TIBCO ActiveSpaces®

Benefits

Drastically improve performance and customer experience

Migrate to a next generation, high performance, in memory system of record and abandon the slow traditional data storage technologies. Accelerate data at scale to demanding customer facing applications.

Agility and scale while lowering TCO

Leverage a system of record built for fast access and data persistence. Store terabytes of operational data using inexpensive commodity or virtualized hardware.

Update data and systems continually for accurate and immediate response

With filtered and indexed queries, distribute rapidly changing data to multiple applications needing subsets of data.

Cloud native

Built as a cloud-first solution, the ActiveSpaces data grid can be deployed on the cloud, on-premises, or into hybrid environments.

Multi-site replication

Anywhere, anytime access with native grid and multi-site replication functionality, balancing data consistency and data access.

The TIBCO ActiveSpaces® in-memory data grid is highly scalable, distributed, and designed specifically to handle the large volumes of operational data needed for enterprise systems of record.

As volume, variety, and velocity of data grows exponentially, traditional data storage technologies like relational databases simply can't scale. TIBCO ActiveSpaces software is a fast, fault-tolerant clustered database that caches data in-memory for fast read access and persistence to a local file system for extreme write performance and data resiliency.

21st-Century enterprise data storage technology

The ActiveSpaces data grid provides a global system of record for applications that need to access multiple terabytes of operational data with extremely fast operations and without compromising quality, accuracy, or availability.

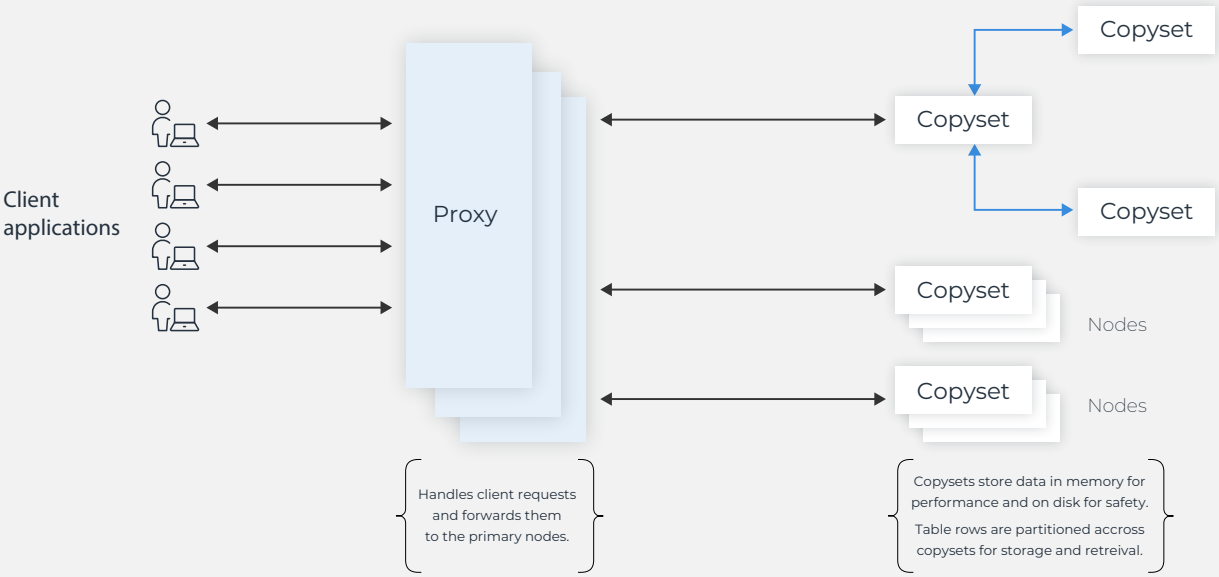
Low investment

ActiveSpaces software can be scaled on commodity or virtualized clustered hardware, allowing for simplified configuration and reduced maintenance, while also providing very low TCO. With client APIs in Java, C, and Golang; plugins for TIBCO's integration, streaming, analytics platforms; and TIBCO AI/ML functionality, applications can be quickly developed and deployed into production to suit a variety of needs.

Data-driven enterprise

ActiveSpaces software is a critical component of the data-driven enterprise. It allows you to deliver real-time customer engagements, improve business operations, and mitigate risk. Real-time changes to data stored in the ActiveSpaces grid can be filtered with SQL and pushed to receiving applications to take action. This real-time access to, control of, and insights from data will allow you to redefine how you detect and respond to opportunities.

TIBCO ActiveSpaces Architecture



Attributes and capabilities

Distributed in-memory system of record

The ActiveSpaces distributed in-memory data grid is ideal for large-scale systems of record and administrators familiar with database concepts, such as tables, rows, and columns. Data tables are persisted, replicated, and partitioned in parallel on local disks, and dispersed across a grid of horizontally scalable commodity servers for fault tolerance and durability.

Fast data access and querying

Data is cached in memory for fast access and can be queried using a subset of the SQL language commands. Queries can be accelerated through flexible indexing capabilities, with both primary and secondary indexes. In addition, client applications can control the cadence of retrieving results without blocking other applications from writing data to the grid.

High performance ACID-compliant data grid

With the ActiveSpaces data grid, you get real time consistency with full ACID compliance through support for transactions and concurrency control. Transactions provide atomicity with internal locking across multiple tables down to the row level. In addition, fully synchronous replication across multiple nodes provides fault tolerance, distributed persistence, and durability.

Live backup and restore

With TIBCO ActiveSpaces Live Backup and Restore, snapshots can be taken of the data grid at any time to provide a consistent checkpoint for use in data recovery or DR events.

Transaction isolation

The highest level of isolation is enforced using a pessimistic transaction model that blocks any operations that could violate database consistency or isolation.

Elastic cluster sizing

Nodes can be dynamically added to the grid to horizontally scale on-the-fly, with administrative control over data redistribution and without service downtime.

Minimal configuration and easy-to-use APIs

Tools are provided to define table definitions and how data is distributed across a configurable number of copyset nodes. Simple to learn and use, APIs support functions to retrieve metadata information about the data grid, a specific table, or a results set.

Eventing and compute grid

TIBCO ActiveSpaces software provides real-time, event-driven push notifications on changes to the data grid to servers and client applications. Table listeners receive data change events as callbacks that can be acted on in real time.

Data distribution and communications

Leveraging TIBCO FTL® messaging software, the ActiveSpaces data grid provides secure communications, configuration, management, and monitoring of all data grid components.

Cloud ready

With no requirements for specialized hardware, storage systems, or databases, ActiveSpaces software provides easy deployment into cloud, on-premises, or hybrid environments. Easily build it into a microservices architecture with container deployment products like Docker and Kubernetes.

Features at a glance:

- Fast in-memory data caching
- Distributed persistence
- High availability and fault tolerance
    - Data can be fully replicated synchronously across multiple nodes and grids
- Elastic grid sizing
- Language and platform independence
- Comprehensive security
    - Transport data encryption and user authentication and authorization
- Multi-table ACID compliant transactions
- Pessimistic concurrency control and row level locking
- Filtered and indexed snapshot-based queries
- Eventing support
- Administration and monitoring
- Remote clients
- Rolling upgrades with no service interruption
- Metadata APIs
- Native integration with:
    - TIBCO's integration platform
    - TIBCO's streaming platform
    - TIBCO analytics platform
    - TIBCO AI/ML functionality
    - Much, much more

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TIBCO, a business unit of Cloud Software Group, has helped global enterprises solve their most complex business challenges for more than 25 years. The TIBCO Platform delivers industrial-strength solutions that meet the highest performance, throughput, reliability, and scalability needs while offering the widest range of technology and deployment options to deliver real-time data where it's needed most. Learn how TIBCO solves its customers' mission-critical software needs at www.tibco.com.

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