

**BENEFITS WITH GEMFIRE  
EDF:**

- Increase ROI from the different risk management systems in place due to the availability of accurate data on-demand
- High-performance and real-time analysis of data with a lower total cost of ownership
- Availability of risk data at the right place, at the right time which will result in better decisions, better deals and trades, and increased revenue
- Simultaneous sharing of data across functional areas and applications resulting in better risk control, faster responses and better customer service

## GemFire Enterprise Data Fabric for Risk Management

Enterprise risk management, whether it's operational, credit or market risk, is a data initiative. Having good data on a timely basis is the key to good decision making.

Risk management is continuing to grow as a high priority initiative, especially among financial service providers, as these organizations strive to minimize their exposures to potential economic loss. Market events, regulatory compliance, and new products and services have challenged today's financial institutions to do more with less. Financial institutions are constantly in need of information from a variety of sources to instantaneously assess their exposure to risk, and to identify opportunities that offer higher margins with a relatively lower risk.

Risk management is no longer an end of the day batch settlement activity, but a critical process that affects the core operations of a financial service provider. Facilitating an accurate real-time view of risk involves a comprehensive enterprise-wide risk assessment approach, which in-turn drives the need for a nimble infrastructure for sharing and distributing information across different systems.

To support the computationally intensive and data dependent nature of risk management and to avoid data latency, today's financial service providers need a data infrastructure that:

- Delivers data on-demand to the different applications that compute important metrics related to portfolio values, risk impacts, etc.
- Is highly available and scalable without data latency - 'in-memory risk servers' as opposed to databases and data warehouses used previously
- Can integrate data across the different trading and risk management applications
- Is flexible enough to interact and access data from different systems and interfaces in a distributed environment

GemFire Enterprise Data Fabric (EDF) enables high performance caching, Complex Event Processing (CEP), high data availability and data distribution across multiple applications. It provides an infrastructure that can scale across multiple hardware nodes/clusters, access data from multiple sources and operate in a variety of web deployment architectures like portal servers, application servers or standalone applications. It can improve the

speed, quality and comprehensiveness of your risk analysis across different entities in real time and develop a highly available and scalable risk management infrastructure that can handle large data volumes with no latency.

### TECHNICAL VALUE OF GEMFIRE EDF IN RISK ARCHITECTURES

- Highly available data fabric that positions data close to the risk computation grids and reduces data latency
- Real-time analytics and continuous querying on fast moving data
- Flexible caching and distribution topology that enables highly distributed and cost-effective data architectures like grids/blades
- Fast reliable access to data from multiple data stores (market data, reference data, etc.)
- Integration into any kind of heterogeneous environment comprising of C/C++ applications, Java applications, databases, message servers, application servers, etc.

- Real-time information exchange between risk, trading and pricing systems
- In-memory risk servers that facilitate real-time risk information delivery to clients
- Scalable data infrastructure that can support surges in trading/risk data volumes as well as increase in number of computational nodes

### WITH GEMFIRE EDF:

- Move from a typical end of the day batch risk computation to real-time accurate risk analysis that feeds into subsequent trades
- Feed accurate data on-demand to risk engines and algorithms like "Monte Carlo Simulation", and enable better decisions that account for risk
- Access risk metrics including margin call risk, position and exposure, P&L, etc., in real-time and thereby, better control client trading practices and price deals
- Understand the correlation between credit, market and

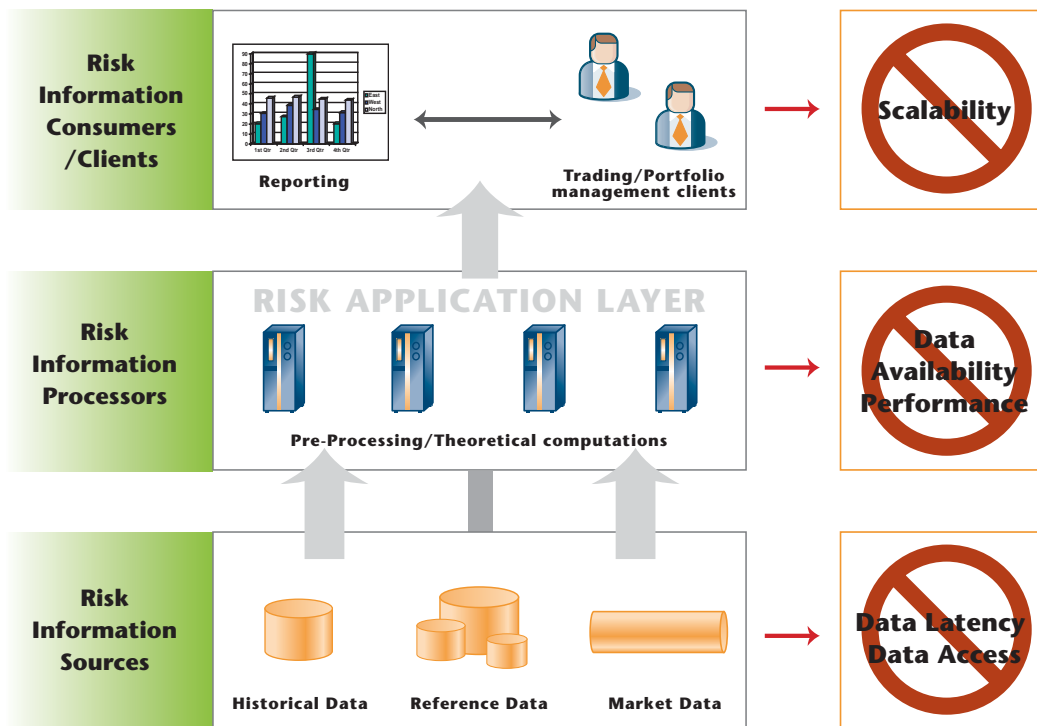
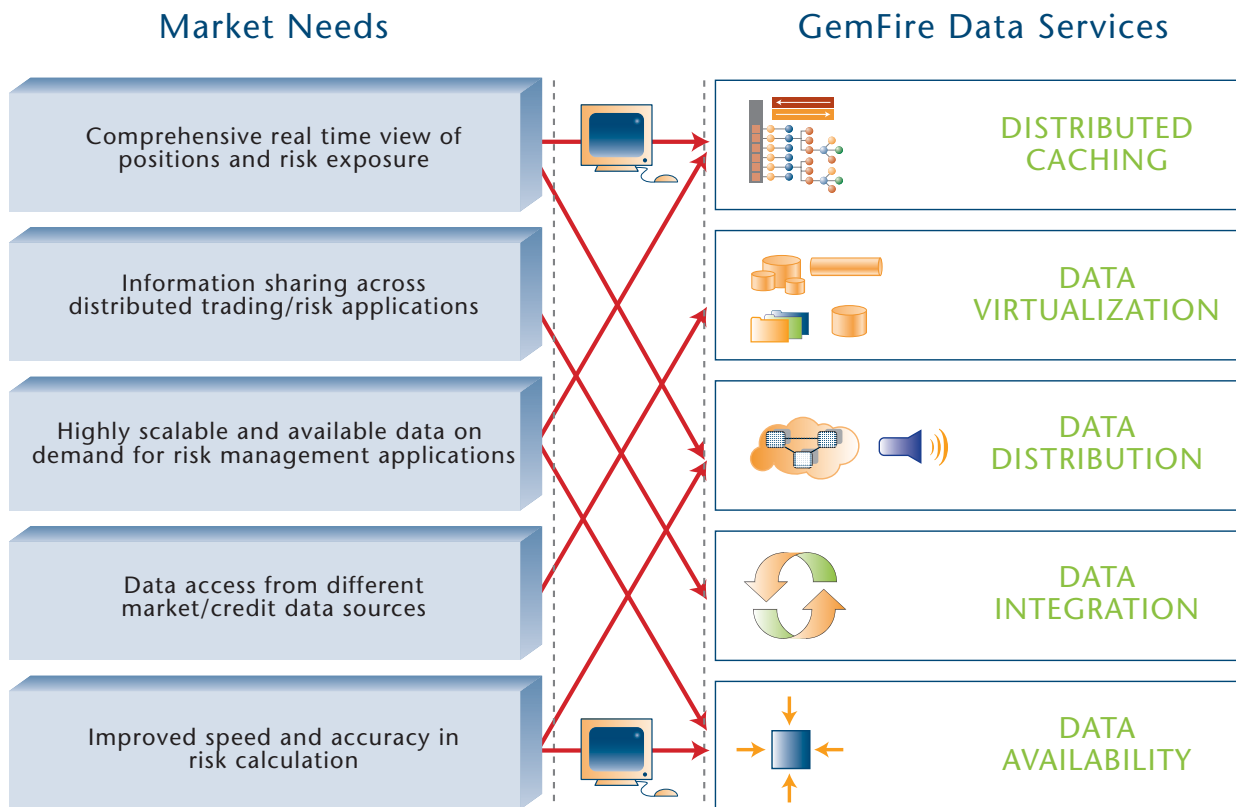


Figure 1: Functional Architectures for Risk Management with GemFire

operational risk by analyzing risk data from multiple sources and performing predictive risk analysis across various business segments

- Compliance to both internal and external regulations, both of which are data intensive activities that need to be completed in short cycles

### GEMFIRE IN ACTION



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