

Why VoltDB is the Best Data Platform for Billing Mediation

Your downstream systems are **starved** for data. They need more and more data to feed better analytics so that they can better help your applications do what they were designed to do: **support powerful telco networks** and their customers by allowing for more granular, dynamic, and nuanced charging and billing systems.

But with 5G here, fast-moving streams of data have become rapid **TORRENTS of data** that threaten to knock your tech stack down with their strong currents. Whether it's speed, scale, or complexity, you're already feeling the challenges of managing data in the 5G age, and you sense your tech stack about to break under the pressure of:

1. HUGE DATA VOLUMES

It's perfectly normal to see billions of records an hour, or even more than 280,000 per second. A system also needs to be able to process records at least 1.5 times the speed they are created, so it can catch up after an outage.

2. SMALLER DATA TIMESTAMPS

While most aggregate data influences events over a time period of hours or days, a subset of the data involves ongoing events that can be influenced over timescales ranging from milliseconds to seconds. This is challenging, as traditional legacy technology can do high volumes in minutes, or low volumes in milliseconds, but **not high volumes in single-digit milliseconds**.

3. INCREASED NEED FOR ACCURACY

Late, missing, duplicate, and incorrectly timestamped records are common issues, all requiring your database to be extremely accurate. A small proportion of records that show up will be either out of sequence or simply late. When possible, they need to be processed. Also, in the real world, you will inevitably have some records that never make it to their destination, and your system will need to be able to cope with these rationally. You'll also have duplicates. If you don't spot duplicates, you run the risk of double-counting usage and overcharging end users. This sounds like a simple issue, and it could be, but not when you're expecting billions of records per day and need to keep them for days.

Your dilemma: continue on with your legacy technology or find something new? And if it's new, what can handle the data volume, variety, and velocity of 5G?

VoltDB solves, from the ground up, the issues caused by this clash of legacy technology with modern networks and devices. How? Because the VoltDB Data Platform was built specifically to make intelligent decisions on complex streams of data at low latency, without compromising on accuracy.

VoltDB offers:

1. LOW LATENCY, HIGH-VOLUME TRANSACTIONS

The VoltDB Data Platform can process hundreds of thousands of records per second, while still allowing users to inspect individual sessions in real time.

2. COMPLEX DECISION-MAKING

Each mediation decision is a non-trivial event that involves both sanity-checking the incoming record as well as making an individual, context-aware decision on whether to generate an output record.

3. TRANSACTIONAL CONSISTENCY

VoltDB can provide immediately consistent answers at mass scale, without re-calculation afterward or giving misleading answers due to 'eventual consistency'. We can **guarantee** that the numbers being sent downstream accurately reflect the data arriving.

4. HIGH AVAILABILITY

Our platform employs things like cross data center replication to ensure high availability. If a node goes down, the system will continue and the node will rejoin without problems.

5. EASY, AFFORDABLE SCALABILITY

Our platform has proven to be able to support tens of thousands of transactions per second on a three-node generic cluster in AWS.

With VoltDB, your mediation systems and applications will stay online, keeping your downstream systems well-fed with data, so that they can, in turn, future-proof your network in the face of 5G, IoT, and whatever comes next.

Get started with VoltDB today.

Contact us here.



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 voltdb.com.