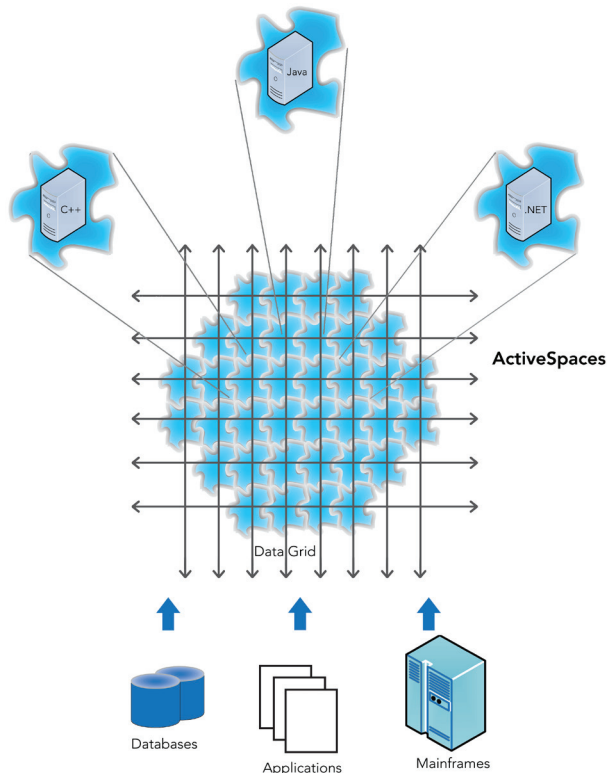


# TIBCO ActiveSpaces

There is increasing pressure on IT to save costs by reducing reliance on expensive transactional systems and to process and analyze ever-increasing streams of data and events in real time. But how? Disk-based relational databases are expensive to buy and configure and cannot deal with events. Network-based messaging systems cannot deal with persistence and queries. Non-distributed in-memory caches are not fault tolerant and cannot scale across networks.

TIBCO ActiveSpaces™ provides an infrastructure for building elastic and highly scalable, fault-tolerant distributed applications. It combines the features and performance of databases, caching systems, and messaging software to support very large, highly volatile data sets, and event-driven applications. It enables organizations to off-load transaction-heavy systems and allows developers to concentrate on business logic rather than the complexities of distributing, scaling, and making applications autonomously fault-tolerant.

TIBCO ActiveSpaces is a distributed peer-to-peer in-memory data grid, a form of virtual shared memory that leverages a distributed hash table with configurable replication. This approach means the capacity of the space scales automatically as nodes join and leave. Replication assures fault-tolerance from node failure as the space autonomously re-replicates and re-distributes lost data.



*TIBCO ActiveSpaces is a distributed peer-to-peer in-memory data grid that enables heterogeneous applications to share, exchange, and process data in real time.*

## AT A GLANCE

**TIBCO ActiveSpaces** is a distributed peer-to-peer in-memory data grid, a form of virtual shared memory that leverages a distributed hash table with configurable replication. It simplifies enterprise application development by providing an easy-to-use interface for data storage and retrieval (data grid) and process coordination (messaging grid).

## BENEFITS

- Provides lower cost of management by off-loading slow, expensive, and hard to maintain transactional-based back-end systems.
- Delivers ultra-low and predictable latency as all communication is done peer-to-peer without the intervention of a central server.
- Simplifies administration - no configuration files. Alleviates the complexity of management and implementation of the collective space.
- Platform independent. Stores database rows and objects and can be used as middleware to exchange information between heterogeneous platforms.
- Provides messaging and database functionality with one unified interface.
- Provides transactional support and concurrent access control.
- Provides elastic linear scalability by leveraging TIBCO's world-class messaging technology.
- Enables data virtualization, allowing developers to focus on business logic rather than details of data implementation.
- Configurable replication provides automatic "active-active" fault tolerance.

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## ATTRIBUTES & CAPABILITIES

### Simple Administration

TIBCO ActiveSpaces eliminates the complexity of implementing a distributed caching platform, saving developers time and improving time to market.

- Create, manage, and deploy applications without complex configurations files. Replication, distribution, and fault tolerance are done automatically by the space.
- A command line administration tool provides an interactive text-based interface for configuration and management that can also be run remotely (for example, via telnet). Shell-like control-keys provide command history, syntax completion, and context-sensitive help.

### Elastic Scalability

TIBCO ActiveSpaces makes it easy for application programmers to create elastic applications.

- Nodes, applications, and machines contributing storage and computing resources can be added and removed from the metaspace on the fly.
- Space scales linearly as nodes join and leave.
- A distributed hashing algorithm minimally redistributes data as topology changes.

### Active-Active Fault Tolerance

Fault tolerance has traditionally been achieved by deploying everything twice in order to have an idling backup ready in case the primary fails, what is called an "active-passive" fault-tolerance architecture.

- A peer-to-peer distribution algorithm provides "active-active" fault-tolerance to the collective space. No resources are wasted, providing more ROI.

### Distributed Peer-to-Peer Infrastructure

TIBCO ActiveSpaces is a true distributed peer-to-peer infrastructure. It uses a specific group membership protocol and does not rely on a central administration server to coordinate communication among peers. This improves latency and efficiency within a collective space.

- Combines database and messaging functionality (create, read, update, delete and publish/subscribe) under one simple interface.
- Nodes discover each other through multicast and coordinate with each other to offer a collective in-memory database.
- No configuration is required. Simply install and deploy.
- Nodes may join the space as "leeches" rather than peers, giving them full access to the space but without contributing memory and computing power.
- An SQL-like data definition language can be used interactively or for scripts. Support for numeric types, strings, date-times, and binary large objects.

## PLATFORM STANDARDS AND SECURITY

### Platforms

#### UNIX

- Linux: Red Hat Enterprise Linux 4, 5 (x86 and x86-64)

#### Windows

- XP (x86 and x86-64)
- Server 2003 (x86 and x86-64)
- Server 2008 (x86 and x86-64)
- Vista Business Edition (x86 and x86-64)

#### Programming APIs

- Java
- C

**TIBCO Software Inc.** (NASDAQ: TIBX) technology digitized Wall Street in the '80s with its event-driven "Information Bus" software, which helped make real-time business a strategic differentiator in the '90s. Today, TIBCO's infrastructure software gives customers the ability to constantly innovate by connecting applications and data in a service-oriented architecture, streamlining activities through business process management, and giving people the information and intelligence tools they need to make faster and smarter decisions, what we call The Power of Now®. TIBCO serves more than 3,000 customers around the world with offices in more than 20 countries and an ecosystem of over 200 partners. Learn more at [www.tibco.com](http://www.tibco.com).

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