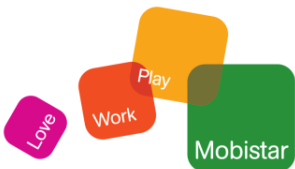




# Lavastorm Analytics and Mobistar

*Reducing Mobistar's Fraud Risk Profile with Real-time Analytics and Collaboration*



**LAVASTORM**  
analytics



# Reducing Mobistar's Fraud Risk Profile with Real-time Analytics and Collaboration

## Introduction

Fraud has become a pervasive and constantly evolving problem for telecommunications service providers (SPs). As global connectivity grows, fraudsters have a larger array of channels available to them by which to fraud businesses and consumers, making the job of preventing the three main categories of telecom fraud – customer, usage, and payment – a larger and more complex job for SPs. What's more, fraud risk inherently increases with a SP's size: as SP's grow their business by winning more subscribers or building innovative new services, even more opportunities and channels for fraud are opened up. SPs today are faced with the task of managing a larger volume of fraud than ever, and must take a more proactive, integrated approach to reducing their fraud risk profile. This has made the need for technology to help automate the processes of identifying and preventing fraud more acute.

At the same time, fraudsters have also become more sophisticated and more organized, often combining methods of attack that exploit multiple elements of a SP's business, or their relationship with a customer. Identifying these new types of fraud and reacting to new threats quickly, then, is increasingly challenging, and usually requires multiple business units or stakeholders to be involved in the fraud identification and prevention process. Along with being more proactive, then, SPs must also be more collaborative with their fraud prevention efforts.

## Mobistar's Challenges and Why They Chose the Lavastorm Analytics Platform

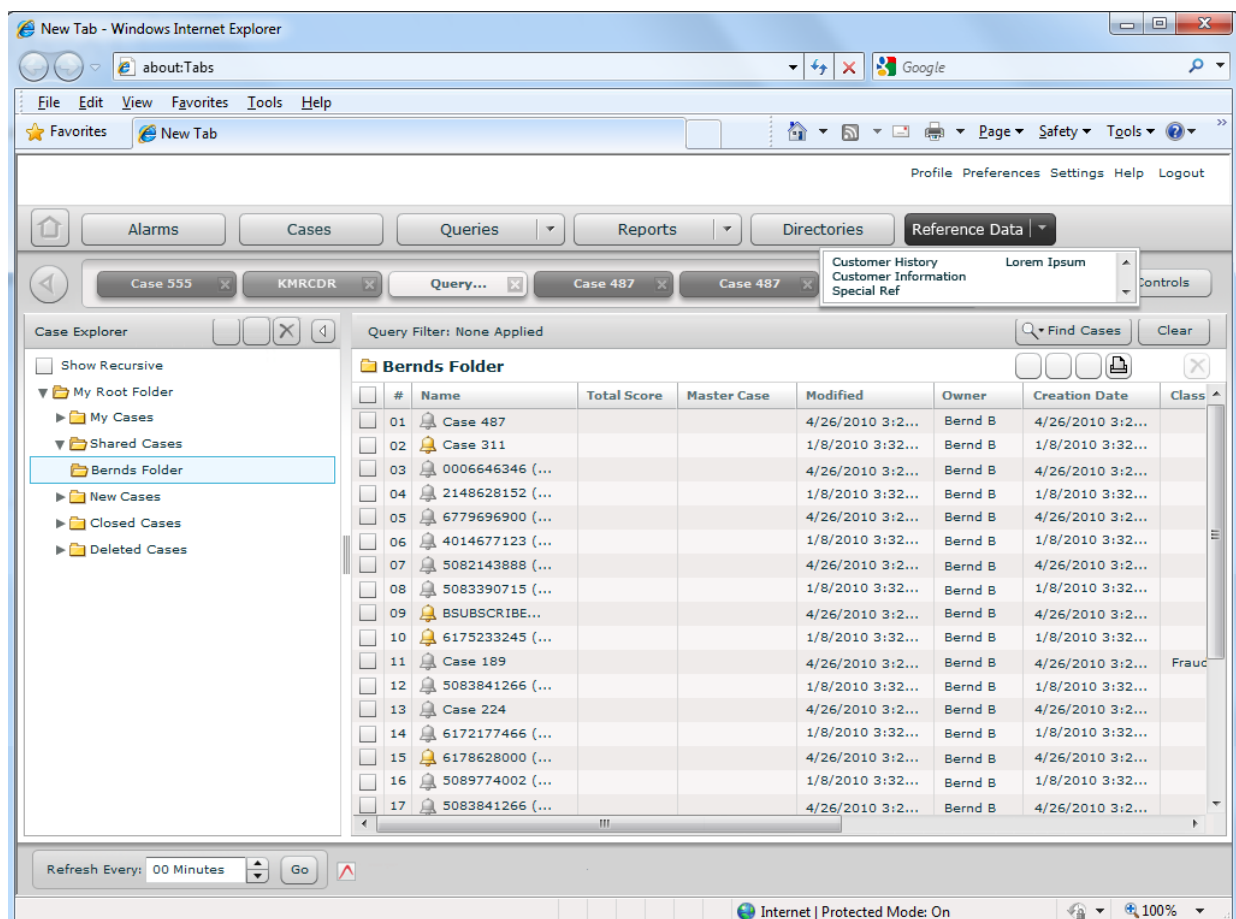
Mobistar is one of mainstays of Belgium and Luxembourg's telecommunications market, active in mobile telephony, fixed telephony, fix data, ADSL, and other services with strong growth potential. The Mobistar group had 4,039,372 active mobile telephony customers at the end of the 2010 financial year, an increase of 5.5 % in one year.

As Mobistar grew its customer base, they faced a combination of increasing volume and complexity of fraud threats. Additionally, the complexity of these threats required a more collaborative decision making process across multiple divisions of the business, and Mobistar was struggling to have their manual fraud prevention system scale with these demands. As they continued to launch new bundles of communications services, they realized that adapting to new fraud risks required a more integrated system.

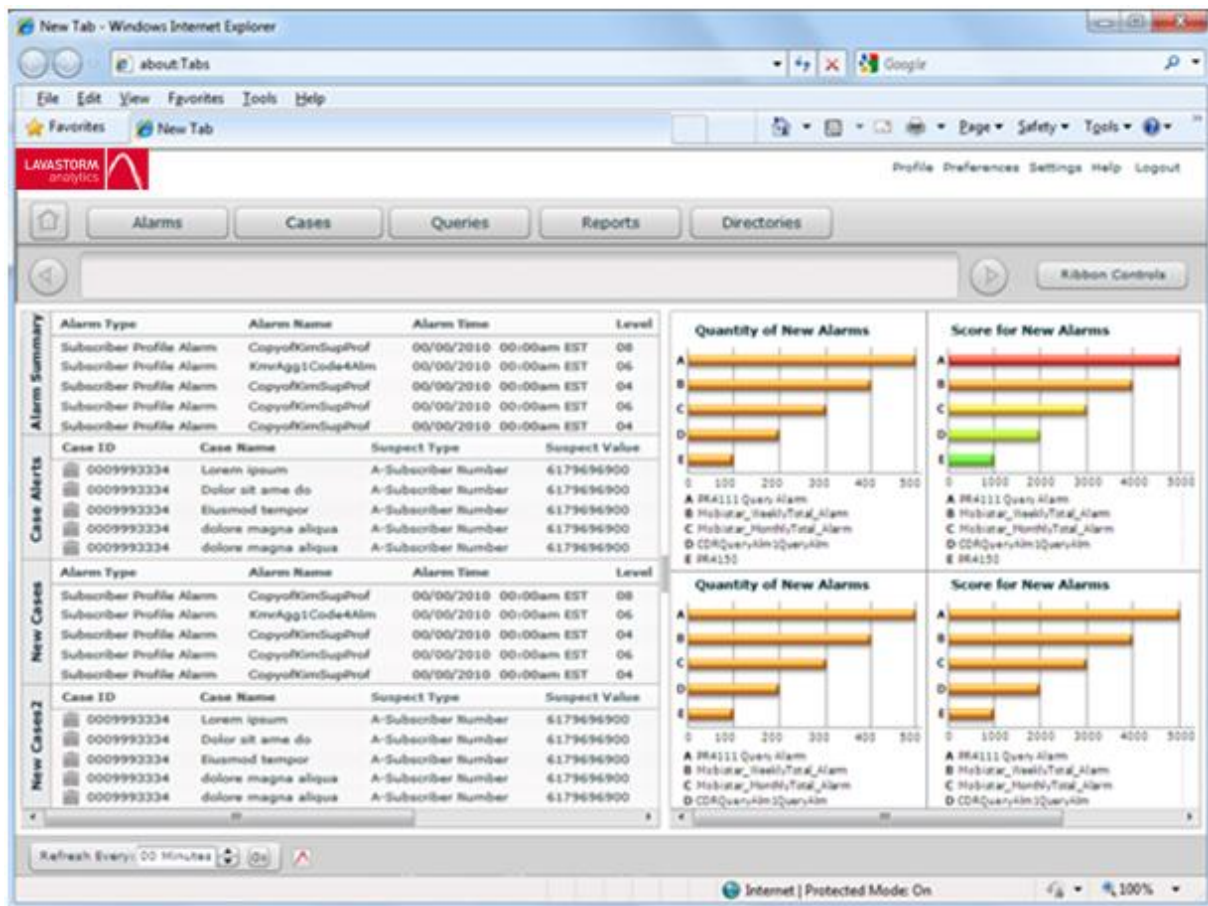
Realizing this need, Mobistar issued an RFP for a new adaptive fraud management system (FMS). The goal for the new system was to allow them to understand new potential threats more quickly, while also increasing their efficiency as a corporation and lessening the potential negative economic impacts of fraud on the company's bottom line.

After a competitive evaluation, the Lavastorm Analytics Platform was chosen for its innovative, flexible analytic capabilities that easily adapted to changing threats, case management priorities, and financial goals.

The Lavastorm Analytics Platform represents a leap forward in fraud management capabilities because of the flexibility it provides to address all fraud types, including identity, usage, and payment fraud, from a single platform and the ability to adapt to emerging types of complex fraud, such as social engineering and SIM card cloning. Using the platform, SPs can investigate fraud cases fully by reviewing call detail records and other event data from any data source including switches, billing systems and rating systems through a single interface. In addition, SPs can proactively detect, analyze and prevent fraud through a full set of built-in fraud management functions, including –fraud pattern recognition capabilities that strengthen detection and minimize false positives, alarming that automatic generates cases, case management workflow with automatic and manual actions, dynamic queries, and automated reporting.



The Lavastorm Analytics Platform’s case management workflow capabilities support rapid detection and action through both automated and manually actions.



Visualizations help analysts investigate alarms and fraud cases.

After completing an initial proof of concept at Mobistar, Lavastorm implemented the Analytics Platform in several stages, completing the full installation in late 2010. On-site training for both Mobistar administrators and end users was provided by the Lavastorm team.

### The Lavastorm Analytics Platform Helps Mobistar Significantly Raise its Fraud Prevention Capabilities

The Lavastorm Analytics Platform has been a huge success for Mobistar in helping to considerably improve the SP's fraud prevention rates.

With the platform's powerful Lavastorm Analytics Engine, Mobistar can run data access every five minutes to identify different patterns and trends, and also access various data sources. The collaborative implications for this are significant: The system allows one business team to raise alarms or create "hotlists" of potential threats and broadcast them across other lines of the business that might be vulnerable to similar potential threat patterns. For example, if a large amount of fraud is being flagged by a particular country, as was typical in Egypt during the recent

riots, they can use that information across the different business segments. By staying abreast of the fraud threats in this manner, they can protect their subscribers and their bottom line.

Additionally, the logistics manager function of the Lavastorm Analytics Platform is used to schedule multiple jobs that collect vital information from the FMS and publishes the information on the Mobistar Management Dashboard in eight key performance indicators (KPIs). These indications include fraud hit rate per control (the rate at which they can prevent fraud according to a specific threat or business rule), amount of fraud per type with trend line, fraud team performance, loss due to fraud per day, and revenue at risk due to fraud per day.

From Mobistar's perspective, the Lavastorm Analytics Platform's success has been measured by the success of the solution to deliver improvements against these specific KPIs. In particular, Mobistar was most concerned with the FMS' ability to raise the fraud hit rate for three specific controls, and for its ability to lower the SP's revenue at risk due to fraud per day.

With the full FMS in place since the beginning of 2011, Mobistar has more than tripled its fraud threat hit rate to more than 60 percent across all of its controls. For the three specific controls they were most concerned with raising the hit rate for - running three types of fuzzy-matching analytics for all new subscribers, subscriber profiling, and sequential analysis - Mobistar has leveraged the FMS to achieve a hit rate over 90 percent in these especially important areas.

According to Mobistar's public data, the FMS has helped to lower the SP's bad debt and overall costs for both the first and second quarters of calendar year 2011. The FMS' ability to lower Mobistar's revenue at risk due to fraud per day has been a direct contributor to this result, lowering the SP's fraud revenue at risk by day to between just €300.000 and €400.000.

### **A Flexible FMS for Future Innovation**

The Lavastorm Analytics Platform and its automated features has made it possible for Mobistar to free up resources for more proactive fraud response and scenario analysis, and its flexibility allows them to continue to innovate new fraud prevention methods on their own.

Currently, Mobistar has only 15 of the platform's 33 pre-built fraud controls running in production. These 15 are considered by Mobistar to be the highest value controls for them.

Additionally, Mobistar has used the platform's flexibility to create multiple "template queries" that not only grab data from inside the platform's own internal storage system, but also sources real-time data via a link to the company's databases for payments, subscriber activity, etc. With these queries, they are able to run specialized analyses in real time to detect and prevent the latest fraud threats, including running matches of suspected current fraudsters against old known fraud cases to narrow down the list of suspects. These two queries together have shortened their investigation time for certain fraud types significantly, and the hit rate is higher than ever.

On top of these custom additions, Mobistar also created four custom analysis batch jobs that grab different sets of data from tables within the Lavastorm Analytics Platform and inserts them into a Master Reporting table. This table is then accessed by the Mobistar MARS platform (Mobistar Dashboard) with Business Objects, and inside this environment the CFO, CEO etc. can

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check on the fraud KPIs in real-time. This has drastically improved the collaborative decision making process and made fraud management much more efficient for all of Mobistar's business units.

Mobistar is currently training new staff on the fraud management system with the goal of creating a 24x7 fraud management task force. In combination with the system's ability to add and quickly analyze new data every 15 minutes, the 24x7 task force will let them detect and act upon fraud even more quickly. For example, abnormally high usage of the networks is often an indicator of fraud. With the new system and task force running 24x7, this condition can be caught earlier before risk is too high: for a customer who has been with Mobistar for less than 30 days and already has usage above \$100 euros, or has made calls to specific fraud "hotlist" countries, the fraud management system can automatically interact with the customer via text message and require a "positive" response from them before allowing any additional usage.