

TIBCO ACTIVESPACES® TRANSACTIONS

AT A GLANCE

TIBCO ActiveSpaces® Transactions is a fully distributed, in-memory transactional application server that powers business-critical services demanding high performance and availability with a single, unified platform and dramatically reduced overall costs. Its “always-on” high availability provides for low-latency fault-tolerant systems and fail-over that is transparent to applications with data, service, and transactional consistency maintained – and no databases required.

ActiveSpaces Transactions delivers all this power and extreme scalability while running on commodity hardware and open systems.

KEY FEATURES

- **Transaction Monitor:** Runs Java code as high-performance ACID transactions with automatic locking, deadlock detection, rollback, and replay.
- **In-Memory Object Store:** Manages persistent objects with transactional consistency in ultra low-latency 64-bit shared memory. Partition for horizontal scalability.
- **High Availability:** Replicates objects memory-to-memory across nodes, failing-over instantly for seamless availability.
- **Distribution:** Spans transactions across nodes with location transparent remote object access and method invocation.
- **Data Grid:** Share data across nodes in elastic grid storage with transactional updates. Caching keeps frequently used data in local shared memory for optimal performance.
- **Geographic Redundancy:** Replicates across sites, enabling work to switch locations with data preserved in catastrophic outages.
- **Integrated JVM:** A tightly coupled Java Hotspot™ virtual machine enables features to execute efficiently and transparently in a simple Java SE programming model.

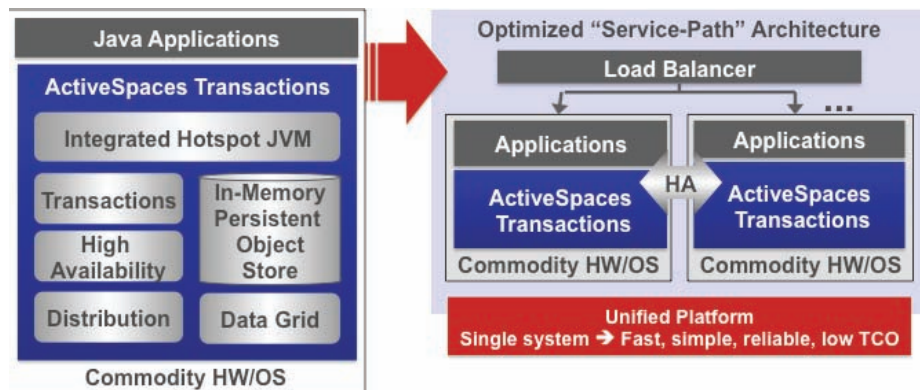
A Unified Platform with Breakthrough Performance and Economics

Alternative transaction processing approaches often combine technologies such as mainframes, application servers, databases, caching, clustering, and transaction monitors. This hybrid approach often results in significant costs, complex

integrations, and a disjointed system limited in performance and scalability.

Taking a unified approach, ActiveSpaces Transactions builds transactions, persistence, replication, distribution, and a commercial Java™ Virtual Machine into a single, unified platform – allowing enterprises to easily deliver services

that require high-volume, low-latency transaction processing. The highly scalable architecture future proofs systems to meet growing volumes and complexities. With fewer licenses, systems, and administrators required, services can be executed at a very low cost per transaction.



TIBCO ActiveSpaces Transactions delivers complex transactional services on a single, unified platform enabling optimized system architectures that are compact, low latency, and highly scalable.

ATTRIBUTES & CAPABILITIES

Sophisticated High-Performance Transactions

- Built-in transaction manager – optimized for high concurrency and low latency – provides application transparent local and distributed ACID transactions
- Transparent locking, deadlock detection, rollback, and replay ensures consistency and instantly resolves conflict without application compensation logic
- Transactions transparently span JVMs and nodes

Durable Shared-Memory Object Storage

- Store durable objects in 64-bit shared memory with high-speed transactional access and update – no database or object-relational mapping required
- Perform high-speed programmatic queries with sophisticated key and query support
- Objects are transparently shared across threads, JVMs, and nodes
- Object store is tightly coupled to application logic for ultra low-latency access
- Partitioning enables systems to scale horizontally
- Objects outlive JVM processes and bypass garbage collection with explicit lifecycle controls

Elastic Data Grid Storage

- Manage huge distributed datasets in memory with shared access across nodes
- Caching policies keep frequently-accessed data in local shared memory for optimal performance
- Transactions automatically map updates to the grid, implicitly maintaining overall grid consistency
- Automatically recover data from the grid into shared-memory when restoring nodes
- Resize grid capacity by adding or removing agents
- Perform ad-hoc grid queries via administration tools

Geographic Redundancy

- Replicate transactions across sites and migrate work in the event of catastrophic outages
- Avoid and reconcile potential split-brain conditions resulting from network failures between sites

Data and Service High Availability

- Objects automatically replicate memory-to-memory to one or more nodes in transactions
- Automatic prioritized failover provides seamless service delivery in catastrophic outages
- Automatic mastering transparently updates objects on proper nodes ensuring cluster integrity
- Restore or add nodes into live clusters with transaction safe synchronization
- Timers fire on schedule after failover

Location Transparent Distribution

- Applications are inherently distributed – nodes can invoke methods and operate on each other's objects
- Distributed object information is automatically maintained without an external directory service
- Service discovery automatically adds nodes into a cluster – synchronizing services, types, and state

Management and Monitoring

- Administer via JMX, web browser, or a command line interface through a central domain manager
- Multi-version configuration manages customization profiles in memory with transactional consistency, and automatically synchronizes configurations in a domain
- Role-based security is enforced on all administrative operations with authentication, authorization, access control, and audit logging
- Built-in profiling and runtime reporting provides essential statistics for performance tuning

System Requirements

- Red Hat® Enterprise Linux®/x86_64
- JDK™ 1.5 or greater



Java and all Java based trademarks and logos are trademarks or registered trademarks of Oracle in the U.S. and other countries.

About TIBCO

TIBCO Software Inc. (NASDAQ: TIBX) is a provider of infrastructure software for companies to use on-premise or as part of cloud computing environments. Whether it's optimizing claims, processing trades, cross-selling products based on real-time customer behavior, or averting a crisis before it happens, TIBCO provides companies the two-second advantage™ – the ability to capture the right information at the right time and act on it preemptively for a competitive advantage. More than 4,000 customers worldwide rely on TIBCO to manage information, decisions, processes and applications in real time. Learn more at www.tibco.com

Global Headquarters
3303 Hillview Avenue
Palo Alto, CA 94304

Tel: +1 650-846-1000
+1 800-420-8450
Fax: +1 650-846-1005

www.tibco.com

 **TIBCO**[®]
The Power of Now[®]