

CASE STUDY

STREAM ANALYTICS

TELCO

## Live platform for streaming IP network and CDR analytics achieves real-time fraud detection, rating, and least-cost routing

### AT A GLANCE

**Company**  
Veracity

**Industry**  
Internet and  
Telecommunications

**Country**  
USA

**Website**  
[veracitynetworks.com](http://veracitynetworks.com)

### NOT-SO-FUN FACT

Average yearly loss suffered by telecom providers due to latent fraud detection and improper reporting systems: 3-10% of income.

### BACKGROUND

Veracity Networks is a facilities-based telecommunications provider delivering video, phone and internet services on their next-generation network throughout Utah, with a reputation for maintaining and improving its Tier-1 network infrastructures while setting industry standards in network stability and customer support.

Success has led Veracity to provide Quad-play IP services for residential and business customers, supported by the introduction of sophisticated IP-based networks and services platforms. With customer growth and satisfaction/retention now a priority in an increasingly competitive landscape, existing systems were struggling to provide full responsiveness to business and technological change, and were unable to scale to deliver the real-time monitoring and process automation required for today's IP-based service delivery networks.

SQLstream is the only real-time stream processing platform capable of analyzing and rating our CDR records in real time, which is vital in meeting the type of reporting and analytics needs we have.

*CHRIS MODESITT, CTO OF VERACITY NETWORKS*

### NEEDS

Veracity were seeking to maximize the capability of their Sonus-based SBC secure SIP access and Broadsoft VoIP platform, making their operations more efficient. They were looking for a stream processing platform for real-time, continuous analysis of CDR and IPDR records, to finally achieve:

- real-time rating
- continuous monitoring of QoS
- real-time policy management
- real-time fraud detection and prevention.

### SOLUTION

With SQLstream's streaming Big Data stream processor, Veracity Networks was able to accelerate the collection, analysis and visualization of their call detail records to real-time, eliminating operational latency. SQLstream enabled streaming CDR and IPDR records from their Sonus equipment and Broadsoft platforms to be processed on the fly and to deliver real-time operational intelligence, aggregated data and analytics streams. The first applications include:

- real-time call rating. Real-time rating of calls based on call route and update of policies for quality-based pricing and discounts / refunds
- call performance monitoring. Existing performance monitoring tools aggregate data by 15 minutes, sometimes by 5 minutes, using measures such as average call duration (very low call durations may indicate a problem). This is insufficient. Most IP-based problems are bursty by nature, lasting only a few seconds, but sufficient to force a quality issue or dropped call. SQLstream can provide real-time monitoring of both equipment performance and CDR analysis in order to identify issues more quickly
- fraud detection. Detection of suspect switch login activity and monitoring of usage and billing information in real-time, in order to detect fraudulent calling patterns as they occur.

Arriving CDR/IPDR records are now processed through the following stages in the Veracity streaming pipeline:

- real-time data acquisition from Sonus and Broadsoft equipment
- data conditioning: cleansing, filtering and parsing
- data enrichment, including augmentation with customer and geospatial data
- data aggregation and analytics, with dual views (for internal operators, and customer reports such as usage/billing)
- streaming dashboard visualization of alerts, alarms and trends
- streaming output integration with operational platforms for automated updates.

### RESULTS

SQLstream enabled Veracity Networks to roll out a range of low- cost, real-time applications with an immediate impact on Quality of Experience, Quality of Service, and network performance:

- Reduced churn and improved retention
- Reduced infrastructure costs
- Optimized call quality AND cost
- Eliminated bad debt and customer dissatisfaction.

