

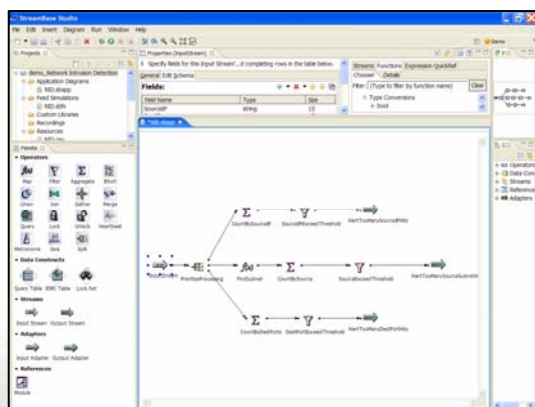
Federal Government, Defense, & Intelligence Applications

Powerful Real-Time Architecture for Today's High-Performance Modern Intelligence Systems

The StreamBase Stream Processing Engine is a new class of system software that enables defense and intelligence organizations to analyze and respond to real-time and historical streaming data within milliseconds.

Data-gathering systems used for intelligence, security, and defense must be able to "sense and respond" to patterns of events that indicate pending threats. Unfortunately, traditional data management and analysis software architectures cannot keep pace with the volume and velocity of the data streaming into many of today's intelligence systems. StreamBase gives government agencies and systems integrators the ability to quickly solve real-time data processing and analytics problems that until now have been time-consuming and sometimes intractable.

With StreamBase, organizations can create analytical applications to monitor streams of data in multiple formats across multiples sources. This data is processed within milliseconds of its arrival.



In StreamBase Studio, real-time applications are built by dragging operators from the palette and connecting them into the desired workflow.

StreamBase applications that alert to threats or opportunities from real-time complex events include:

Intelligence & Surveillance

A key challenge in providing security is to effectively capture, filter, analyze, and act on flows of data from disparate sources in real-time. With Federal, State, and local law agencies constantly generating related information from monitoring of networks, emails, financial transactions, watch-lists, and other sources, it is increasingly difficult to aggregate real-time data into a holistic view that can help identify imminent or potential threats. StreamBase helps these organizations by organizing, filtering, and interpreting streams of information in real-time.

Intrusion Detection & Network Monitoring

Both military and civilian agencies rely on their information systems and networks to execute their missions. These systems need to be protected from malicious attacks fueled by determined hackers and terrorists. StreamBase can be an invaluable tool in creating applications to detect and shut down such attacks. By capturing and analyzing network traffic in real-time, StreamBase provides an ideal platform for intrusion detection/prevention and other applications to protect the information infrastructure on which organizations rely.

Battlefield Command & Control

Modern warfare has become a "digital battlespace" in which data about locations and status of all force components can be transmitted between all personnel, providing better coordination and shared knowledge. With StreamBase, information streams of sensor data containing locations and status of all forces can be captured, analyzed, and acted upon. With more accurate information available more quickly, better decisions are transmitted faster and with higher precision.

Management of Data "On-the-Fly"

To process real-time and historical data, StreamBase leverages StreamSQL, a next-generation programming language that extends the familiar SQL paradigm.

StreamSQL operators perform a variety of functions including:

- Time-window-based aggregations, filters, computations
- Real-time analytics, matching against user-defined criteria, and alerting
- Querying and updating in-memory storage
- Handling late or out-of-order data

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StreamBase for Government/Military Solutions

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High Data Volume, Low Latency Processing

StreamBase's inbound processing model executes queries on streaming data before it is stored, thus removing latency, and enabling processing greater than 300,000 messages/second.

StreamBase achieves this accelerated performance with a highly adaptable software platform on commodity hardware, featuring:

- Inbound processing on streaming data over specified time or event-based windows
- Multiple ways to manage stored state, including in-memory tables for fast data access, and ODBC/JDBC connectivity to external databases
- StreamBase Chronicle, a high capacity message store, which enables querying of up to tens of terabytes of data
- Running all time-critical operations in one system process

Rapid Application Development

The StreamBase integrated development environment provides tools for all stages of the development process, including design, test, and deployment. Applications can be prototyped in as little as hours to days.

StreamBase Studio™ lets developers drag-and-drop operators to quickly create sophisticated high-performance applications.

Key features include:

- Stream record and playback, allowing for incoming data to be captured in real-time and played back to test new algorithms and analytics on historical data
- Integrated debugger, which pauses a running application and steps through processing
- Performance monitor displays information about streaming data (e.g. speed of data records passing through individual operators or system components)
- Real-time output capabilities to Microsoft® Excel or a custom-generated Java GUI for ease of testing

About StreamBase

Founded by Dr. Mike Stonebraker, one of the world's foremost data management experts, StreamBase has developed a new class of award-winning systems software — a Stream Processing Engine — designed to help organizations meet the performance, agility, and return-on-investment challenges posed by high-volume, high-velocity streaming data applications. StreamBase is based in Lexington, Massachusetts, with offices in New York, Washington D.C. and London.

Integration with Existing Systems

StreamBase offers a highly reliable platform designed for enterprise-class stream processing.

Key features include:

- Documented C++ and Java APIs, allowing smooth integration between StreamBase and other systems
- High availability, using a fault-tolerant architecture designed for real-time streams
- Broad platform support: Linux, Windows and Solaris
- Distributed operation, allowing scalability from a single-server to a multi-server deployment
- Adapters to common messaging systems

StreamBase Specifications

Server Platforms	Red Hat Linux, Enterprise Edition AS 3.0 Sun Solaris 9.0 Windows 2003 or XP
Development Platform	Red Hat Enterprise Edition AS 3.0 Red Hat 9.0 Sun Solaris 9.0 Windows 2000 or XP
Application Programming Interfaces (APIs)	Client API (available for C++, Java, and Microsoft .NET): used for building adapters that connect input and output streams to the StreamBase Server Custom Function API (available for C++ and Java): extends StreamBase functionality by supporting custom-built math and aggregate functions
Connectivity	TIBCO Rendezvous JDBC Microsoft® Excel Flat Files
Enterprise Functionality	Clustering High availability SMP-enabled

StreamBase Locations

Corporate Headquarters

181 Spring Street
Lexington, MA 02421
+1 866 STRMBAS (1 866 787 6227)

Federal Office

11921 Freedom Drive
Suite 550
Reston, VA 20190
+1 703 608 6958

European Headquarters

34-36 High Holborn
London WC1V 6AE
United Kingdom
+44 (0)20 7190 1713