

**BUSINESS OVERVIEW**

# **POWERING REAL-TIME REVENUE ASSURANCE FOR TELCOS**

**THE VOLTDB DATA PLATFORM EMPOWERS YOU  
TO GET THE MOST OUT OF YOUR 5G DATA**

**VOLTDB**

## FRAUD AND THE NEW AGE OF REVENUE ASSURANCE

The scope of telecom revenue assurance has grown considerably in recent years. While the term no longer applies solely to fraud (and revenue leakage detection and prevention), fraud still eats roughly **\$32.7 billion** of global telco operator budgets annually.

It's clear that the two are inseparable and, unfortunately, the problem is only getting worse. Hackers are becoming increasingly sophisticated and aggressive, and now 5G, IoT, and machine-to-machine communications are giving them more attack surfaces (ie, opportunities) than ever.



# NEW LATENCY DEMANDS ARE DRIVING NEW REVENUE ASSURANCE-RELATED DEMANDS

5G is driving a new level of demand for fast-data decisioning.

Telco operators have a very limited number of opportunities to interact with customers, which means they need to be able to power applications that can capitalize on the few moments when customers are motivated to act.

5G continues the long-term trend of decreasing latency and reduced cycle times between end-users and backend systems. We thus need new and powerful applications that can capitalize on this new speed of operation.

A powerful data platform capable of sub 10-millisecond decisioning can help you:



## 1. PLUG REVENUE LEAKAGE

Revenue leakage occurs at many different points across the telecommunications supply chain. Oftentimes, it's difficult to detect due to a lack of visibility across all operations.

Luckily, real-time decisioning can put a stop to this. For example, suppose a customer makes three separate service requests within a short window of time. And imagine that the company is well aware that when customers call for the fourth time to fix a single issue, they are most likely to cancel their service altogether.

Using a real-time decisioning engine, that telco could flag that customer in real-time for advanced support. That way, they may be able to get to the bottom of the problem and potentially prevent another service call — in effect saving money on expensive truck rollouts (which are bad for the customer experience, too) and possibly preventing churn. .



## 2. ACT ON FRAUD BEFORE IT HAPPENS

One reason fraud is rampant in the telco space is because so many telcos are still relying on legacy infrastructure and simply don't have the ability to keep up with evolving threats. As such, telcos need to speed up their operations to shut down harmful fraudulent activity.

For example, in-event decisioning could detect and prevent location routing number (LRN) fraud, a form of fraud where callers insert fake LRNs into their calls to avoid paying high service fees.

A real-time decisioning engine could potentially spot suspicious LRNs as calls are taking place, enabling the telco to either shut down the call or bill the call at its accurate price point.



## 3. UPSELL CUSTOMERS

Telcos have limited opportunities to interact with customers, making it difficult to roll out new services and convince customers to upgrade to bigger and better things.

This is going to be a problem as telcos move forward with 5G deployments. According to a study from GSMA, more than half of consumers in developed countries expect 5G networks will deliver faster speeds. Yet it's not clear whether consumers will actually pay a premium for them. Further, just one in four consumers expect 5G to deliver innovative new services.

As such, it's going to take some convincing to obtain consumer buy-in with 5G. That being the case, telcos need to be in a position to capitalize on consumer interest during calls and digital engagements and respond with timely pitches while the topic is on the customer's mind and the agent has their attention.

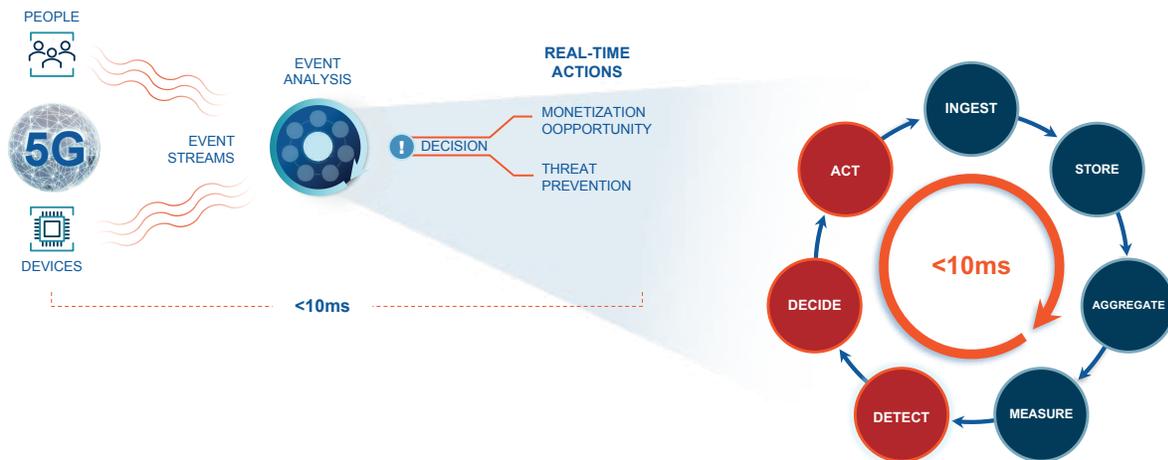
On the other hand, waiting until after the call ends could be too late. This type of interaction is only possible with real-time decisioning.

## WHY REAL-TIME IS SO IMPORTANT FOR FRAUD PREVENTION

Although VoltDB isn't in the business of developing applications, our platform enables our customers in the telco space to take full advantage of the enormous opportunity presented by 5G and fast data.

Our partners and customers share a common goal: to process data the instant it is created and thereby maximize its value while minimizing risk. For revenue assurance, this means going beyond reconciliation to proactively prevent revenue leakage and take advantage of the data monetization and fraud blockage opportunity as soon as it presents itself.

Customer data has the most value—for insight, opportunity, and response—the moment it is generated, and its value decreases rapidly as soon as that moment has passed; the opportunity to deliver an exceptional experience and profit from it or to keep fraudsters from getting into your network has evaporated.



The window of opportunity for competent fraud prevention is now 250 milliseconds. However, this requires the identification of—and more importantly, decision on—anomalous activity (such as bot activity) within just 10 milliseconds.

Why 10 milliseconds?

Because by the time the data makes the trip to and from the data lake, it's too late, the fraudsters have already gotten in to do their dirty-work.

## WHY VOLTDB FOR REAL-TIME REVENUE ASSURANCE?

Telecommunications companies and communications service providers (CSPs) are on the brink of a sea change in fraudulent behavior: a new era of fraud ushered in by the unprecedented data volume, variety, and velocity that the combination of 5G and IoT brings.

To handle it, telcos and CSPs need a new kind of data platform that enables intelligent, real-time decisions on anomalous activity, so that anomalous behavior is identified and blocked in real time and in-event, prior to the transaction occurring.

Using in-memory data storage to power real-time revenue assurance applications, VoltDB enables intelligent, single-digit millisecond decisioning on anomalous behavior, allowing telcos to capitalize on opportunities and act on fraudulent acts before they occur. The platform offers elastic scalability, high throughput, and cross data center replication.

Here's why VoltDB is the best data platform for telco revenue assurance:

### Adaptive Intelligence

VoltDB applies a rule-based detection approach to find anomalous activity and invoke preventative action. These rules, of course, are dynamic because VoltDB can integrate with machine learning platforms such as data lakes and data warehouses to update these rules as new triggers and patterns emerge. This allows systems built on VoltDB to continually adapt to the attack surface coverage.

### Channels

Applications built on our data platform can analyze data coming from multiple sources and channels at once. This is key in an era where CSPs and telco customers—and their devices—bring in data via several different channels.

### Contextual Decision Intelligence

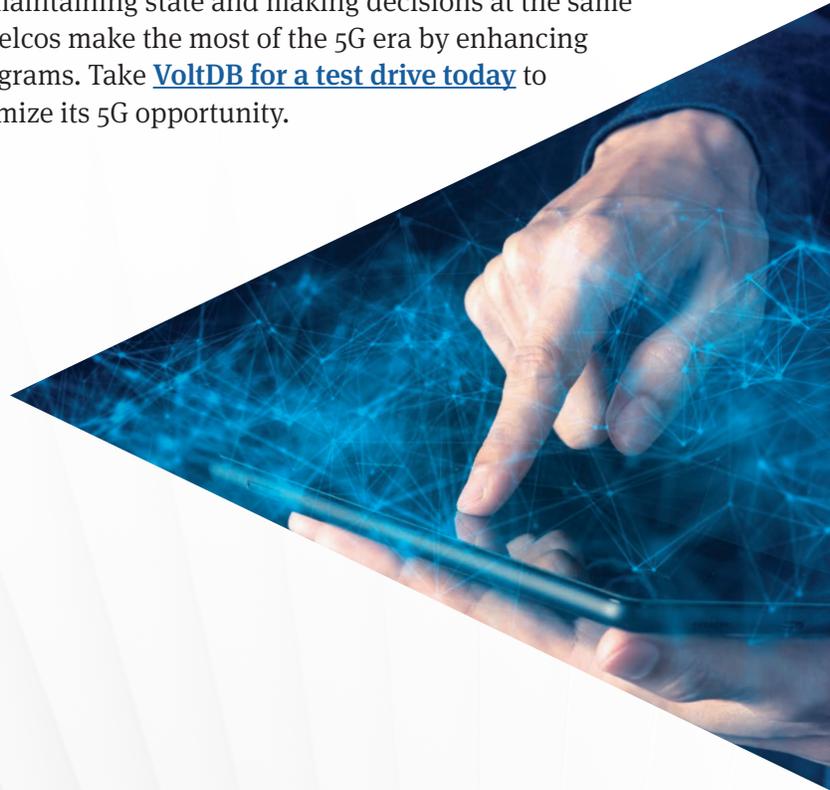
Fraudulent activity is never a singular event. It is a combination of multiple events that come together to form fraud. It is essential to take the incoming event in the context of near-past events to complete the picture. This means using a platform that brings stream processing and data storage together to ensure low-latency decisions. VoltDB is exactly that platform that brings our flagship in-memory database and stream-processing capabilities together to meet the “under-10 milliseconds” need to take preventative measures.

## THE BOTTOM LINE ON REVENUE ASSURANCE

The VoltDB Data Platform uses real-time intelligence, machine learning, and complex event processing from multiple channels to analyze thousands of attributes—including subscriber behavior, geolocation, device information, transaction type, etc—across multiple channels in real time. These attributes are compared to correct behavior and statistical anomalies are picked out as events occur to head off fraudsters before they even have a chance to act.

That means you, your networks, your applications, your customers, and your revenue, are kept safe.

As the only data platform on the market capable of maintaining state and making decisions at the same time at scale, VoltDB is uniquely positioned to help telcos make the most of the 5G era by enhancing their revenue assurance and business assurance programs. Take [VoltDB for a test drive today](#) to learn more about how your telco company can maximize its 5G opportunity.



### ABOUT VoltDB

VoltDB enables enterprise-level companies to innovate faster, perform better, and create new revenue streams by unlocking the full value of their 5G data. The only data platform built for real-time, sub-10 millisecond decisioning, we empower companies to re-engineer their latency-dependent solutions to process more data than ever before at a faster pace than ever before, allowing them to not just survive but thrive in the world of 5G, IoT, and whatever comes next. By combining in-memory data storage with predictable low-latency and other key capabilities, we can power BSS/OSS, customer management, and revenue assurance applications that need to act in single-digit milliseconds to drive revenue or prevent revenue loss, without compromising on data accuracy. For more information, visit [voldb.com](http://voldb.com).

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