Cyber Services
Success Stories

How we have helped our customers

ir.deto

INTERNATIONAL LAW ENFORCEMENT COLLABORATION WITH FBI

Irdeto recently completed a comprehensive person and technical investigation into a popular and elaborate illicit streaming service (ISS). This service allowed un-authorized access to our customer's official content. This ISS was prevalent across the United States whose owners ran at least 46 website domains that were also operating an ISS. Through covert investigations into the original target, we were able to confirm that the individual resided in the United States.

Through tight collaboration with the Intellectual Property Rights (IPR) Center of the FBI, we addressed our customers growing direct threats, the location of the business and stopped the large financial gain that was being illegally acquired by the pirate. In the end, the FBI investigated further and all 46 website domains are now offline.

COMPLEX COVERT INVESTIGATIONS AGAINST ORGANIZED CRIME

Pirates are in a constant state of evolution and innovation. Cyber Services understands that we must continuously adapt to the scale and complexity of both current and future threats. We recognize that individuals involved in organized crime are amongst the most capable and resilient adversaries that our clients face. Our team is fully equipped to identify and engage those operating at every level of the pirate infrastructure.

We recently assisted a client with an investigation into a prominent wholesaler serving streams, through multiple retailers, to millions of subscribers worldwide. By utilizing our experience we nurtured relationships, built trust and bought into their service. As a result, we were able to expose the most lucrative component of this illegal streaming ecosystem and provide the customer with the intelligence they required to engage laaw enforcement (who might not otherwise have the time and resources to undertake such tasks).

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GLOBAL REACH AND EXPERTISE INTO EXTERNAL JURISDICTIONS

Piracy presents a global threat. Criminals and their technical infrastructure are often based overseas. International collaboration with our partners and law enforcement is essential. Our international reach allows us to assist rights owners whose content is being infringed by those bad actors sitting outside of our customers jurisdiction.

According to former acting CIA Director Michael Morell, Pakistan has become one of the most dangerous countries in the world. It is also home to a very prominent piracy operation responsible for a vast network of illicit streaming services operating outside of Pakistan. Thanks to a protracted in-house investigation, which lead to the identification of this pirate, our team of investigators were able to physically serve a cease-and-desist notice on the suspect on behalf of our client. This resulted in two globally prominent illicit streaming services being taken off-line and ultimately removed these direct threats to our client's business.

BRINGING DOWN LARGE PIRATE OPERATIONS THROUGH INTELLIGENCE AND RAIDS

One of our largest and longest standing customers requested our help to protect their exclusive rights to live premium TV content.

Following a covert preliminary target assessment of a Kenyan based Illicit Streaming Service (ISS) provider we successfully acquired intelligence which included the physical address of an individual involved in the distribution of our client's content, without their authority at a discounted price to a large customer base. This presented a clear and significant threat to the business of our client, who promptly acted and engaged the local authorities within Kenya. Kenyan Law Enforcement were quick to react and effected an arrest. They then conducted a raid of the pirates' address, immediately suspending this ISS infrastructure and disrupting the services of customers who had subscribed to this illicit service.

Within the last 12-month period, this great collaboration has led to the swift arrests of 10 individuals located across Sub-Saharan Africa; all of whom were operating businesses supplying illicit streams of our customer's content.

SUCCESS STORIES

GLOBAL IDENTIFICATION AND REMOVAL OF ISDS ON MARKETPLACES AND SOCIAL MEDIA

Irdeto has been engaged by various sports rights owners and broadcasters to remove advertisements for IDs that use their logos, trademarks and other keywords that are attributable to their brands. Currently, Irdeto reports a downward trend in the usage of customer brands on various marketplaces by ISD advertisements.

Irdeto also engages with the platforms in order to find solutions to mitigate the damages done by pirates. Irdeto works with social media platforms to suspend accounts of repeating offenders as well as work with e-commerce sites to prevent illicit streaming advertisements from being posted. Irdeto also uses test-purchases and other sources of evidence to remove items that don't directly reference a (sports) brand.

QUANTIFYING THE EXPOSURE OF LICENSEE'S OTT PLATFORMS TO CREDENTIAL THEFT AND SALE

Irdeto has been engaged by a tier 1 sports rights owner to identify the exposure of their licensees' OTT platforms to credential theft and sale. The rights owner used this intelligence to inform and support their licensees in improving the security of their OTT platforms. Irdeto uses state of the art crawling technology to find these stolen credentials and engages with these platforms to remove these stolen items from the web.

HURTING THE PIRATES WHERE IT COUNTS

Irdeto was engaged by a tier 1 sports rights owner to target and remove advertisements of piracy devices on online marketplaces. One of the vendors that was targeted ended up losing their vendor status and was stuck with a warehouse full of pirate devices. The alleged owner of said operation flew to one of Irdeto's offices and demanded to speak to someone. He brought a bag of cash with the intention of bribing Irdeto to help him reinstate his vendor account. In the end, the man left the office, with his vendor account still banned.

SUCCESS STORIES

KICKING DOWN DOORS WHERE NEEDED

Irdeto was approached by a renowned sports rights owner to target and remove advertisements of piracy devices on online marketplaces. One of the vendors was so persistent whereby he uploaded replacement advertisements quickly. Irdeto helped identify the location of the vendor and passed it onto the client. Armed with this intelligence, the client paid said vendor a visit… with the police.

THE FULL PACKAGE

Sometimes content owners need more than any of the above services. In those instances, Irdeto will offer a mixed package with services that complement each other. Irdeto will tailor a mix of services that will help the customer to address a specific piracy incident.

Irdeto has previously assisted one of our clients to tackle a worldwide piracy incident where our customers channels were made available on a pirate set-top-box and sold in many countries. The pirates rebranded the channels and added their own commercial breaks. This made it hard for the consumer to differentiate between official and unofficial content.

Irdeto has worked to remove advertisements of these devices, investigated how the content was being stolen and rebroadcasted and assisted in implementing features to prevent these pirates from stealing the channels. Irdeto also identified some of the people behind this pirate operation and captured key evidence which enabling our client to commence litigation. Ultimately this resulted in the shutdown of this pirate network which was causing significant commercial harm to our client.

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GEOGRAPHIC MAPPING OF HIGH-SPEED INTERNET PIRACY

Irdeto was engaged by a tier 1 cable operator to assess the theft of service affecting their high-speed data and video infrastructure. Due to the nature of the infrastructure, it was very important for our team to map out which threats were happening in what location. As a result, the operator was able to better target problematic areas, save on bandwidth and to sign up more customers.

ACQUISITION AND TESTING OF CHEATING SOFTWARE ON A GLOBAL BASIS

Irdeto was approached by a tier 1 video games publisher to help them tackle cheating problems plaguing several of their titles. Irdeto not only acquired and tested the usability of these cheats, but also provided additional intelligence to support further development of their systems and to increase robustness. In the end, Irdeto is happy to report a downward trend in the number of cheats available on the covered titles.

THREAT MITIGATION AND ACTOR'S IDENTIFICATION

Irdeto was engaged by multiple tier 1 videogame publishers to assist them in the identification of actors posing threats to their intellectual property (piracy), user experience (cheats), user security (accounts) and employee security (threats to employees).

In the end, after identifying the main actors involved, Irdeto assisted the legal actions undertaken both in and out of court. Alongside the actor's identification we provided threat mitigation with investigation support, court expert testimonies as well as domestic and international law enforcement relation support resulting in the termination of harmful activities by the actors.

SENTIMENT ANALYSIS

Irdeto was engaged by a tier 1 video games publisher to analyze the negative sentiment plaguing their brand. It was suspected that bad actors had launched an astroturfing campaign against them. In the end, after identifying the main actors involved, Irdeto allayed the fears of the customer and supported them in turning the negative sentiment into a positive one.

SUCCESS STORIES

CYBERSECURITY

HARDWARE AND FIRMWARE SECURITY REVIEW

The Irdeto team was requested by a tier 1 cable operator to perform a security review of a set of routers. As result of the security review, Irdeto identified multiple significant security vulnerabilities in the router. These security vulnerabilities included bypassing security measures via physical access, a backdoor used for testing purposes in production and a third-party configuration error causing the device to be susceptible to a man-in-the-middle attack. As a result of Irdeto's review, the customer was able to fix all identified security vulnerabilities.

INCIDENT RESPONSE AND VIDEO PLATFORM SECURITY REVIEW

Irdeto supported a customer during a security incident. A malicious hacker was able to send messages to thousands of set-top-boxes. Support was provided on-site during the incident and it was found that due to a misconfiguration, an internal device was publicly exposed.

As result of the incident, the customer decided to perform a comprehensive (video) platform wide security review. Irdeto supported by a pentest of all internet exposed video systems. As a direct outcome of the security review significant amounts of high-risk vulnerabilities were identified and mitigated. This included detecting a second misconfiguration what caused the initial hack to happen.

CYBER RESILIENCE PROJECT

Irdeto has been supporting a large video operator with a cyber resilience project. This project provides our customer with a monthly attack surface report which includes ongoing consultancy support to improve security related processes and procedures.

As a direct consequence of this project over 1000 servers are now monitored on a daily basis and over 100 high-risk security vulnerabilities have been reported. Furthermore, many procedures and process have been improved and pragmatic incident response plans tailored to the customers situation have been created and implemented.

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FORENSICS SUPPORT AS PART OF LITIGATION

Irdeto was requested by a video rightsholder to provide support to their lawyer agent as part of a litigation process. The request was to perform a technical analysis of a streaming device, including memory analysis and produce a detailed technical report about the operation of the IPTV streaming device as evidence. To maintain the chain of custody, the IPTV device was collected by Irdeto's Cyber Forensic team and analyzed in a forensic lab.

During the analysis the streaming application was reverse engineered and the memory of the IPTV streaming device was dumped. The video packets in the memory dump were reconstructed to video as part of the forensic procedure. All findings were reported. And the evidence was successfully presented by Irdeto's Cyber Forensics team to the attorney general.

FORENSICS SUPPORT

A rightsholder requested that Irdeto provide technical support during a disruption activity of five IPTV streaming applications that provided unauthorized access to their content. Irdeto supported the customer by exploring methods to disrupt the IPTV services and present this to a group of internet service providers and the regulator.

During the operation, Irdeto supported with continued monitoring of 5 IPTV streaming applications and provided multiple daily technical updates on the status of the streaming application as well as the command&control infrastructure. As result of this support, the illicit streaming operations were disrupted.

ANTI-PIRACY RAID SUPPORT

A rightsholder requested Irdeto to provide technical expertise and forensic support during an IPTV raid operation. Irdeto provided on-site support during the operation by examining the IPTV streaming operation. As a result of Irdeto's support, the suspect was prevented from being able to destroy crucial evidence during the raid such as financial data and passwords to access administrative panels.

SUCCESS STORIES

ADVANCED PROTECTION SERVICES

COMMON SCRAMBLING ALGORITHM UPGRADES

Common Scrambling Algorithm (CSA) is an encryption algorithm used in digital television broadcasting for encrypting video streams. Over the years, most customers have upgraded from CSA1 to CSA2. This was highly recommended due to CSA1 being insecure. Some smaller operations did not have the knowledge or manpower to do this and eventually their services appeared on pirate services; including customers from Turkey and the UK. We helped both customers to upgrade to CSA2 in less than a month. The developments of piracy at the British service were monitored by many sports customers as they carry premium content. Not only was this success story good for our reputation but also for other customers with premium sports content.

BROADCAST WATERMARKING HARDENING

Irdeto's watermarking solution TraceMark – along with the acclaimed Online Piracy Detection solution – enables content owners, broadcasters and OTT providers to efficiently protect content at all stages of the value chain. Back in May 2020 we hardened our broadcast watermarking product. During a watermarking deployment at a customer we found that pirates had countered our standard watermarking, i.e. the way watermarking was operating. We came up with two new innovative solutions which were subsequently implemented. At the end of the year, we were able to test these new features which successfully improved detection with multiple cards (collusion) and detection speed.

OTT LOG FILE ANALYSIS

Irdeto was requested by a customer to investigate potential content theft of their OTT platform. Pirate services were streaming high-quality content of the customer and intelligence collected on the illicit streaming service indicated that the content was indeed sourced directly from the OTT platform by abusing legitimate user accounts.

The Irdeto team investigated the piracy thre at by collecting further intelligence on the pirate operation and by analyzing multiple datasets of the OTT platform. Due to the extensive OTT security expertise of our technical analysts, they were able to quickly identify anomalies in the customers OTT data, which showed abuse of the OTT system. With ongoing support from the Irdeto team, new anomalies were detected and attempts by the pirates to bypass newly implemented security measures could be blocked.

As a result of on-going technical OTT investigations, analysis of multiple OTT datasets and innovative blocking methods, the activities resulted in the unavailability of the customers content on the illicit streaming service.

SUCCESS STORIES

ADVANCED PROTECTION SERVICES

REVERSING A PIRACY SECURITY EXPLOIT

As part of Irdeto's ongoing intelligence gathering into pirate activities, an anomaly was identified with a streaming pirate service. It appeared that the pirate service had found a method that bypassed an anti-piracy measure known as "fingerprinting" on set-top-boxes (STB's) that were used by the customer. This is cause for concern, as STB's are typically well protected against modifications to protect video content against streaming piracy.

The information was shared with the customer and a collaborative investigation was started into the pirate service with the objective to find out how the pirate was able to modify the STB. The customer was able to obtain a STB which was sold by the streaming pirate. After an initial investigation by Irdeto's team it was confirmed that the pirate service was indeed able to block fingerprints that were sent to the device. We initiated an in-depth technical investigation focusing on the possibility of a hardware or software vulnerability that was exploited by the streaming pirate. This process of reverse engineering the STB to identify the security vulnerability that was abused, resulted into a technical report that revealed that the streaming pirate had indeed modified the software on the STB. The exploit could be linked to the STB manufacturers code.

As result of Irdeto's in-depth technical analysis of the STB security exploit, the vulnerability was resolved via a close collaboration between the customer, STB manufacturer and Irdeto. Furthermore a plan was provided for new firmware developments to improve the STB's security level in the future.

ADVANCED PROTECTION SERVICES

COMPLEX INVESTIGATION OF A PIRATE STREAMING OPERATION

A valued Irdeto customer requested investigative support into an active piracy threat. Intelligence about the pirate operation was identified which indicated that this operation was specifically targeting the customers content. The content was offered in many different ways and channels and was even wholesale (i.e. selling streaming devices in bulk to resellers), making this streaming pirate a significant streaming threat.

The Irdeto anti-piracy team supported the customer with a covert investigation, which included making test purchases directly from the pirate and technical investigations into the provided devices and service. As result of an ongoing investigation, persistence and expertise combining OSINT with data acquired during the technical and covert investigation, the Irdeto team was able to identify an identity behind the streaming pirate operation.

As result of this investigation, the team was able to create a comprehensive case file including evidence about the streaming operation which helped tremendously with forwarding the casework to law enforcement in the Netherlands.

SUCCESS STORIES

As video entertainment and videogame delivery and consumption evolve, pirates find new ways to circumvent security technologies and steal valuable assets.

Protect your content, brand and investments while meeting premium content security requirements.

Contact Irdeto

Irdeto is the world leader in digital platform cybersecurity, empowering businesses to innovate for a secure, connected future. Building on over 50 years of expertise in security, Irdeto's services and solutions protect revenue, enable growth and fight cybercrime in video entertainment, video games and connected industries including transport, health and infrastructure. With teams around the world, Irdeto's greatest asset is its people and diversity is celebrated through an inclusive workplace, where everyone has an equal opportunity to drive innovation and support Irdeto's success. Irdeto is the preferred security partner to empower a secure world where people can connect with confidence.