Friend MTS

Protecting content + revenue

Measuring streaming piracy consumption over ISP networks

Quantifying the impact of content theft on your business

Application Note

Measuring streaming piracy consumption over ISP networks

Introduction

While there has been widespread acceptance of the threat posed by streaming piracy to the media and entertainment industry, there has often been a reluctance to invest more heavily in anti-piracy services due to insufficient data about the level of pirate content consumption by potential pay TV subscribers.

In particular, many providers of premium sports and entertainment content have been lacking accurate information about how streaming piracy is impacting their own businesses, rather than general industry trends.

Content owners, broadcasters and pay TV platforms have typically wanted to know the following:

• What content is being viewed from pirate platforms?

• How many of my broadband subscribers are viewing pirate content?

• Which pirate platforms are watched most by my subscribers?

Until now, streaming piracy data has typically focused on availability monitoring which can only deliver information about the number of pirate platforms delivering specific content, rather than how much pirate content is actually being consumed. There have been unsuccessful attempts to measure content consumption by extrapolating data from network packet analysis, as well as consumer surveys about pirate site viewing behaviour. However, none of these approaches have delivered accurate subscriber consumption data that can withstand serious scrutiny.

With the introduction of Friend MTS' Piracy-iQ service, precise data about streaming piracy consumption by broadband subscribers can be gathered for the first time. This service measures the consumption of specific pirate content over internet service provider (ISP) networks by enhancing the reporting of third-party network flow analysis data. This application note explains the workflow, the critical information that can be captured, and how this analysis tool can be used to track the effectiveness of anti-piracy services.

Identifying IP addresses of pirate platforms

The process for measuring streaming piracy consumption involves analysing the viewing of specific content, such as a sports event or channel, from known pirate services.

The first step in the workflow is monitoring for illegal redistribution of the content by pirate platforms. This can be performed using Friend MTS' Global Monitoring Platform, which scans an extensive managed catalogue of known piracy sources, including Kodi and Android based illicit streaming services, as well as content sharing by mobile apps, websites and social media. Streaming piracy can be identified accurately in just a few seconds, and the IP addresses of the pirate streaming servers captured.

Streaming piracy identification and IP address capture with content monitoring

Generating reports about piracy consumption

Once the IP addresses of the pirate servers have been captured, they are fed into the reporting tools of the third-party network flow analysis system operated by the internet service provider (ISP) for piracy traffic measurement.

Using big data analytics, a reporting system such as NETSCOUT Arbor's Sightline Insight, can deliver granular, multi-dimensional reports with powerful filtering to provide detailed piracy consumption insights.

The reporting can present a wide array of accurate data about the streaming piracy, including which pirate platforms are most used for viewing specific content, the number of the ISP's broadband subscribers who are watching the pirate content, and the infrastructure providers used by the pirate platforms.

Pirate services

1 illegal redistribution of content identified with Friend MTS fingerprinting
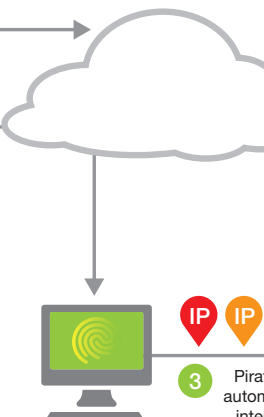
Pirate service #1

Pirate service #2

2 Global Monitoring Platform identifies IP addresses of pirate services

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Global Monitoring Platform and Piracy-iQ

3 Pirate service IP addresses are automatically sent at configurable intervals to third party network flow analysis system

Internet service provider

4 Third party network flow analysis system measures streaming piracy consumption

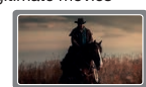**Subscriber viewing**

Pirate service #1

Legitimate sports

Pirate service #2

Legitimate movies

Simplified schematic of Piracy-iQ workflow for measuring streaming piracy consumption

Sample reporting

This visualisation presents the relationships between the pirate platform viewers (Top Subscribers), the network providers (Remote Origin ASN), and the pirate platforms (Top Server).

The detailed reporting that can be generated from the massive quantity of captured flow data allows precise measurement of key metrics, such as the number of unique IP addresses of pirate platform viewers.
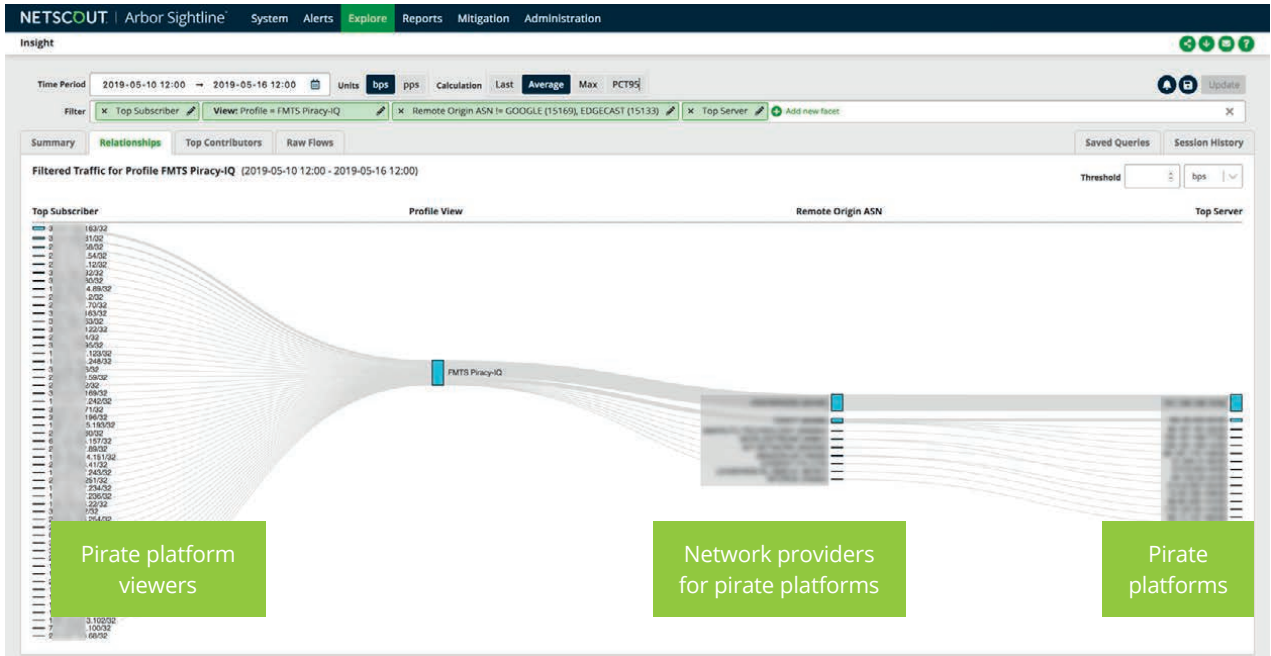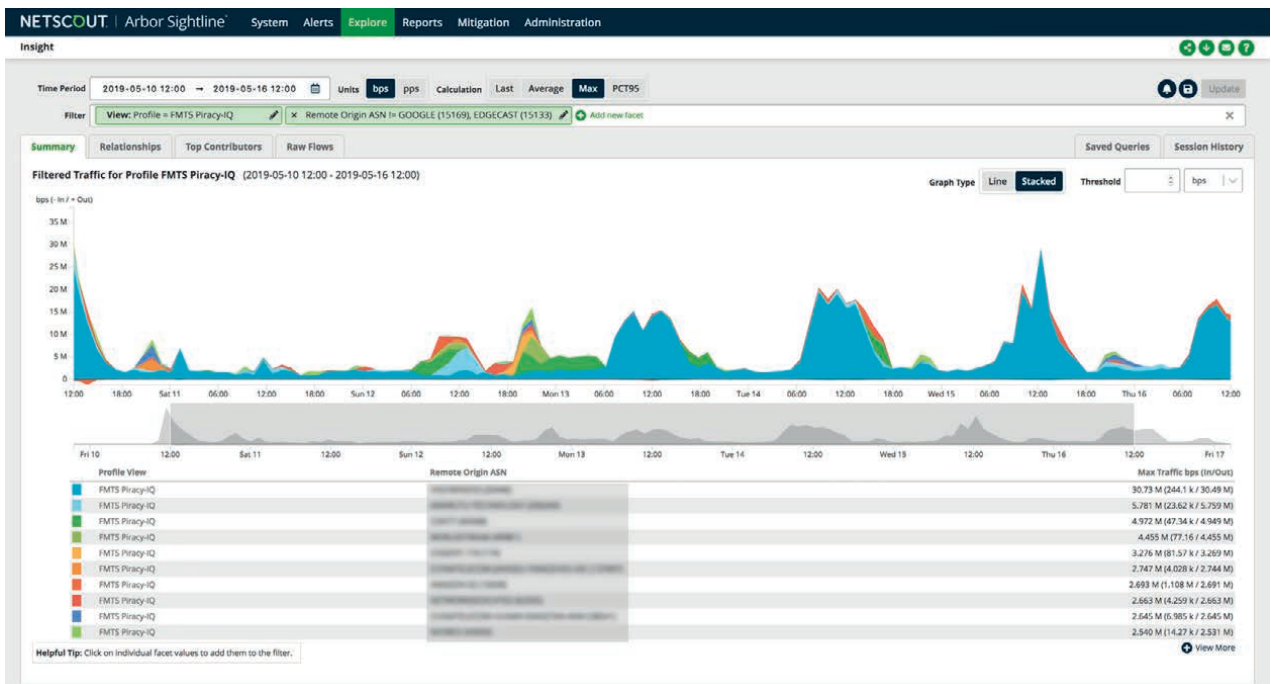

Picture courtesy: NETSCOUT

Rich visualisation of traffic flows

A highly graphical visualisation capability can be used to vividly convey a wide range of data, such as the aggregated volume of pirate content traffic, split between the various ASNs, as shown below.

This highly flexible reporting can be used for both real-time analysis and post-event diagnostics.

Picture courtesy: NETSCOUT

Tracking performance of anti-piracy services

The measurement of streaming piracy consumption is a powerful capability that can be deployed at the start of a content protection program, when there is a requirement to better understand the impact of theft on a business.

In addition, it should then be used on an on-going basis to track the success of any anti-piracy services implemented by the business, such as subscriber-level watermarking, and also to improve the targeting of additional security countermeasures.

Conclusion

The development of tools for accurate measurement of streaming piracy consumption is a key capability in the fight against illegal redistribution.

By providing precise data about the impact of content theft on individual media and entertainment businesses, it is likely to stimulate a higher level of investment in anti-piracy services, and drive the adoption of proven countermeasures such as subscriber-level watermarking.

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For more information about measuring streaming piracy consumption visit:

www.friendmts.com/piracy-iq