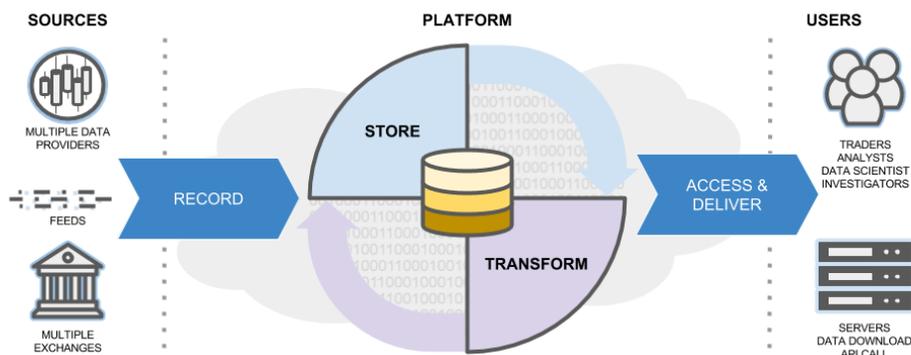


# TickVault

## Big Data Application for Capital Markets

TickSmith, with its TickVault platform based on Hadoop technology, is a leader in Big Data applications for the Brokerage ecosystem and financial services.

The platform is used for data centralization and distribution, market surveillance, risk management, strategy discovery and analytics. It is ideal for trading and risk groups, regulators, exchanges and data vendors who need to accumulate, transform, analyse and disseminate larger scales of financial data from multiple sources.



### SOLUTIONS

#### EXCHANGE DATA VENDORS

Exchanges and data vendors create historical data marketplaces to extract value from their data and to make it easily accessible to their customers.

#### TRADING FIRMS

Trading Firms centralize terabytes and petabytes of data they receive from quote feeds, trading systems, event feeds and more. It can also help them run out-of-the box and custom analytics

#### REGULATORS & SROs

Ideal for regulators and SROs to cost effectively manage and analyze mountains of financial data for market surveillance, investigation, enforcement and more.

#### DATA DISTRIBUTION

#### ANALYTICS

#### RISK MANAGEMENT

#### COMPLIANCE

- All asset classes
- Analyze & enrich
- Reconstruct & report
- Interact & distribute
- Backtesting and analytics
- Machine learning
- FIX trade reconciliation
- Advanced trade analytics
- Advanced SOR analytics
- Transaction cost analysis
- Data repository for risk
- MIFID II RTS 27 and 28 (best execution)
- FRTB

### TESTIMONIALS

"Not only is our original trading book data available through the new portal, but TickSmith also provides easy-to-use reformatted and normalized versions of our content."

-Dan Kessous, CEO of Nasdaq CX



"We are collaborating with big data solutions provider TickSmith and implementing their TickVault platform into CME DataMine to improve access to historical data."



"We have faster and better post-trade analysis capabilities using TickVault and AWS. As a result, we can improve and optimize our trading operations and generate more revenue for National Bank of Canada."

-Pascal Bergeron, Director of Algorithmic Trading  
National Bank of Canada



# TickVault

## Where Big Data technology meets financial markets

### PLATFORM OVERVIEW

The platform works with a variety of data types, both structured and unstructured. Data is loaded from files and feeds in near real time. The platform works with terabytes and petabytes of data and is highly scalable and flexible. Analytics and reporting can be run against these massive data sets.

Designed as an open platform to meet new and changing business needs. TickVault integrates within your existing infrastructure to make shared data the center of your architecture. It will change the velocity of your business and give you better and faster insight, correlations, predictive analytics and reporting capabilities.

#### Tick-by-Tick Database

Stores, manages and delivers historical trade & quote data (level 1, full depth)

#### Book Replay

Powerful historical data replay and analysis tool, allowing users to view the consolidated order book and trade data at any point in time.

#### File Inventory for Distribution

Provides a comprehensive solution to manage and distribute large quantity of flat-files containing data from multiple sources.

#### Trade Reporting

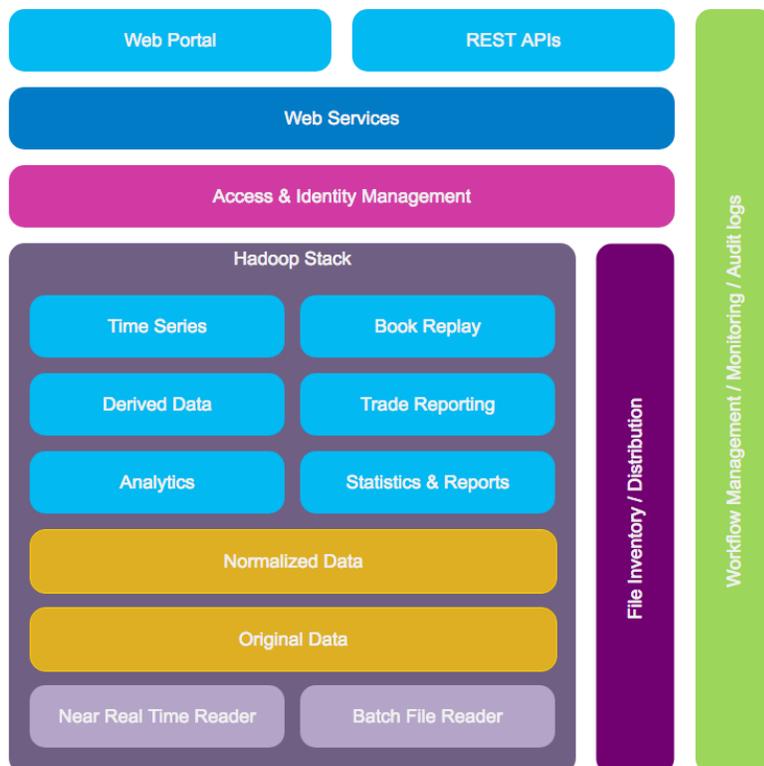
Enhance your trade reporting, investigation or market surveillance by recording all your FIX transactions history of various sources in a centralized repository.

#### Marketplace Advanced Insights

Designed to help market participants better understand how they are performing, how their peers are behaving and how they can adjust their strategies.

#### Web Store / Historical Data Marketplace

Online store allow you to distribute data to your customer. Subscription management, online payment, entitlements. Easy interface access via REST API, Python API, SFTP, S3 to S3.



### DEPLOYMENT OPTIONS

Firms that have already implemented a Hadoop cluster can integrate TickVault to their existing IT enterprise architecture strategy. Compatible with major Hadoop distributions deployed on-premise or with your cloud provider. Easily manage terabytes and petabytes of data. TickVault can be deployed:

- In-house, using your Hadoop cluster
- In the cloud, on your AWS instance

