

GEMFIRE AND J2EE SYNERGY

- Both are intended for heterogeneous platforms
- Both are suited for distributed deployments
- GemFire enables data availability for clustered EJBs
- GemFire can provide multiple persistence models (in-memory, disk, synchronization with DB) for EJBs

BENEFITS

- High performance data management for distributed J2EE clusters - low latency and high transaction processing
- Improve responsiveness of web portals and other transactional systems
- Improved scalability without additional hardware and software costs
- High data availability for distributed applications with increased responsiveness to network failures or data source unavailability

GemFire Enterprise Data Fabric for J2EE Applications

Do you have performance, scalability and data availability issues with your J2EE applications? Look no further. The GemFire Enterprise Data Fabric provides a broad range of high-performance data management functions for J2EE environments:

DISTRIBUTED CACHING ACROSS MULTIPLE JVM INSTANCES

- Multiple topologies - peer-to-peer, hierarchical, partitioned.
- Low-latency data distribution.
- Scalability to large volumes through partitioning and overflowing to disk.
- Based on the JCache (JSR 107) specification.

JDBC APPLICATIONS SCALABILITY AND PERFORMANCE

- Monitor any JDBC application for expensive/repeated SQL queries, configure individual queries or patterns of queries.
- Distribute database query result-sets in-memory and/or disk across multiple nodes.
- ZERO CODING, with ability to tune application performance in real-time.

SESSION MANAGEMENT FOR CLUSTERS

- Multiple topologies for caching HTTP sessions across the clusters - distributed caches, shared memory segment (OS), or server caches.
- Intelligent distribution of updates to session object (as opposed to whole objects) - reduction in serialization overhead.
- Session objects virtualized across entire cluster as opposed to one or two secondary servers, thereby enabling load-balancer to uniformly re-distribute web server requests upon failure of primary.
- Ability to seamlessly overflow passive sessions to local disk based on LRU algorithms and thereby conserve memory even under high loads.
- Provide access to session objects to entities outside the Web container- like session beans.

HIGH DATA AVAILABILITY IN J2EE CLUSTERS

- Synchronous replication of data across multiple standby application servers to facilitate fail-over.
- Hot-standby option for data cache servers.
- Persistence onto disk for complete data recovery.

TRANSACTIONS

- JTA based transaction manager for managing transactions within GemFire in coordination with other sources like RDBMS.
- JTA implementation that allows participation in Container Managed Transactions with XA/2-phase commit.
- A native transaction API that is optimized to fail-fast when conflicts are detected (Avoid slowdowns in low-latency applications).

DISTRIBUTED QUERYING

- High-performance OQL support for querying objects in regions
- Support for joins across multiple data regions.
- Ability to introspect query result metadata based on object graphs.
- Support for queries with bind parameters (like a PreparedStatement).

XML <--> JAVA INTER-OPERABILITY

- Native, optimized XML representation for high performance XML document storage and processing.
- Bi-directional XML-Java binding that enables automatic marshalling of XML documents to Java objects and vice-versa.
- Java APIs for JVMs to access XML documents, with support for XML:DB and Web Service APIs for SOAP and HTTP-direct clients.

JMS CONNECTOR

- JMS connectivity that enables GemFire to subscribe and publish to messaging systems.
- For e.g., Data notification changes from backend data sources published to GemFire regions via a message bus.

SYSTEM MANAGEMENT

- Powerful console for detailed characteristics and configuration of distributed caches.
- JMX APIs that enable JMX clients and Enterprise System Management tools like Tivoli to monitor the GemFire system.
- Visual Statistics Display (VSD) utility for graphical display of GemFire performance characteristics.



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