

TIBCO FTL High Throughput Low-Latency Messaging

Benefits

End-to-End Connectivity:

Provides an integrated messaging suite with connectivity between systems and application data, including web and mobile device data via TIBCO eFTL™.

Intra-Host Communications:

Includes shared memory transport with average latency as low as 315 ns.*

Ultra Low Latency:

Supplies inter-host communication with Remote Direct Memory Access (RDMA), via InfiniBand and 10Gb Ethernet, TCP, and multicast transports with average latency as low as 2.0 μs.*

Maximized Performance:

Includes a distributed, in-memory persistence engine that maximizes performance with reliable message delivery of approximately 6 million/second and guaranteed message delivery of over 850,000/second from a single publisher to a single consumer.

One-to-Many Transports:

Includes a variety of independent transport bindings for a single message to access multiple subscribers.

Transport Management:

Provides centralized metadata and transparent transport management for increased application flexibility with no code changes required.

Broad Data Support:

Supports structured and unstructured data without significant performance or latency penalty.

Flexible Integration Options:

Provides API support for C, .NET, Java, and TIBCO Rendezvous®, providing a variety of options to leverage existing IT investments.

Data Distribution Flexibility:

Subscriber data distribution based on message content for flexibility and application stability.

At a Glance:

TIBCO FTL® is a robust, high performance messaging platform for real-time, high-throughput data distribution to virtually any device. Optimized to leverage the latest advancements in hardware, networking, and web technologies, TIBCO FTL can handle higher message throughput with lower latencies—and a greater number of concurrent connections—than other messaging products. All this capability is delivered with a peer-to-peer architecture and API libraries that run on commodity, general purpose systems with no specialized hardware devices required.

The Next Step in High Performance Messaging

To achieve a competitive edge in a demanding business environment, you need real-time information provided with as little delay as possible. You face challenges around ever increasing amounts of data and less time to react to the opportunities or threats that lie within that data. TIBCO's fully distributed peer-to-peer messaging architecture delivers extremely high throughput, low-latency, reliability, consistency, and predictability for the most demanding applications.

Introducing TIBCO FTL

TIBCO FTL, designed from the ground up to address the increasing demands of high-performance computing, is an important addition to TIBCO's enterprise messaging portfolio. Unlike other offerings, TIBCO FTL has been built with the latest technology in mind and designed to provide the flexibility needed to leverage new technology designs as they are developed. TIBCO FTL is highly optimized software that no longer requires application developers to understand how data distribution happens.

System administrators can define and manage data distribution, so developers can focus on writing high-performance application code.

Event processing doesn't wait for situations to materialize before taking action. Processing massive amounts of high-speed data streams in real time requires a messaging middleware that can deal with these volumes. TIBCO FTL provides the foundation for high-speed event processing.

Benefits continued

Enterprise-Level Features:

Provides standard features including centralized monitoring and management, transport bridging and WAN routing, application fault tolerance libraries, and multiple levels of quality of service including synchronous/asynchronous guaranteed delivery and shared durable delivery.

Flexible Deployment:

Provides options to deploy as software, as TIBCO FTL® Message Switch hardware, or both, allowing the right mix to address needs and reduce complexity and cost.

Platforms, Languages & Transports

- Platforms: Windows 7, 8; Server 2008, 2012 (x86-64); RH 5 and 6; SUSE 11 (x86-64)
- Languages: C, Java, .NET, iOS Objective C, JavaScript, and Android Java
- Transports: Shared Memory, RDMA (InfiniBand, 10GbE), TCP, Reliable UDP Multicast, and Point to Point

*Performance metrics based on testing conducted by TIBCO in December 2013 with FTL 4.0.0.

For more details regarding performance benchmarks, please contact your TIBCO representative.

Attributes & Capabilities

High Throughput

With digital information doubling every two years, and the amount of time you have to react to capitalize on opportunities or threats, you need messaging infrastructure that can handle ever increasing volumes. TIBCO FTL uses a distributed, in-memory persistence engine that maximizes performance with reliable message delivery throughput of 6 million/second and guaranteed message delivery of over 850,000/second.

Extreme Low Latency

TIBCO FTL takes the next step in extreme low-latency messaging with sub microsecond intra-host communication and inter-host communication at single digit microsecond latency. Performance benchmarks show average application latencies of 315 ns for intra-host communication using shared memory transport and 2.0 µs using RDMA transport over InfiniBand.*

Broad Platform Support

TIBCO FTL supports the common platforms used by many organizations. With TIBCO eFTL native support for Android Java, iOS Objective C, and JavaScript, support is extended to virtually any platform including web and mobile devices.

Content-Based Addressing

TIBCO FTL delivers increased flexibility with native content-based addressing. Applications are no longer bound to a topic namespace, which can become rigid and inflexible over time. Content-based subscriptions deliver more flexibility by

enabling developers to distribute data based on the content itself and to filter data at the subscription level.

Powerful Metadata Management

Without sacrificing performance, TIBCO FTL offers out-of-band centralized administration and a wide range of transports enabling applications to only receive data that's relevant to them. In addition to simplifying distribution and management, this makes sure the messages that matter get there faster.

Ease of Integration

With simple APIs for C, Java, .NET, iOS Objective C, JavaScript, and Android Java, TIBCO FTL works in harmony with existing applications, the web, and mobile devices to distribute data throughout your environment at maximum speeds.

Choice of Transports

Choose from a variety of underlying transports at run-time—including shared memory, RDMA, TCP, and reliable UDP multicast and point to point transports—depending upon messaging requirements.

A Proven Communications Backbone

When it comes to extreme low latency, code paths and optimization can have massive consequences. Developed to take full advantage of today's technologies, TIBCO FTL draws on TIBCO's more than 20 years of industry-leading experience in mission-critical, high-performance messaging.

TIBCO Software Inc. (NASDAQ: TIBX) is a global leader in infrastructure and business intelligence software. Whether it's optimizing inventory, cross-selling products, or averting crisis before it happens, TIBCO uniquely delivers the *Two-Second Advantage*®—the ability to capture the right information at the right time and act on it preemptively for a competitive advantage. With a broad mix of innovative products and services, customers around the world trust TIBCO as their strategic technology partner. Learn more about TIBCO at www.tibco.com.



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