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Enabling change at the speed of thought

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Message Driven SOA --- Enterprise Service Oriented Architecture

Meeting the needs of Technology and Business

Fastest JMS Server in the Market

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MEETING THE NEEDS OF TECHNOLOGY AND BUSINESS

Fastest JMS Server in the Market

Executive Summary

Fiorano's latest release, FioranoMQ offers significant new features and enhancements. This new release is compliant with the latest JMS specification, JMS 1.1 released by Sun Microsystems. It supports XML Content Based Routing which brings new levels of ease-of-use and flexibility to developers. With superior flow control, high-performance guaranteed delivery and massive scalability, customers see immediate ROI for their JMS solutions. Feedback on the new release from early-users has been excellent, with better stability and performance reported across the board. Highlights of the latest release include:

- JMS 1.1
- XML Content based Routing
- Client side
- Addition of a GUI based Cluster Admin Tool
- HTTP and SSL Support in C Run time library
- Improved Structured Guide documentation in pdf format

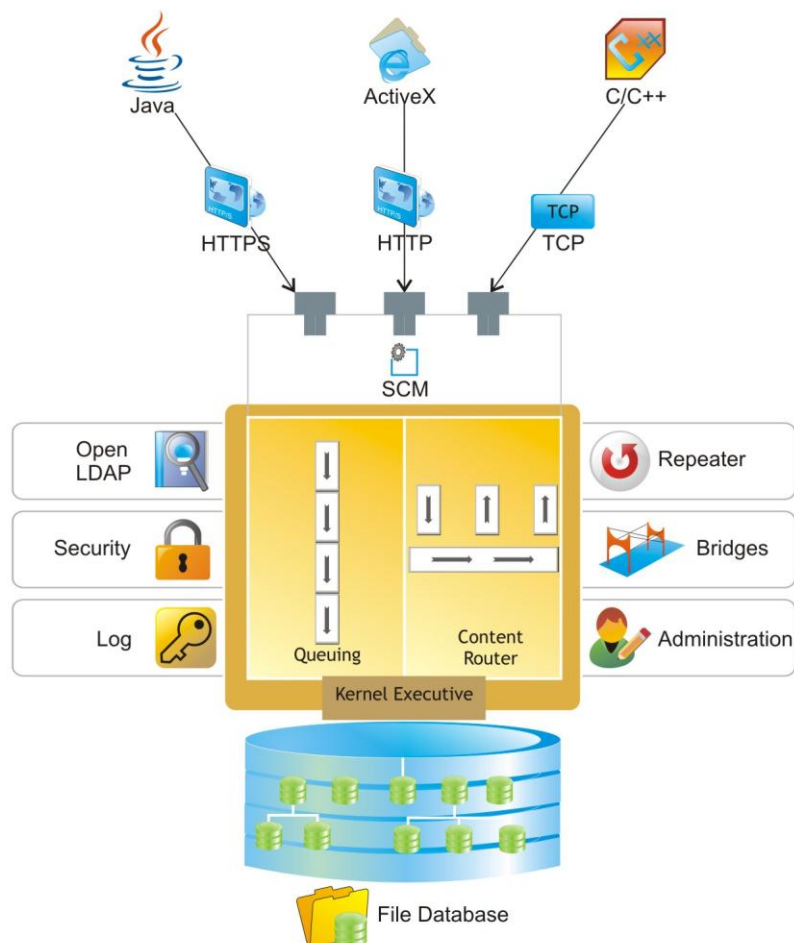


Figure 1: FioranoMQ Architecture

Massive Scalability

FioranoMQ introduces a new pluggable architecture enabling the Message Server to achieve higher levels of scalability than any other JMS implementation. Only FioranoMQ provides you with a Scalable Connection Management Module (SCM) to maximize the number of concurrent users and throughput so your organization's IT infrastructure can accommodate a growing user base and scale smoothly. Using the new pluggable Scalable Connection Management module, FioranoMQ can support 10,000 concurrent clients. For more detailed information on the FioranoMQ architecture and SCM whitepaper http://www.fiorano.com/whitepapers/ia/fiorano_fioranomq_scalability.php?wp=mm

High Performance

FioranoMQ is the *fastest* Java Messaging Server on the market. Only FioranoMQ uses a file based data store to deliver guaranteed messages 10-15 times faster than any other JMS Implementation. Developers can prove Fiorano's performance advantage to themselves by downloading the performance test with source code from our web site. At Fiorano we consider you the independent

JMS Compliance

FioranoMQ is compliant with the latest JMS specification, JMS 1.1, released by Sun Microsystems. The JMS specifications of Pub-Sub and PTP, by introducing the Unified Messaging domain. In the Unified Messaging domain, there are Connection Factories, Connections, Sessions, Producers, Consumers and Destinations, which are not dependent on Topics or Queues. The previous concept of Pubsub and PTP domains is however supported in this release. Now the JMS developers have the flexibility to use APIs that are specific to both multiple and unified domains.

XML Content Based Routing

FioranoMQ introduces XML Content Based Routing support within the FioranoMQ server. This serves as a powerful message selection tool based on the actual content of the message, along with the traditional JMS message selection that is based on JMS Message properties. The message selectors are Standard XPath predicates that follow the SQL92 syntax.

Client side persistence

Client side persistence or caching of messages is available in FioranoMQ release. This allows the client applications to save all the messages in a local file-based cache (if the connection with the FioranoMQ server fails due to any reason) and then send all the pending messages as soon as the connection is established again. This support is available for both PubSub and PTP applications.

HTTP and SSL Support in C Run Time Library

The C runtime library of FioranoMQ now adds support for native C clients to communicate with the FMQ server over HTTP/HTTPS and SSL. Native C clients can now create Topic or Queue connections and send/receive messages with the FioranoMQ server that is running on HTTP, SSL or HTTPS with minimal changes in the client applications. The SSL support in C-RTL works only with Phaos SSL implementation of FioranoMQ server and not JSSE implementation. It uses the OpenSSL implementation on the client side for the same. The HTTP C runtime support uses the standard C HTTP library, provided by W3C.

C++ Interoperability

C++ programmers can access JMS publish/subscribe and point-to-point Messaging facilities using a C++ API derived from the based Java API. FioranoMQ thus allows C++ and Java programs to share data seamlessly. The FioranoMQ C++ runtime library (RTL) can be used to build COM interfaces (ActiveX controls) to allow Visual Basic and Microsoft Excel applications to access JMS Services.

XML Interoperability

Using the power of the FioranoMQ XML Interoperability Toolkit, a JMS message can be transformed in to an XML format, allowing JMS applications to easily communicate with any external system such As legacy and ERP applications. User can also send an XML document as a JMS message. Developers can now build reliable applications in confidence using the XML data format exchange standard.

Transparent Interoperability with MSMQ and IBM MQSeries

Together, the FioranoMQ Server and the FioranoMQ Bridge enable you to send all types of JMS messages to an external messaging server. In addition, you can receive messages from either a MSMQ or IBM MQSeries Server. Through the tight integration with the FioranoMQ Message Server, the FioranoMQ Bridge extends the ease of administration and configuration benefits of the Fiorano Administrator to messages being sent to and from MSMQ or IBM MQSeries servers. Plus the same powerful ACL-based (Access Control List) security features found in the FioranoMQ Message Server can be utilized for messages traveling over a MSMQ or IBM MQSeries server.

LDAP Integration

FioranoMQ enables you to leverage your new and existing investments by allowing you to store and access directory information and services in a standard LDAP server. FioranoMQ administrators can now remotely configure all administered objects in an external LDAP store such as NDS, Netscape Directory Store, Active directory etc. Through seamless LDAP server integration, enterprises can configure all of their enterprise resources in a central LDAP server and setup all the FioranoMQ servers in a network along with rest of the enterprise resources (Database servers, EJBs, hosted applications etc.). A simple set of configuration option in "server.cfg" within FioranoMQ connects FioranoMQ to an LDAP server without any changes in client code.

Faster time to Market

FioranoMQ significantly increases your development productivity so you can get your applications to market faster by isolating developers and applications from low-level network programming details like sockets and network addresses. In addition Fiorano provides the following unique benefits:

- **Tracing and Logging Facilities** FioranoMQ incorporates sophisticated tracing and logging facilities so you can detect and resolve errors in your messaging system faster and easier.

The FioranoMQ Administrator can dynamically set different tracing levels for each individual FioranoMQ component. These trace levels define the "verbosity" of logs generated by the server. In addition, FioranoMQ generates a log with detailed result descriptions that can be viewed within the Admin Tool.

- **Message Snooping** Administrators can view the messages that have been published on both Topics and Queues. The ability to snoop messages facilitates the administration, management, testing, and debugging of JMS applications.

Tight Security

Fiorano's highly configurable, comprehensive security system allows application security to be easily configured by an external visual Administration tool. The FioranoMQ security system is completely standards-based and implements the Java security API. In addition, FioranoMQ implements the following security mechanisms:

- **Java Realms** New to FioranoMQ is the support for Java REALMS improving security management. FioranoMQ realms centralize user authentication sources by combining Users, Groups, Permissions, and Access Control Lists. FioranoMQ provides integration with security REALMS on NT and UNIX platforms.
- **ACL (Access Control Lists)** Administrators can remotely set ACL's for Topics and Queues to control who can publish, subscribe or request guaranteed delivery on a given destination.
- **Software Firewalls** Allow administrators to set ACLs at the Topic, User, and Server level. Administrators can selectively block incoming and outgoing information to and from any given server.
- **SSL Security** FioranoMQ supports both 40 and 128-bit message encryption on multiple platforms.

Reliability

FioranoMQ implements dynamic load balancing and failover protection making the system highly available and allowing an unlimited number of concurrent client connections to a server cluster. The Fiorano Dispatcher dynamically routes incoming client connections to the least-loaded server in a cluster. Fiorano provides a comprehensive Dispatcher API that allows servers to be added to and removed from the cluster.

Remote Administration

FioranoMQ incorporates a comprehensive administration API which allows administered objects to be created and monitored externally. The FioranoMQ administrator can create, delete, modify and set properties for various administered objects through an available Administration Tool. A uniform API is used to create and destroy all administered objects. FioranoMQ adds a Remote Monitoring API that allows users to monitor internal server statistics such as the number of running threads, memory utilization, message throughput, etc. Developers may install and/or remove customized system monitors using a rich set of administrative APIs.

FioranoMQ Server-to-Server Communication

Fiorano provides an ideal solution for messaging applications that require communication across servers geographically distributed servers. The FioranoMQ architecture allows multiple servers to be connected together, allowing clients connected to one server to exchange information with clients connected to any of the other servers. In the case of any network failures across the WAN, FioranoMQ guarantees messages are delivered to the appropriate neighboring servers.

Internet Support

FioranoMQ greatly simplifies the development of distributed applications that rely on cost effective yet unreliable networks such as the Internet to share and exchange information. FioranoMQ's standards based location-independent communication APIs can be used within browser-hosted applets and across corporate firewalls via HTTP Tunneling.

About Fiorano Software

Fiorano Software (www.fiorano.com) is a leading provider of enterprise class business process integration and messaging infrastructure technology. Fiorano's network-centric solutions set a new paradigm in ROI, performance, interoperability and scalability. Global leaders including Fortune 500 companies such as Boeing, British Telecom, Credit Agricole Titres, Lockheed Martin, NASA, POSCO, Qwest Communications, Schlumberger and Vodafone among others have used Fiorano technology to deploy their enterprise nervous systems.