VOLTDB

APPLICATION BRIEF

TRANSACTIONS

VoltDB's unique and powerful transaction system makes writing simple, fast and reliable real-time analytics and decisioning applications easy. VoltDB supports complex multi-SQL-statement ACID transactions. The transactional system in VoltDB supports serializable isolation, complete multistatement atomicity and roll-back, and strong durability guarantees.

Java and SQL lower the learning curve

Transactions in VoltDB use Java to implement business logic and SQL for data access. Create applications on top of arbitrarily complex stored procedures, knowing that each stored procedure is strictly isolated and fully ACID.

Move computation closer to your data

VoltDB eliminates unnecessary application-to-database network round-trips to increase throughput and reduce latencies. By moving computation closer to your data, this streamlined architecture enables new application designs that can capitalize on high-velocity data ingestion: decisioning on incoming data as it arrives, executing business logic against each unit of ingestion. VoltDB executes hundreds of thousands to millions of transactions per second on clustered commodity hardware.

Partition data using a single, user-defined key

VoltDB distributes your data across a cluster of commodity servers. Data is distributed across partitions by a user-selected key — for example, a customer ID, a product SKU, or an advertising campaign identifier. Each partition independently executes single-key transactions. Single-key workloads scale linearly as new nodes are added to the cluster. At the same time, VoltDB supports hundreds to thousands of multi-key transactions per second — transactions that require all partitions. This allows scaling highvelocity ingestion workloads, which are single-key by nature, while simultaneously supporting global cross-key transactions for dashboarding and multi-key analytics.

VoltDB transactions provide a familiar foundation for writing applications that can handle big data and fast data alike. VoltDB builds on industry-standard SQL and Java transactions to create a new, scalable database that handles today's constantly changing data with full ACID semantics. What will you build on top of VoltDB transactions?

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