

# GEMFIRE ENTERPRISE DATA FABRIC

GemFire Enterprise Data Fabric offers firms data virtualisation and the ability to access as well as distribute real-time data across multiple applications simultaneously.

Heightened regulatory pressures and spiralling data volumes are placing considerable strain on companies' data management systems – at least that is what the vendors and consultants tell us. But it is fair to say that in the back offices of most major wholesale transaction banks, on a typical day, multiple applications are accessing multiple sources of data stored in different locations. Add to that the need to demonstrate 'best execution' under regulations such as MiFID and sell-side firms looking to gain a competitive advantage by running complex algorithms across multiple streams of data, it is obvious that the data management fabric of most companies is being stretched to capacity.

A number of data management vendors have stepped into the gap, touting data virtualisation, grid computing and in-memory caching to help companies access data more quickly. One of these companies is GemStone Systems. It counts more than 200 large enterprises encompassing the financial, telecoms, energy and logistics sectors among its customers.

Analyst firm IDC, says companies are struggling to deal with overlapping applications and databases gained through mergers and acquisitions, and bottlenecks that can occur as a result of multiple applications accessing a smaller number of data sources. "The reality in most IT shops is a vast array of disconnected database applications and fixed storage and system resources that are tied to them," writes IDC in a white paper.



## SHELF LIFE

**Product description:** GemFire Enterprise Data Fabric provides data virtualisation and a distributed in-memory data store that allows data to be distributed across multiple applications simultaneously. It includes a data grid for data virtualisation as well as a real-time complex event processing engine to help firms glean intelligence from multiple streams of data and distribute that information to other applications.

**Company:** GemStone Systems  
**Release Date:** GemFire Enterprise 5.0 was released September 2006.  
**Price:** Price per CPU model  
**Users:** Bear Stearns, Merrill Lynch

According to Martin Hand, business development director, EMEA, GemStone, the solution is an Enterprise Data Fabric (EDF), which enables firms to harness additional computing power to overcome data gridlock and bottlenecks. GemStone's EDF, GemFire, includes a distributed in-memory data store that reduces data latency and a data grid for data virtualisation to provide "high availability" of data across multiple applications and locations. IDC says GemFire's 'data fabric' provides a flexible interface that enables accessing applications and users to be managed independently of the constraints of the source data. GemFire EDF

transforms companies' existing databases into what Hand describes as an "in-memory" data cache so data can be more easily replicated across multiple processes and computers. "If 1000 business processes are trying to all access the same data, the most efficient way to do that is in-memory," he says.

GemFire works with both structured and unstructured data and incorporates a Real-Time Events complex event processing engine, which sits on top of the data cache, allowing intelligence to be gleaned from incoming data and distributed to applications. GemFire can be implemented in conjunction with grid computing and service-oriented architecture applications.

In the US, Wall Street firms such as Merrill Lynch have implemented GemStone's distributed data caching technologies to provide a data access layer for ensuring applications receive the correct data at the right time. "In the US market investment banks choose us because of our scalability," says Hand, adding that GemStone has distributed data caching across 1,000 nodes already in production, enabling firms to replicate data not only across multiple applications but also locations, which is useful in disaster recovery planning. "So if New York goes down, for example, firms can recover [their data] from London or Tokyo," says Hand. GemFire is also available on IBM's BladeCentre low-cost server network. //

## WHAT THE ANALYSTS SAY:

In a June 2005 white paper entitled "Overcoming the Data Bottleneck to Deliver Dynamic IT," IDC analysts Carl Olofson and John Humphreys described GemFire as "data connectivity software" which supports "the unification of diverse data sources (databases, application stores, analytical tools, messaging systems, mainframes) into a high-performance data interaction environment." A wide range of data formats and data connectivity standards including SOAP and web services are supported. According to IDC, GemFire allows users to interact with the data "as if it were coming from a single managed data source". When deployed with IBM's "network of servers in a box", IDC says that users "get the best of both worlds" in terms of reduced data bottlenecks and scalability at lower cost.