Fiorano ESB® Enterprise Service Bus
Rapid Integration Across the Enterprise

Fiorano ESB is an Enterprise Service Bus that allows companies to integrate applications and processes across the extended enterprise using a standards-based, Service Oriented Architecture (SOA). It also includes a REST-based, highly distributed, yet centrally managed architecture. Fiorano ESB overcomes the problems of monolithic integration brokers and application servers. It enables companies to draw on existing business logic residing anywhere within the enterprise to rapidly assemble efficient solutions for business problems. Fiorano ESB's event-driven architecture allows improved responsiveness to changing business conditions, leading to unmatched flexibility and increased productivity. Fiorano ESB has been deployed in large-scale, secure, mission-critical environments. With a distributed services implementation, Fiorano ESB enables effective reuse, allowing projects to be incrementally scaled and extended across the enterprise.

ESB – Enabling Standards-Based Integration

Fiorano ESB is a JMS messaging-based ESB that mediates and manages interactions between heterogeneous services across the extended enterprise. It reduces complexity and increases flexibility by enabling the creation of dynamically configurable event-pipelines. This is achieved by distributed services, obviating hardcoded dependencies. With a REST-based, peer-to-peer architecture, the Fiorano ESB enables linear, build-as-you-grow scalability with no performance bottlenecks and 24x7xforever availability.

Fiorano ESB is the foundation for an enterprise-wide SOA, allowing enterprises to integrate applications and processes as standards-based, event-enabled services over a distributed, centrally managed infrastructure.
The proven leader in large-scale, mission-critical deployments, Fiorano ESB allows a logical application design to be mapped directly to the physical implementation. This makes the development process more intuitive and easier than that of conventional integration suites. Fiorano ESB’s distributed services architecture enables effective reuse, providing the ability to extract business-value from existing business and legacy applications and allowing the easy coordination of processes across heterogeneous networks. Key features and benefits include:

**Distributed Services Architecture**

**Event-Driven Service Model**
Defines a coarse-grained, event-driven model for Enterprise Services. This enables simplification of existing Web Services, Database applications, Legacy, J2EE and .NET software assets, enhancing their reuse. These components can be reused within event-driven business processes and automatically maximizing the parallelism within each business process.

**Distributed, Dynamic Deployment and Management**
Enables service deployment across the ESB infrastructure from any centralized location, allowing each individual service to be independently configured. Services can also be independently managed, updated and redeployed without disrupting other services or processes.

**Event-Driven Process Orchestration**
By enabling event-flows between distributed services to be set up dynamically by the underlying middleware, allows the logical process design to be mapped directly to physical services distributed across the ESB. This empowers non-technical business-users to compose, deploy and modify event-driven business processes.

**Lifecycle Management and Versioning**
Enables controlled deployment of business processes across network endpoints, together with automatic transitions across the software lifecycle (development, QA, staging and production) via customizable services and process profiles.

**XML Transformations**
Supports sophisticated XSLT transformations with pluggable external transformation engines. Enables assertion-based verification of processes via XSD/DTD port matching.

**Peer-to-Peer, REST-based Communications Backbone**

**Unbounded Performance and Scalability**
Peer-to-Peer messaging obviates the need for events to traverse a central hub, enabling concurrent event-flows between distributed services. This critically obviates any single points of failure within the infrastructure.

**Service-Level Failover and 24x7xForever Availability**
Enables failover instances of services to be dynamically deployed on remote ESB nodes based on multiple triggers, creating self-healing application networks with continuous availability under all operating environments.

**Comprehensive Security**
Provides a flexible framework for authentication, authorization and encryption, with support for J2EE, LDAP and other security standards, adapting to a wide range of federated enterprise security policies.

**ESB Generic Services and Adapters**

**Distributed Intelligent Routing**
Enables dynamic changes to be seamlessly incorporated into running processes by automatically routing events between distributed ESB Services.

**Monitoring, Logging and Auditing**
Supports asynchronous event-based notification of critical errors in event-driven business processes, with dynamic tracing, logging, auditing and monitoring of messages, documents and services.

**Adapters and Pre-built Services**
These are shipped with a rich set of pre-built enterprise services including adapters to all popular relational databases, files, Messaging Middleware (MQSeries, JMS, MSMQ, others), Web Services, EJB, FTP, SMTP and more.

**Advantages of a Standards-Based Solution**
Fiorano ESB implements standards for communication, connectivity, transformation and security. This enables application interoperability and allows skills and software-assets to be easily transferred between integration projects. Fiorano supports and drives industry standards for integration, including Java, Web Services and XML.

**Mitigating Proprietary Dependencies:** Proprietary integration solutions ’lock-in’ customers by forcing them to code to non-standard APIs, inhibiting flexibility, preventing reuse and ultimately proving to be extremely expensive. Fiorano ESB’s standards-based, service oriented approach smooths the operational path of the processes running a business, reducing the time, effort and cost of integrating applications.

**Seamless Connectivity:** The emergence of connectivity standards including Web-Services, JMS, J2EE-JCA and .NET allow Fiorano ESB to seamlessly integrate multiple enterprise assets including application servers, messaging middleware, legacy systems and mainframe applications, without requiring custom coding or application rewrites. These standards shield users from version and API changes, ensuring that existing processes are not disrupted by new releases.

**Reuse of Software Assets:** The adoption of a standards-based, Service Oriented Architecture (SOA) allows existing legacy and packaged applications within an organization to be used as building blocks, enabling their reuse within enterprise business processes. This drives down development and management costs. This enables a quicker learning curve with standards that further enable development skills and resources to be effectively reused across projects.

**Easy Interoperability:** Support for Web Services and other standards within Fiorano ESB enables seamless interoperability of disparate applications distributed across heterogeneous platforms. This enables applications to exchange data with ease, without the need for expensive custom transformations, extra coding or language translation capabilities.
**Fiorano ESB Business Benefits**

Fiorano ESB offers a number of benefits over existing solutions for integration and real-time enablement, including faster implementation and deployment cycles, a flexible platform for future expansion offering a high degree of reuse, easy extensibility, seamless interoperability and an improved ROI. Key advantages include:

**Dynamic Responsiveness**
Deployed as service-oriented processes, solutions on the Fiorano ESB improve responsiveness to changing business requirements, minimizing impact on existing business applications. Fiorano ESB is based on an event-driven, asynchronous, message-based service-oriented architecture, providing the ability to rapidly specify controlled changes to operations based on business objectives. This allows the implementation of changes directly, quickly and more efficiently for business agility and integrity.

**Reduced Training Costs**
Fiorano ESB improves the productivity of organizations by including a variety of pre-built services necessary for the creation of service-oriented processes, together with tools to componentize existing enterprise software assets. Comprehensive support for industry standards, including J2EE, .NET, XML and Web-Services, ensure a fast learning curve, allowing developers and enterprise managers to become proficient at synthesizing custom solutions to problems in the form of interactive service-oriented processes.

**Increased Revenue**
With in-built support for business-to-business interactions, Fiorano ESB enables seamless connectivity across the extended enterprise for transacting business in real-time with customers, trading partners and distributors worldwide. Streamlined processes translate into increased revenue, lower costs and open up possibilities of innovation to find newer sources of revenue. Fiorano ESB's architectural-level innovations enable linear, build-as-you-grow scalability.

**Accelerated Time to Market**
Fiorano ESB enables the creation of interactive, end-user service-oriented processes without programming, by orchestrating existing services with visual tools. The ability to synthesize applications from multiple, distributed enterprise assets without any programming is extremely vital for achieving flexibility in a dynamic environment, leading to the automation of common development tasks and accelerated time-to-market.

**Lower Total Cost of Ownership**
Fiorano ESB is built on top of standards, enabling efficient reuse of existing enterprise applications and infrastructure and lowering capital requirements for new projects. B2B features lower cost of working capital compressing order to cash times. Fiorano ESB's dynamic versioning, deployment, and change-management capabilities, reduce development and maintenance costs by an order of magnitude in comparison to incumbent solutions.

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**The Fiorano SOA Platform**

Fiorano ESB serves as the foundation of the Fiorano SOA Platform which adds the Fiorano Event Process Orchestrator, Fiorano Integration Studio, Fiorano Deployment Manager and Fiorano Adapters to form a comprehensive integration platform.
Global Leaders Choose Fiorano

Fiorano helps organizations worldwide improve operational efficiencies and business performance by sharing information dynamically across global operations. Our commitment to developing standards based solutions that deliver immediate ROI with proven interoperability and industry-leading reliability helps ensure our customers’ sustained success in worldwide markets.

Fiorano understands the development, infrastructure and performance challenges facing IT departments in today’s hyper-competitive markets. Over 500 enterprises worldwide have deployed Fiorano solutions, allowing them to:

- Extract business value from existing business and legacy applications spanning multiple, cross organizational boundaries.
- Deploy in a cost effective, incremental fashion, without disrupting existing operations or major up-front investments.
- Meet dynamic surges in demand, deliver services without disruption and increase customer satisfaction without having to provision new hardware systems.
- Lower the cost of ownership and maintenance of IT systems via enhanced reuse of software assets and standards based implementations.
- Reduce training costs and reliance on outside consultants, allowing in-house developers to deploy and manage complex integrations.
- Enhance productivity by allowing business-analysts to compose business processes with minimal programmer intervention.

Manufacturing
Leading manufacturers have selected Fiorano over competing solutions for real-time process control across multiple platforms and applications over heterogeneous protocols.

Energy
Some of the largest oil and energy companies use Fiorano to rapidly integrate disparate systems and harness silos of information in legacy systems to improve delivery of services. Oil companies use Fiorano to get real time information from field to office enabling critical decision making by Managers that directly impacts the bottom line.

Banking and Financial Services
Leading financial institutions have selected Fiorano solutions to deploy the next wave of flexible and adaptable core banking, risk management and trading solutions.

Telecommunications
Leading telecommunications companies use Fiorano Software to deliver millions of messages daily across complex, distributed workflows in mission-critical 24x7 environments.

Retail, Real Estate and Hospitality
Some of the leading consumer service organizations use Fiorano to significantly improve their net profits through streamlining of processes and connecting with trading partners.

Government /Defense
State and Federal Governments have deployed Fiorano to significantly improve citizen services and increase revenue collections; Defense Agencies have used the solutions to significantly enhance their response and intelligence gathering activities.

ABOUT FIORANO SOFTWARE

Founded in 1995, Silicon Valley based Fiorano is a USA (California) Corporation, a trusted provider of Digital Business Backplane and enterprise integration middleware, high performance messaging and peer-to-peer distributed systems. Fiorano powers real time, digital enterprises with bimodal integration and API Management strategy that leverages the best of systematic (centralized, high-control) and adaptive (federated, high-speed) approaches to deliver solutions across cloud, on-premise and hybrid environments. Fiorano operates through its worldwide offices and a global network of technology partners and value-added resellers.

Global leaders including AT&T Wireless, Boeing, British Telecom, L’Oréal, McKesson, NASA, POSCO, Rabobank, Royal Bank of Scotland, Schlumberger, US Coast Guard and Vodafone have deployed Fiorano to drive innovation through open, standards-based, event-driven real-time solutions yielding unprecedented productivity.

To find out more about how Fiorano can help you meet your enterprise integration objectives, visit www.fiorano.com or e-mail sales@fiorano.com