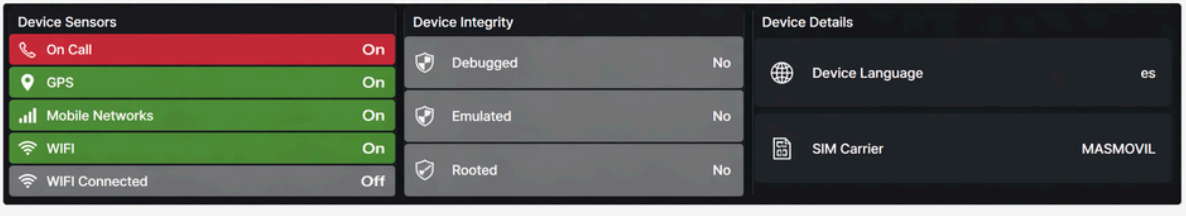
Anomalous behavior - Vishing for authorized fraud

Real-time call detection in transaction operations.

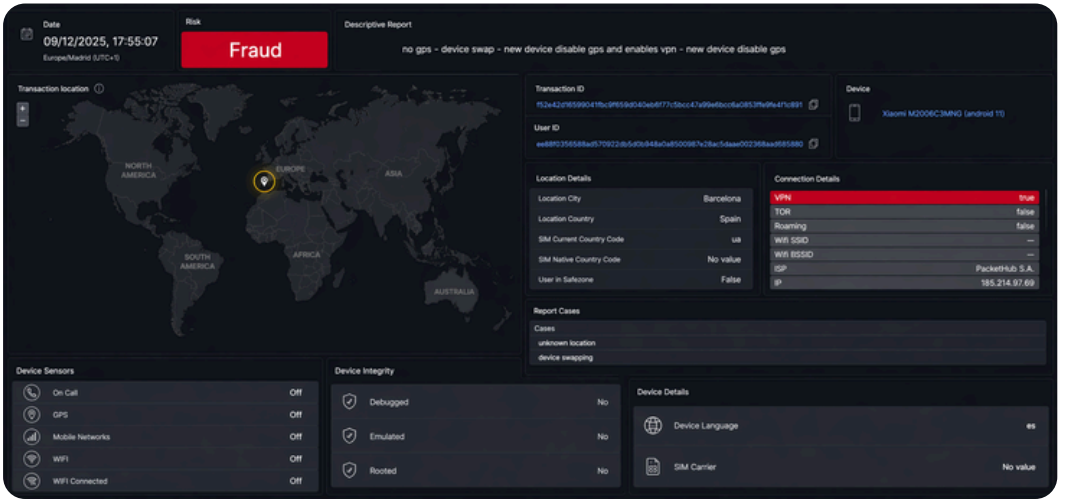
IP call detection:

- Telegram, Discord, WhatsApp...

Call redirection and roaming detection.



Abnormal behavior - Location spoofing or virtual SIMs



Antimalware with active real-time protection

Our next-generation antimalware module acts as an active defense layer during the session. Unlike static solutions, our technology detects indicators of compromise (IoCs) in real time, such as injection attacks, screen overlays, and unauthorized remote access tools. This constant monitoring ensures that the environment where identity is validated is **free from malicious interference, safeguarding the integrity of every transaction.**

Overlay Attacks
Fake screens overlaid on top of the real app to steal credentials. Theft of passwords and 2FA codes.

Remote Access Trojans (RATs)
Hidden or active remote control tools (AnyDesk, TeamViewer). A third party performs the transaction on the user's behalf.

Keyloggers
Scripts or apps that capture every keystroke the user makes. Capturing PINs, card details, and private keys.

SIM Swapping / SMS Sniffers
Malware that intercepts confirmation SMS messages from the bank. Authorizing transfers without the user seeing the code.

Code injection / Hooking
Manipulation of the browser or app's memory to alter the destination of a payment.
Changing the recipient's IBAN at the last second.

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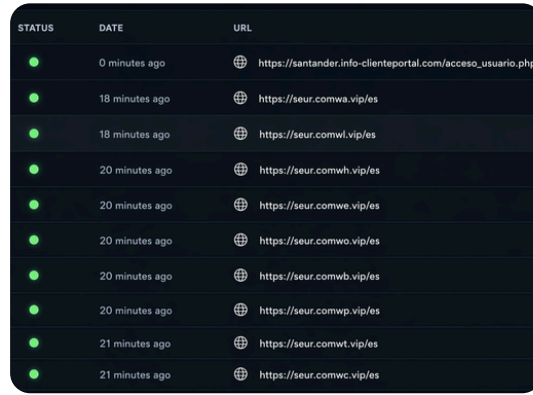
Phishing/Smishing Module - Malicious Site Scanning

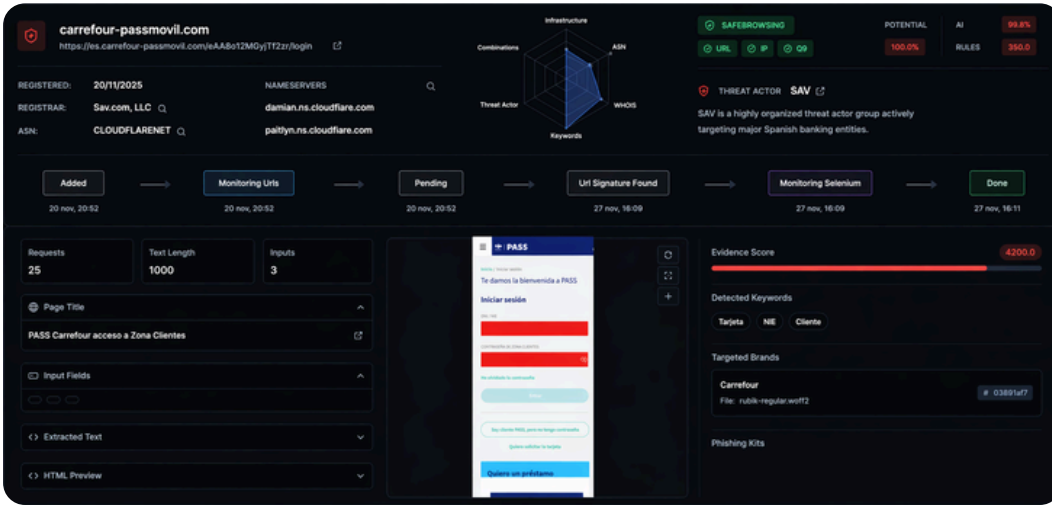
Our **phishing detection technology** continuously scans the internet to identify websites impersonating financial institutions. When we locate them, we automatically analyze their vulnerabilities, taking advantage of the fact that these infrastructures are often weak and insecure.

Whenever possible, we set up a monitoring **system that captures, in real time**, the information attackers are attempting to steal. This data is immediately reported to the affected institutions so they can block access, reset credentials, and prevent fraud.

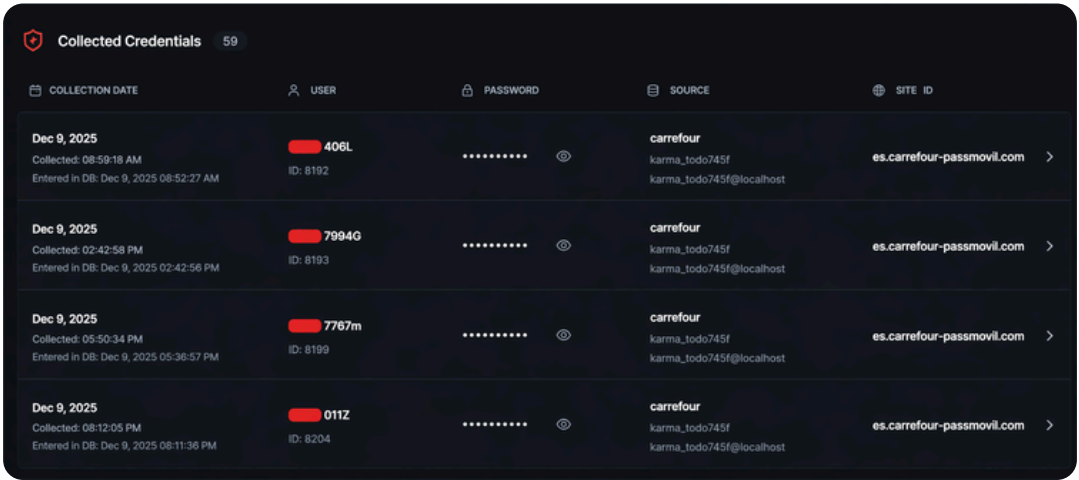
In addition, **we detect compromised cards and track the channels** where criminals centralize the stolen information—including Telegram bots discovered through these vulnerabilities—to anticipate risks and strengthen protection for financial customers.



Phishing/Smishing Module - Site Profiles



Phishing/Smishing Module - Credential and Card Analysis



Case **study**

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//ABANCA

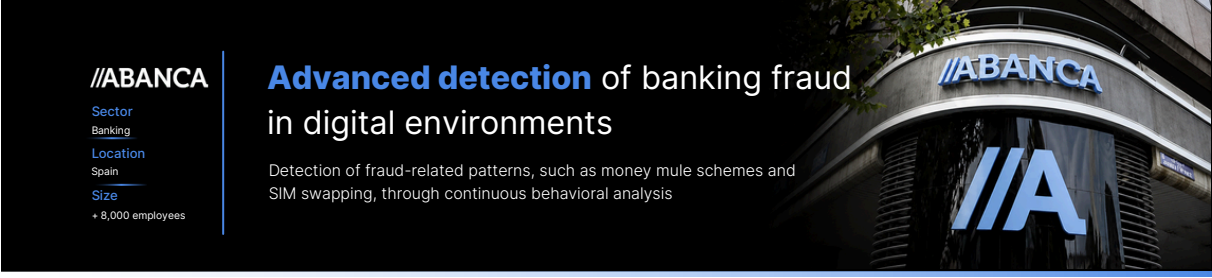
Sector
Banking

Location
Spain

Size
+ 8,000 employees

Advanced detection of banking fraud in digital environments

Detection of fraud-related patterns, such as money mule schemes and SIM swapping, through continuous behavioral analysis



CHALLENGE

Abanca was facing the growing complexity of banking fraud, with threats such as money mules and SIM swapping that were difficult to detect using traditional systems. The lack of visibility into location, device, and behavior limited the ability to identify anomalies in real time. This made it difficult to distinguish between legitimate and fraudulent access in critical transactions. Furthermore, it was necessary to strengthen security without compromising the user experience.

SOLUTION

A solution was implemented that relies on continuous analysis of user behavior, incorporating location and device information as identity factors, enabling the detection of anomalous access attempts and fraud—such as SIM swapping—without affecting the user experience.

RESULTS

- Detection of multiple types of fraud, such as **money mule schemes and SIM swapping**
- Real-time identification of anomalous access based on behavior, location, and device
- Enhanced ability to distinguish between legitimate users and fraudulent activity

> Ironchip integrates its product into a key stage of the authentication process in a simple, cost-effective way, offering a user experience that is hard to find these days.

– Fatima Cereijo, Manager of Fraud Control and Privacy, Abanca

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They trust us

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Ibercaja

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Verify identities before they become a security incident.

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