



The Challenge

Fraud has moved from being a back-office subject to front-page news. Existing fraud management systems are losing the innovation battle against sophisticated criminals. They either:

- Fail—Don't discover fraud
- Overwhelm—Bombard users with false positives
- Operate in Batch—Discovering fraud after the criminal has gone
- Use Dated Rules—That discover last year's fraud not today's
- Require skillsets that are not available

The Communications Fraud Control Association (CFCA) reported that mobile and fixed-line carriers are losing \$46 billion to fraud. The impact of fraud is financially devastating and can be measured in terms of the bottom line, compliance fines, customer service cost and churn, and brand/reputation damage—often the most costly.

Joint Solution Benefits

- Save millions of dollars from the bottom line for mobile carriers
- Achieve pervasive SS7 and IP traffic visibility throughout the entire network and IT infrastructure including SDN and NVF
- Detect both new and old fraud attack techniques in minutes vs. days
- Achieve pervasive SS7 and IP traffic visibility throughout the entire network and IT infrastructure including SDN and NVF

The Gigamon and Argyle Data Joint Solution Overview

The Gigamon Visibility Fabric™ nodes provide Active Visibility to the network traffic and subscribers via line-rate intelligent filtering and packet correlation as well as unsampled Netflow generation.

In real time, Argyle Data's Hadoop-based fraud analytics application ingests billions of live call packets from the Gigamon Visibility Fabric and uses the latest machine learning techniques to detect the following fraud types and methods:

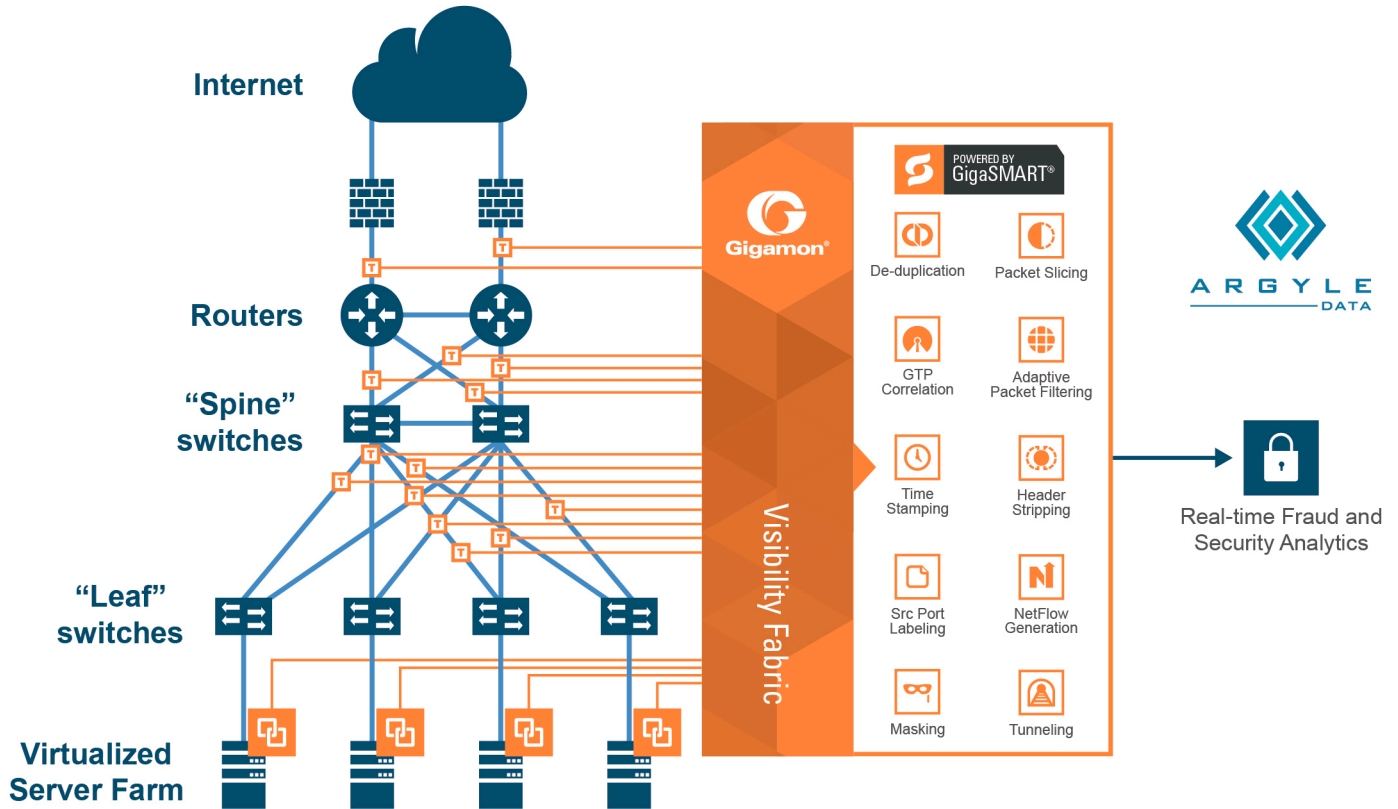
- Roaming Fraud—\$6.11B lost annually
- Premium Rate Service Fraud—\$4.73B lost annually
- Abuse or Arbitrage Fraud—\$2.2B lost annually
- International Revenue Share Fraud (IRSF)—\$1.8B lost annually
- Domestic Revenue Share Fraud (DRSF)—\$0.8B lost annually
- Subscription Fraud—\$5.2B lost annually
- SIM Cloning—\$0.5B lost annually
- Interconnect Bypass e.e. SIM box—\$2B lost annually
- Wangiri Fraud—\$2B lost annually

How the Joint Solution Works

Carriers are shifting to IP networks and from 3G to LTE. Valuable data is available throughout the network that is commonly untapped. The Gigamon Visibility Fabric is able to tap into live traffic, determine what is valuable across both the control plane and user plane and route data to applications that can derive value from the “fire-hose”, even in the case of encrypted data. This is possible across:

- Mobile Calls—ISUP, TD, 35, MAP, SMS, BSSAP, GTP, Diameter, xCDR ...
- Fixed Calls—ISUP, Diameter, xCDR ...
- VoIP/VoLTE Calls—SIP, H.323, Diameter, xCDR ...

Argyle Data is a real-time fraud analytics application built from the ground up on Hadoop using the latest Big Data, machine learning and anomaly detection technology. Argyle Data is able to ingest packet data extracted by Gigamon in real-time and perform Deep Packet Inspection (DPI). As packet data is stored machine learning algorithms identify fraud and send alerts to a fraud analyst dashboard. Applied graph theory allows sophisticated visualization and centrality calculations allow deeper investigation of criminal rings. The fraud analyst is able to query petabytes of data and get interactive response times using an industry standard SQL framework.



In addition to providing the leading Big Data fraud detection application, Argyle Data's technology enables new, innovative Big Data approaches in areas such as revenue assurance, network quality, and SS7 security applications.

About Argyle Data

Argyle Data is the leader in real-time fraud and security analytics at network speed and Hadoop scale offering solutions for the largest data-driven companies in mobile communications and financial services. Argyle Data offers a real-time fraud and security analytics application built from the ground up on Hadoop using the latest Big Data, machine, learning, and anomaly detection technology. It is able to detect fraud not detected by existing systems, discover fraud in minutes vs. days, discover both new and old fraud attack techniques, and dramatically reduce false positives.

About Gigamon

Gigamon provides an intelligent Visibility Fabric™ architecture to enable the management of increasingly complex networks. Gigamon technology empowers infrastructure architects, managers and operators with pervasive visibility and control of traffic across both physical and virtual environments without affecting the performance or stability of the production network.

Through patented technologies, centralized management and a portfolio of high availability and high-density fabric nodes, network traffic is intelligently delivered to management, monitoring and security systems. Gigamon solutions have been deployed globally across enterprise, data centers and service providers, including over half of the Fortune 100 and many government and federal agencies.

Learn More

For more information on the Argyle Data and Gigamon solution, contact:



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