

# Fraud detection and prevention: Telecoms network monitoring to protect the bottom line

Our Fraud Solution is used by international carriers providing carrier services to operators. Operators need to connect countries and to offer global reach to their customers with high-quality roaming services worldwide.



Utel's **Fraud Solution**, gives you complete visibility into the voice traffic travelling over your network. It enables you to identify and stop fraudulent and unwanted traffic, keep track of the traffic to and from their vendors and partners, and gain complete insight into voice traffic in near real-time.

## Background

Fraud is pervasive in the telecoms industry, leading to serious losses for both operators and their customers.

Fraud is a significant and growing problem for all operators, leading to significant annual losses – for both service providers and their customers. It is of particular risk to elderly and vulnerable people – though sophisticated methods mean that anyone can fall victim. Fraudsters are professional, highly organised, and constantly create new methods for fooling customers and operators.

As a result, operators of all kinds face the challenge of protecting their customers from the ever-growing threat of phone scams and fraud. Utel's Fraud Solution offers a proven way for voice and mobile operators to offer high-quality voice and SMS services while protecting their customers from fraudulent activities – minimising losses all round.

## The business challenge

Fraud impacts your bottom line, but also can seriously undermine your reputation as a trusted carrier or service provider.

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*It's estimated that wholesale carriers lose 2.17% of their total annual revenue to fraud, costing a massive \$44 billion per year. The cost of fraud to their customers is estimated at even more at \$48 billion per year.*

International carriers offer wholesale voice services, which route voice calls to global destinations for business units within the parent company, and for customers and partners. But carrying voice brings the challenge of dealing with phone scams and fraudulent traffic.

It's estimated that wholesale carriers lose 2.17% of their total annual revenue to fraud, costing a massive \$44 billion per year. The cost of fraud to their customers is estimated at even more at \$48 billion per year\*.

Fraudulent traffic incurs monetary losses in several ways:

- Direct payment for the fraudulent traffic.
- The need for internal resources to follow-up incidents of fraud.
- The time and cost of negotiating billing disputes with customer carriers and partners.

For carriers, it is important to act as a trusted partner by ensuring that calls carried across your network are secure, and that traffic is legitimate. Put simply, you need to proactively monitor, identify and block fraudsters.

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\* <https://riskandassurancgroup.org/rag-rafm-survey-2020/#report>

WHOLESALE CARRIERS LOSE

**2.17%**  
**OF THEIR TOTAL  
ANNUAL REVENUE  
TO FRAUD**

### An ever-changing, evolving threat landscape

There are multiple forms of fraudulent traffic, including:

- Calls to premium-rate numbers.
- “Wangiri” calls, where end users are tricked into returning a missed call but are instead connected to a premium-rate number operated by the fraudster.
- Machine-generated sequential calls:
- Calls intended to scam people into providing personal information or bank and credit card details.
- Robocalls.
- Calls probing to find phone systems vulnerable to being hacked.
- Hijacked traffic, where calls are routed outside their intended operator and termination points.
- Hacked PBX systems used for grey or black routing of phone calls, or mass-call generation towards premium-rate numbers.
- Traffic on grey routes that circumvents country or regional legislation.
- Non-roaming traffic, where the calling number is registered in the same country as the called number.

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*The Utel Fraud Solution enables operators and carriers to reduce call fraud, quickly remove fraudulent traffic from the network, and comply with regulations aimed at combatting fraud.*

Carriers need a solution that can detect and block all these fraudulent activities on an end-to-end basis throughout the network. How can this be done?

## The Utel solution

Identify, block, and eliminate fraudulent calls before they impact your customers and reputation.

The Utel Fraud Solution enables operators and carriers to reduce call fraud, quickly remove fraudulent traffic from the network, and comply with regulations aimed at combatting fraud. Network-deployed virtual probes harvest calling data directly from the international voice network, generating Call Detail Records (CDRs) that provide a complete overview of the voice traffic across the network to quickly identify traffic that matches these patterns.

The harvested data is analysed in near real-time, and if the solution identifies traffic patterns that match fraudulent traffic profiles. It also generates alerts that can be escalated to the anti-fraud team for urgent investigation.

### Powerful measures to recognise fraudulent traffic

Fraudulent calls are often identified by a high volume of calls coming from a number series that show specific characteristics, including:

- Known fraudulent number series
- Calls that terminate in known fraudulent number series
- Number series marked as unassigned
- Premium-rate numbers
- Roaming numbers

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*The solution also allows carriers to build internal procedures to block unwanted calling or called number series in the phone switches by contacting and working alongside the carriers and operators that are routing the unwanted traffic.*

By analysing summaries from both the calling and called phone numbers, and by looking at an aggregate of all the traffic in the network, the solution can identify individual traffic streams.

The solution can identify calls from a single-number series, based on the Calling Line Identity (CLI), and the operator that is sending the traffic into the carrier's network. Traffic is also summarised under Called Number – whereby the calls are labelled by matching the phone number prefixes to a database of international phone numbers.

This allows complete visibility into any number series generating or receiving a large number of calls, and the networks and carriers that are originating and terminating these calls.

Figure 1 illustrates how captured data is available for analysis – automatically and visually. In this case, there is a high number of calls, but no billable minutes – which is an indicator of suspicious traffic activity.





**Figure 1:**  
CDR capture and review

### An ever-changing, evolving threat landscape

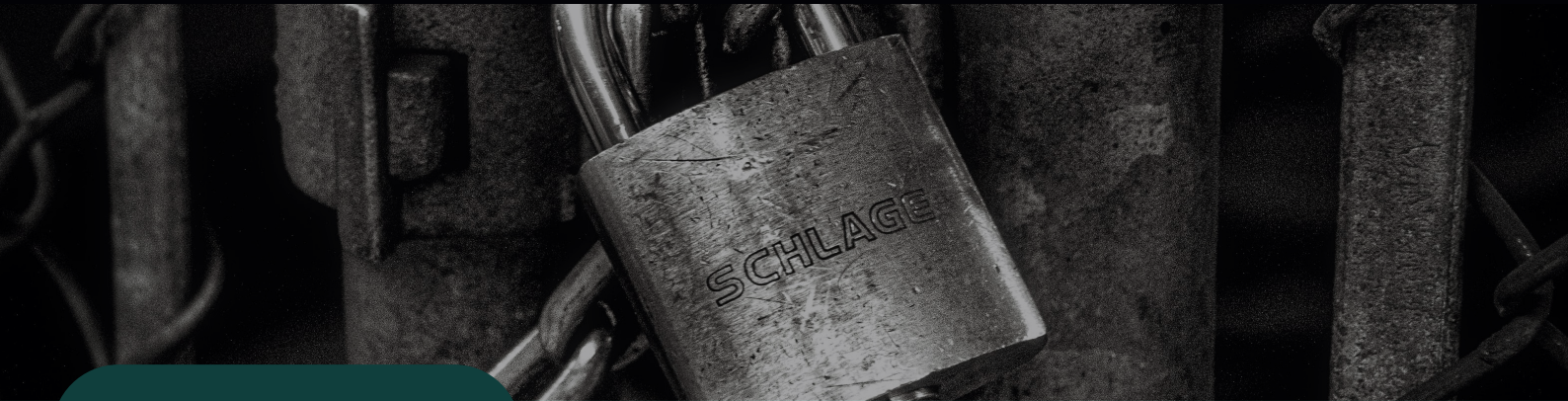
Automated notification generation identifies fraudulent traffic dynamically and alerts anti-fraud teams pro-actively, enabling fast termination of number ranges across the network and reducing customer fraud.

As a result, operators can spot suspicious activity, such as:

- An increase in the number of calls from phone numbers of countries where the population does not match the expected number of originating calls.
- Calls where the calling phone number and the called phone number belong to the same country but are outside the number series used for roaming.
- Single number series of numbers that are generating or receiving an unusually high number of calls.

*The Utel Fraud Solution allows carriers and operators to build up in-depth expertise of what constitutes normal and abnormal, fraudulent traffic in their network by analysing traffic on a continual basis.*

The solution also allows carriers to build internal procedures to block unwanted calling or called number series in the phone switches by contacting and working alongside the carriers and operators that are routing the unwanted traffic. This helps to stop fraudulent traffic and avoid billing disputes for both parties. Utel also provides the necessary data and analysis to resolve disputes.



"We have learnt that fighting fraud has two main objectives. The first is to stop unwanted traffic.

The second is to be able to stop the payment towards the fraudsters. Both are equally important."

Customer Representative

## Benefits

Utel's Fraud Solution can reduce fraud management costs by up to 90% through efficient anti-fraud monitoring.

The Utel Fraud Solution allows carriers and operators to build up in-depth expertise of what constitutes normal and abnormal, fraudulent traffic in their network by analysing traffic on a continual basis. It analyses the 'Calling' and 'Called' numbers of each suspect phone call, as well as the identity of the operator from which the calls are received or routed.

The Utel Fraud Solution offers a number of benefits



### REDUCE CALL FRAUD

Identify fraudulent calls, block suspicious calling numbers and reduce customer fraud



### REMOVE FRAUDULENT TRAFFIC, FAST

Fraudulent calling schemes can be short-lived, react fast and block number ranges while they are still in use



### REGULATORY COMPLIANCE

Ofcom compliance audits include current and planned initiatives to combat fraud

Utel's Fraud Solution can reduce fraud management costs by up to 90% through efficient anti-fraud monitoring and operations. They enable fraud teams to set up alarms when new abnormal traffic patterns are identified, enabling rapid action. It also offers a whitelist of number series that are known to generate large numbers of legitimate traffic to avoid unwanted alarms.

UTEL'S CUSTOMERS  
HAVE REDUCED THE TIME  
AND EFFORT SPENT HANDLING  
FRAUDULENT TRAFFIC BY  
**10–15%**

## Conclusion

Comply with regulation, protect your network, and safeguard customers with a zero-tolerance approach.

Operators and carriers seeking regulatory compliance, reduce the cost and time wasted by fraud, or those working towards their own CSR commitments, must implement a zero-tolerance policy towards fraud.

Utel's Fraud Solution helps you to block known fraudulent number series, stop payment procedures towards fraudsters, monitor performance of partners, and whitelist/blacklist traffic.

By using the Fraud Solution from Utel, you can gain complete visibility into the voice traffic travelling over your network. It enables you to identify and stop fraudulent and unwanted traffic, keep track of the traffic to and from their vendors and partners, and gain complete insight into voice traffic in near real-time.

Utel's customers have reduced the time and effort spent handling fraudulent traffic by 10–15% using our solutions. We help you to reduce the time and cost spent on fraud incidents, payment disputes and direct payment towards fraudsters.

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