Real-Time Policy and SLA Management

Implementing real-time policy and service level agreement (SLA) management requires the ability to ingest real-time data feeds, analyze events in real time, and implement granular policies immediately. In order to process at the speed and latencies required to automate real-time policy decisions and achieve SLA compliance, a database must support moving transaction processing closer to the data.

VoltDB is a fast, in-memory SQL database that is ACID compliant and provides the high-throughput, low-latency response applications need to make policy-based decisions in real time while ensuring compliance with SLAs. VoltDB’s high-performance transactions enable request-response style applications that scale from thousands to millions of requests per second on small clusters of commodity servers.

Supporting thousands of concurrent connections with round-trip latencies in milliseconds, VoltDB is an ideal platform for high-speed policy enforcement and SLA management, authorization, rule evaluation, and quota management.

Each server in a VoltDB cluster can execute tens-of-thousands of transactions per second. High availability and fault tolerance are built in and use active/active, cross-datacenter replication, and applications can connect and send requests to any server in the cluster. Customers in many industries rely on VoltDB for real-time policy management and SLA monitoring and management.
Ensuring Real-Time Stock Trading Consistency

MaxCDN is a content delivery network (CDN) provider that emphasizes reducing the latency and Companies throughout the financial services industry rely on VoltDB for real-time policy and SLA management to ensure compliance and meet SLA requirements. For example, a major options exchange selected VoltDB to provide a fast data platform to deliver real-time, consistent transactions to its trading firms. Since stock prices can change within milliseconds, VoltDB’s high-velocity, in-memory SQL database enables this exchange to report on all orders within established SLA boundaries.

Exchanges partner with trading firms that have strict SLAs for the time it takes for a trade to be executed. Even the smallest delay in the time an order can be executed can cost a firm significant amounts of money when the stock price moves up or down in millisecond bursts. The VoltDB platform ensures highly consistent transaction times that enhance the customer experience and provide the exchange with accurately recorded trades.

Real-time, consistent data transactions are not just a nice-to-have — they’re a requirement that isn’t achievable with other technologies. VoltDB empowers organizations to analyze and implement policy-based actions on streaming, high-value data in real time to deliver business value across daily operations.

Enabling Real-Time Reporting for Publicly Traded Assets

EDGAR Online serves as the reporting engine for financial and regulatory filings for companies worldwide. It relies on VoltDB for real-time application programming interface (API) authentication and management. VoltDB provides the analytical interface to EDGAR’s data warehouse, providing real-time, policy-based management of API services and throttling API activity as needed to control SLAs and improve performance and response times.

Telecom SLA Management

Openet is a leading independent supplier of real-time business support systems (BSS) to communication service providers, enabling the world’s largest network operators to innovate service offerings in an increasingly mobile, data-driven society. Openet selected VoltDB as the logical choice for a cloud-deployable transactional database that can flexibly handle high-volume data streams that service providers can monitor and leverage in real time. Openet is also using VoltDB to meet its SLA goal of achieving sub-50 ms response times with 99.999% accuracy. Read the case study and view the video.

“We wanted to move toward a higher-performance, in-memory database that could combine the capabilities of an operational database, real-time analytics, and stream processing in one easy-to-use platform. We needed an in-memory database that could handle fast data, and we needed a database technology that would be complimentary to our innovative software solutions and suitable for virtualized deployments. We also needed a database that was elastically scalable and could grow and contract as needed.”

— Openet Executive Director of Product Development Oisin Loftus
Implement Policy Management and Ensure SLA Compliance with VoltDB

VoltDB is an in-memory SQL database that combines analytics on live data feeds with transaction processing in a single, horizontal scale-out platform. It runs on commodity hardware in a massively parallel shared-nothing architecture, and is built to tap the value of fast data in real time.

Designed as an alternative to legacy one-size-fits-all relational databases, VoltDB delivers the speed, scale, and flexibility required by modern data-intensive applications while providing the data durability, ACID guarantees, and familiar programming models developers have come to expect. VoltDB’s fast data platform provides rapid data ingestion, real-time analytics, and automated decision-making capabilities on a per-user, per-event basis, with data enrichment and rapid export to data warehouses.

This enables companies across multiple industries to implement real-time policy management and meet SLA goals. VoltDB’s fast operational database with real-time analytics and decision-making is powering the next generation of applications that rely on fast, smart data. For more information, visit [www.voltdb.com](http://www.voltdb.com) or contact us.

About VoltDB

VoltDB is the only in-memory transactional database for modern applications that require an unprecedented combination of data scale, volume, and accuracy. Unlike other databases, including OLTP, Big Data, and NoSQL, that force users to compromise, only VoltDB supports all three modern application data requirements: 1. **Millions** — VoltDB processes a relentless volume of data points from users and data sources. 2. **Milliseconds** — VoltDB ingests, analyzes, and acts on data in less than the blink of an eye. 3. **100%** — Data managed by VoltDB is always accurate, all the time, for all decisions. Telcos, Financial services, Ad Tech, Gaming, and other companies use VoltDB to modernize their applications. VoltDB is preparing energy, industrial, telco and other companies to meet the challenges of the IoT. VoltDB was founded by a team of world-class database experts, including Dr. Michael Stonebraker, winner of the coveted ACM Turing award.