

## OVERVIEW

StreamBase LiveView™ is a real-time analytics platform for streaming, real-time data. Unlike traditional business intelligence and data warehousing, StreamBase LiveView is designed to analyze and visualize information in motion, rather than at rest.

The StreamBase LiveView platform consists of the StreamBase LiveView Server, the StreamBase LiveView Desktop, and connectivity to over 150 event data sources,

alerting channels, and databases. StreamBase LiveView also supports advanced event-based analytics to be integrated using StreamBase CEP, the leading event processing platform in the industry, and APIs for the development of custom clients.

## VALUE PROPOSITION

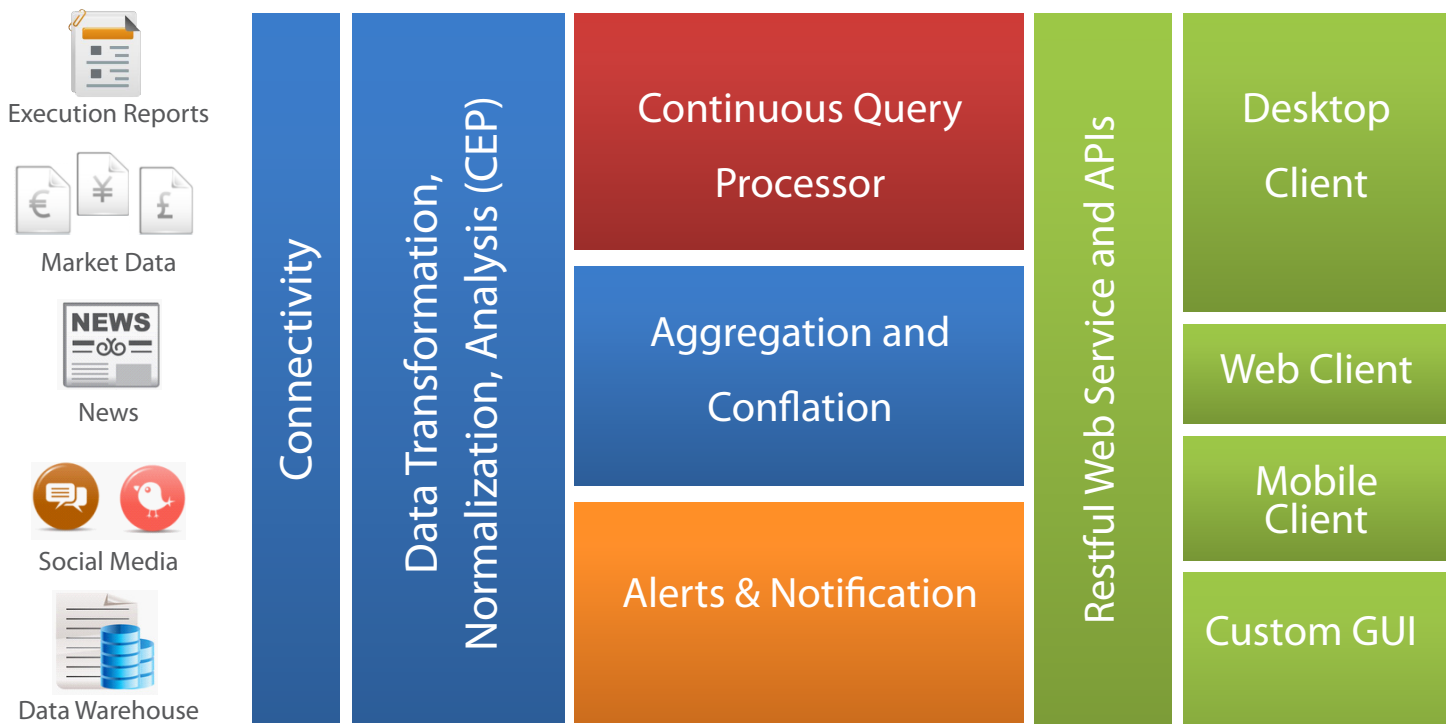
### Real-Time Analytics for Streaming Data

StreamBase LiveView provides a live view into your event-based business operations. Real-time analytics are

The screenshot displays the StreamBase LiveView Desktop interface with several key components highlighted by numbered callouts:

- 1**: End-user configurability, shown as a top navigation bar with tabs for 'Real-Time TCA', 'Flow Blotter', 'Signal Analysis', and 'Alerts'.
- 2**: Real-time graphs, represented by a grid of colored panels (red, pink, green, light green) showing data for various symbols like INTC, CSCO, DIS, AAPL, CERN, CVX, and CAT.
- 3**: Ad-hoc queries, shown in the 'LiveView Tables' window with a 'Query Builder' for 'ChildOrders' and a list of columns including Account string, ParentOrderID string, ClOrdID string, Symbol string, and Side string.
- 4**: Live tables, shown as a data table with columns: OrderID, VWAPSlippage, ArrivalSlippage, LastSlippage, and OpenSlippage. The table contains 70 rows of data.
- 5**: Alerts, shown as a table with columns: AlertName, Symbol, and ExecutionSty. The table contains 22 rows of alert data.
- 6**: Notifications, shown as a 'StreamBase LiveView Desktop Notification' window with a 'Blotter' tab and a trade alert: 'Trade Alert: ML33918 slipping against VWAP: 7.00'.

The StreamBase LiveView Desktop is a BI-style interface enabling users to interact with live data through [1] end-user configurability, [2] real-time graphs, [3] ad-hoc queries, [4] live tables, [5] alerts, and [6] notifications.



The StreamBase LiveView Server manages data connectivity, continuous queries, alerts, client connectivity, user authentication and security.

processed and continuous updates are pushed to users in milliseconds, enabling analysis and action in real-time. Traditional business intelligence is designed to analyze historical information; StreamBase LiveView is optimized to analyze what's happening *right now*.

### Management by Anticipation

Alerts and notifications of business problems and opportunities are delivered to end users in real-time as they occur, enabling users to focus their efforts on the most important business events while they still matter.

### Built for Big Streaming Data: High Performance, Scalability, and Low Latency

The StreamBase LiveView Server is designed for the most demanding enterprise environments - tens of millions of events a day per server, federated deployment, and thousands of continuous, streaming queries, all delivered with milliseconds of latency.

### Drop-In Installation; Self Service Analytics

Using LiveView's 150+ pre-built connectivity options, integration with live data is quick and easy. Once installed, users are given self-service access to live data, and can compose their own ad hoc queries, create alert rules, and interact with live data through highly configurable tables, graphs, drill downs and aggregate views of real-time

continuously updating data.

### CASE STUDY

StreamBase LiveView is deployed globally at a top tier investment bank for automated trade execution services. StreamBase LiveView is used by the global trading groups to effectively provide live insight into trading workflow generated by over a dozen execution management systems (EMS), allowing them to manage global risk in their automated trading operations.

Traders, risk managers, and sales use StreamBase LiveView to get a single aggregated view of all trading activity in real-time, slice and dice that information interactively, manage real-time risk exposure and provide proactive client services.

According to the Head of Equities Trading at the bank, "StreamBase LiveView completely changes the way we work. Everything we can automate, we automate. We push all the intelligence into LiveView and have it alert really skilled operators, or let them define their own queries."

### HOW STREAMBASE LIVEVIEW WORKS

#### StreamBase LiveView Server

The StreamBase LiveView Server manages data connectivity, continuous queries, alerts, client connectivity,

user authentication and security.

At the heart of the LiveView Server is the Continuous Query Processor, which processes high-speed streaming data, creates fully materialized “active tables,” manages ad-hoc queries from the StreamBase LiveView Desktop and custom client user interfaces, and continuously pushes live results as real-time conditions change. The LiveView Server also aggregates and normalizes the data, and IT can use StreamBase Studio to enrich streams with event-based analytics. The LiveView Server manages and delivers real-time alerts and notifications via Desktop notifications, email, SMS, chat – via any connection supported by the StreamBase platform.

### StreamBase LiveView Desktop

The StreamBase LiveView Desktop is an end-user

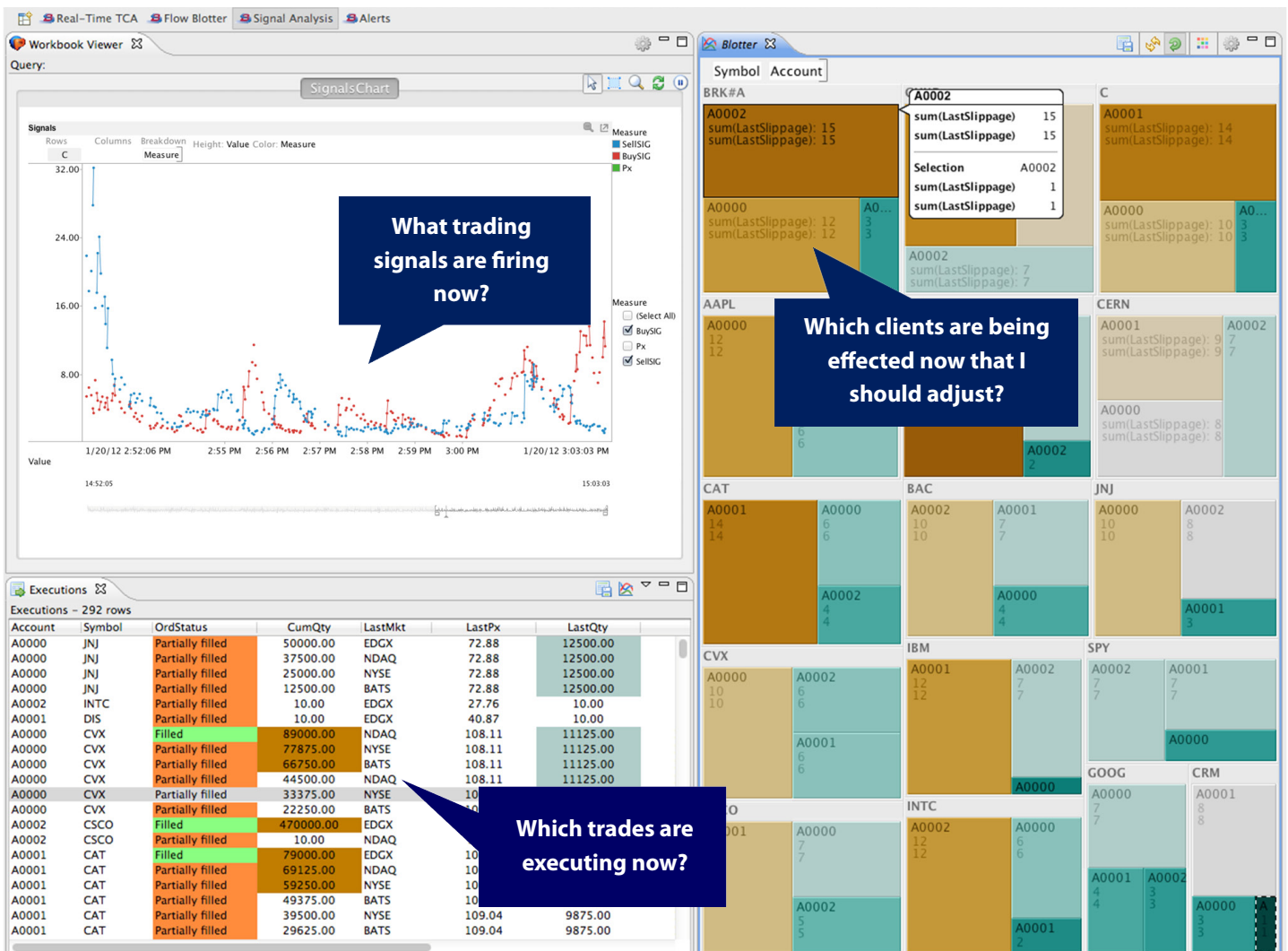
application that enables users to interact with live, continuously updating data and queries on tables contained in the LiveView Server. The Desktop is the real-time command center – users have complete control over window configuration, formatting, and layout of their Desktop, including the ability to define ad-hoc queries, select, configure and view charts, control desktop notifications and alerts.

### Alerts and Notifications

StreamBase LiveView Alerts are continuously processed and delivered to mobile devices, email, or to a user’s Desktop – any delivery channel supported by the StreamBase LiveView Server.

### Connectivity and APIs

Real-time streaming data is ingested into the StreamBase



Real-time signalling and execution monitoring as seen from within the StreamBase LiveView Desktop.

LiveView platform from over 150 data sources and sinks, such as market data providers, databases, and messaging buses. The StreamBase LiveView API allows developers to build custom user interfaces, or HTML5 front ends to the LiveView Server.

## USE CASES

StreamBase LiveView can be used to provide live business intelligence in any industry, for any streaming data.

Example use cases include:

- Trade execution consulting
- Trade risk management
- FX liquidity analysis
- Position and P&L management
- Transaction cost analysis (TCA)
- Infrastructure monitoring
- Surveillance

## STREAMBASE SPECIFICATIONS

### StreamBase LiveView Server

- Continuous query processing
- User authentication and administration
- Server federation
- Logging management
- High availability
- Manageability
- Optimized for multi-core, distributed deployment

### StreamBase LiveView Desktop

- Ad-hoc query builder
- Live graphs, charts, tables
- Notifications, conditional formatting
- Window layout, organization, design control

### Programming APIs and Analytics

- StreamBase Studio
- Java API
- .NET API
- Restful Web Services APIs

### Connectivity (Samples Provided)

- General messaging  
TCP/IP, Solace Systems, TIBCO Rendezvous, 29West...
- Historical data  
JDBC, HP Vertica Analytical Database, Thomson Reuters Velocity Analytics, MySQL...
- Static data  
CSV files
- Capital Markets: Market Data  
Thomson Reuters Enterprise Platform for Real-Time, CME, Bloomberg, BM&FBOVESPA, Wombat, Hotspot...
- Capital Markets: Execution  
QF/J, StreamBase FIX, CameronFIX, CME, Bloomberg...
- Capital Markets: Asset class specific  
Hotspot, Currenex, GAIN GTX, Deutsche Bank autobahnFX...
- User interface  
Eclipse RCP, Panopticon, .NET
- Programming Languages  
Java, C++, .NET, Python
- Analytics Packages  
MATLAB, QuantLib...

### Platform Support (LiveView Server)

- Red Hat Enterprise Linux AS 4.0, 5.0, 6.0
- Novell SUSE Linux Enterprise Server 10
- Windows Vista, Windows Server

### Platform Support (LiveView Desktop)

- Windows
- MAC OS X

### Platform Support (StreamBase Studio Development)

- Mac OS X
- Red Hat AS/AP 4.0, 5.0, 6.0
- Windows XP, Windows Vista Business, Windows Server 2003, 2008, Windows 7

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