IBM WebSphere Front Office for Financial Markets delivers a flexible, high-throughput, low-latency, front-office platform

Overview

WebSphere® Front Office for Financial Markets delivers a single platform that can help you satisfy your complex market data access requirements. This software is a market data vendor-neutral solution built on the award-winning portfolio of IBM middleware products for an integrated environment optimized for high-volume trading. The WebSphere Front Office platform is designed to meet the performance requirements of today’s low-latency, time-sensitive applications.

WebSphere Front Office includes a Feed Adapter Framework that lets you access a wide range of market data feeds, including direct market feeds and aggregated feeds. The WebSphere Front Office framework and simplified API set ease feed adapter construction, maintenance, reuse, and application connectivity. Its APIs can stream data to machine, terminal, and custom applications requiring streaming data. Data from multiple sources can be integrated into decision support or other applications.

Innovative new technology from IBM distributes data for rapid delivery to high-volume automated applications. The WebSphere Front Office platform is designed with security features using a standards-based LDAP directory. Capabilities include systems monitoring and metering, data collection, and high-availability features including detection, notification, and recovery.

WebSphere Front Office can help you to differentiate your business and become more competitive while managing operational costs. As market volumes and data demands continue to grow rapidly, the ability to move to direct-exchange feeds and reduce the number of market data platforms you support can help deliver significant savings while you drive more business through program and algorithmic trading. Low latency combined with high capacity make WebSphere Front Office a superior platform for today’s high-speed, high-volume applications.

To help you manage costs, the WebSphere Front Office platform allows you to gradually add new feeds and applications on your schedule and to pay accordingly. WebSphere Front Office middleware, combined with IBM global support and services, can provide an end-to-end solution to your front office needs.

Key prerequisites

Refer to the Hardware requirements and Software requirements sections.

Planned availability date

July 7, 2006

- Electronic software delivery
- Media and documentation

At a glance

This comprehensive front-office platform is based on leading IBM middleware. It can accept feeds directly from exchanges to help achieve high-speed delivery to machine-based trading systems and other decision-support applications in response to the rapid growth in market data.

- Helps improve trade performance with measurably low latency compared to commonly used existing platforms
- Supports growing market data requirements
- Helps reduce cost of market data access and operations
- Provides the ability to integrate both direct market data and aggregated feeds with machine-based trading and other decision support applications
- Includes metering and systems monitoring, high availability, and recovery
- Delivers a flexible foundation for front-, middle-, and back-office application integration
- Enhanced by IBM worldwide support, business and technology services, and outsourcing capabilities

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To stay competitive in the financial markets industry, buy and sell-side firms must meet their clients’ expectations as operational cost pressures increase. As market volumes and data demands continue to grow rapidly, financial market firms move to direct-exchange feeds and considering migration off of existing market data platforms. Keeping up with regulatory changes, such as Regulation National Market System (Reg NMS) for best-trade execution in the U.S. and MiFid in Europe in real-time, adds additional cost to already strained IT budgets.

**Differentiate with a high-performance WebSphere Front Office platform**

This software provides a high-performance, vendor-neutral solution that is built on the award-winning portfolio of WebSphere, IBM Tivoli®, and Data Management products for an integrated environment that is designed for high-volume trading. Innovative new technology from IBM for data distribution provides common data transportation and increased data recovery with low data loss. The WebSphere Front Office platform can deliver market data with the speed required by today’s high-volume automated applications.

**Easily integrate market data feeds with Feed Adapter Framework**

The Feed Adapter Framework provides a complete yet simplified interface for integrating market data feeds to help you adapt to changing business needs. It lets you access a wide variety of information, including direct market feeds, aggregated feeds, and-in-house and other third-party data. The framework and simplified API set eases feed adapter construction, maintenance, reuse, and application integration.

Through the framework, the platform accepts streaming market data (including composite feeds, direct-exchange feeds, contributed data, and so on), combines the feeds, and transforms the data into self describing ticks. Binary self describing ticks provide XML-like flexibility in a compact format. Data processing capabilities include in-line computation, data quality checking (including missing and out of band data), and caching. Subscription-controlled data delivery is possible to either broad or narrow (instrument level) sets of applications or users.

**Delivers low latency for time-sensitive applications**

IBM WebSphere Front Office for Financial Markets is a high-speed platform that is designed for direct market access applications, including program and algorithmic trading. IBM technology delivers in-memory storage of all data and rapid real-time access to that data. While client implementations and system demands will vary, performance evaluations indicate latency measured in microseconds rather than milliseconds, significantly faster than platforms generally in use in the market today.

**Reduces market data and platform support costs**

As demand for market data information and services has grown, market data managers are faced with the daunting task of delivering the needed data in a cost-effective manner. The IBM WebSphere Front Office for Financial Markets platform supports this initiative in multiple ways:

- Enables firms to integrate direct market data feeds from multiple sources, potentially reducing the number of market data platforms required
- Allows market data managers to track entitlements and usage of market data by user or feed so that duplication can be identified and eliminated
- Provides a clear, simple pricing model
- Allows adapters to be built using reusable components leveraging standards-based IBM middleware with vendor-agnostic interfaces
- Uses low-cost Linux™ and Intel® on IBM xSeries® hardware.

**Delivers simplified APIs for application connectivity**

The platform provides simplified APIs that enable connectivity to middle- and back-office applications. WebSphere Front Office APIs can feed machine applications (program trading, algorithmic trading), terminal applications, and custom applications requiring streaming data (position keeping and trade management applications). Market data from multiple sources can be integrated into the client’s choice of application for decision support applications.

**Provides standards-based provisioning for managed access to market data and applications**

The platform provisions users and group entitlement to feeds and applications using standards-based LDAP directory capabilities. Authorization checks can monitor and respond to requests for user actions. Auditing and logging capabilities can be tailored to particular business requirements. The program stores usage data, and clients can access that data to generate reports to meet internal needs and requirements of third-party data providers.

**Supports high-availability operations, and includes monitoring, back-up, and recovery capability**

The monitoring and metering capabilities of WebSphere Front Office are designed to address industry requirements for detection and notification of platform operation status, and data collection to support reporting and trend analysis of system performance, usage, and access. For high-availability operations, the platform monitors key system resources, and can send system alerts or take appropriate action including failover.

**Delivers leveraged services from IBM to help you optimize your solution**

IBM offers exceptional services to help you, from business strategy to IT infrastructure implementation. Resources include:

- IBM Global Business Services, with thousands of financial services practitioners
- IBM Software Services
- IBM Global Services Business Transformation and Application Outsourcing

Available services designed specifically for WebSphere Front Office software include:

- Premium support: On-site assistance, augmented problem management, proactive planning for environment changes, and platform management services such as performance tuning, capacity
planning, metering, usage reporting, and entitlement management

- Custom services: Custom application development and integration, custom feed adapter development and support, and platform integration and deployment

Business consulting services are also available to help you manage your Market Data environments. Specific services available include Market Data Management TCO Analysis and Market Data Management Optimization services.

Accessibility by people with disabilities

Section 508 of the U.S. Rehabilitation Act: WebSphere Front Office for Financial Markets is capable as of July 7, 2006, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM Web site


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http://www.ibm.com/common/ssi

Also, visit the Passport Advantage® Web site
http://www.ibm.com/software/passportadvantage

Publications

No publications are shipped with this product.

The IBM Publications Center
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The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries free of charge.

Technical information

Hardware requirements: Minimum requirements are listed. The actual requirements for your system may be greater, depending on the complexity of your specific environment, throughput, and data requirements. For additional details, refer to the WebSphere® Front Office for Financial Markets Deployment Planning Guide.

The following information is for the WebSphere Front Office for Financial Markets solution only. If you choose to combine multiple solution components on the same server, make appropriate adjustments.

Additional server requirements

- Additional CPUs may be required based on capacity requirements.
- Additional memory may be required based on capacity requirements.
- Additional servers for added capacity and/or redundancy.
- Additional disks may be required based on capacity requirements.
- Gigabit network adapters and routers are required.

WebSphere Front Office for Financial Markets systems

- History server (optional)
  - Processor: An IBM xSeries® and Intel®-based multi-processor system (or equivalent) containing 8 processors with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 2x36 GB

- Feed Adapter Framework
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 2x36 GB
  - For messaging path high availability — Add an additional Feed Adapter Framework

- Framework server
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 2x36 GB
  - For messaging path high availability — Add an additional Feed Adapter Framework

- System administration/Monitoring server
  - Processor: An IBM xSeries and Intel-based multi-processor system (or equivalent) containing 4 processors with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 2x36 GB

- Operational state manager/Metering server
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 4 GB
  - Minimum DASD requirements: 2x36 GB

- Access control and authorization server and provisioning server
  - Processor: An IBM xSeries and Intel-based multi-processor system (or equivalent) containing 4 processors with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 2x36 GB

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Hardware requirements for client access to WebSphere Front Office for Financial Markets

- Framework client
  - Processor: An IBM IntelliStation® Z Pro and Intel-based uniprocessor system (or equivalent) with a minimum processor speed of 2.8 GHz
  - Minimum memory requirements: 1 GB
  - Minimum DASD requirements: 18 GB

Hardware requirements for WebSphere Front Office for Financial Markets development systems

- System template
  - Processor: An IBM Intellistation Z Pro and Intel-based uniprocessor system (or equivalent) with a minimum processor speed of 2.8 GHz
  - Minimum memory requirements: 1 GB
  - Minimum DASD requirements: 18 GB

- Framework client
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 36 GB

- Framework service provider implementation
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 36 GB

- Custom feed adapter
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 36 GB

Software requirements:

For more details, refer to the WebSphere Front Office for Financial Markets Deployment Planning Guide.

WebSphere Front Office for Financial Markets systems

- History server (optional): Red Hat Enterprise Linux AS 3 Update 7

- Feed Adapter Framework:
  - Red Hat Enterprise Linux AS 3 Update 7
  - For messaging path high availability, — Set up an additional Feed Adapter Framework using the same software stack

- Framework server
  - Red Hat Enterprise Linux AS 3 Update 7
  - For messaging path high availability, — Set up a secondary Framework Server (horizontally clustered)

- System administration/Monitoring server
  - Red Hat Enterprise Linux AS 3 Update 7

Software requirements for client access to WebSphere Front Office for Financial Markets

- Framework client
  - Processor: An IBM IntelliStation® Z Pro and Intel-based uniprocessor system (or equivalent) with a minimum processor speed of 2.8 GHz
  - Minimum memory requirements: 1 GB
  - Minimum DASD requirements: 18 GB

Software requirements for WebSphere Front Office for Financial Markets development systems

- System template
  - Processor: An IBM Intellistation Z Pro and Intel-based uniprocessor system (or equivalent) with a minimum processor speed of 2.8 GHz
  - Minimum memory requirements: 1 GB
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- Framework client
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  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 36 GB

- Framework service provider implementation
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
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- Custom feed adapter
  - Processor: An IBM xSeries and Intel-based dual-processor system (or equivalent) with a minimum processor speed of 3.2 GHz
  - Minimum memory requirements: 2 GB
  - Minimum DASD requirements: 36 GB

Performance considerations: WebSphere Front Office for Financial Markets is a scalable product. Its performance depends on the complexity of the specific environment, volume of data traffic, and the data object size.

Planning information

For planning information, refer to the WebSphere Front Office for Financial Markets Deployment Planning Guide.

Customer responsibilities: It is strongly recommended that IBM Services be used to assist in the installation,
design, implementation, and maintenance of the IBM WebSphere Front Office for Financial Markets. To implement Feed Adapters, Framework Service Providers, and Framework Client applications, the following skills are required:

- Network skills
- Java and/or C++ programming
- XML
- Thorough understanding of specific Feed Provider implementation
- Thorough understanding of the WebSphere Front Office for Financial Markets

Software Maintenance, previously referred to as Software Subcription and Technical Support, is included in the Passport Advantage Agreement. Installation and technical support is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity, with voice and electronic access into IBM support organizations.

**Packaging**

IBM WebSphere Front Office for Financial Markets is distributed as a single package containing:

- Quick Start CD, which includes a Readme, Quick Start Guide, and Installation and Configuration Guide
- IBM Program Package on CD media

**Security, auditability, and control**

WebSphere Front Office for Financial Markets uses the security and auditability features of the system on which the products are installed.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

**Software Services**

IBM Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team.

IBM has defined two levels of augmented services for WebSphere Front Office clients. Premium support is the recommended minimum level of support for WebSphere Front Office clients.

**Premium support**

- Includes on-site and/or remote assistance
- Provides an augmented level of break/fix support
- Assists in problem characterization
- Manages problems, and escalation if needed
- Delivers a rapid path to senior technical resources
- Supports proactive planning for environment changes
- Enables knowledge transfer and skills sharing
- Can include performance tuning
- Can provide capacity planning
- Can assist with data access declarations and metering
- Can assist in usage reporting
- Can help with entitlements/permissioning management and support

**Custom services**

- Can include application development/integration
- Can consult on or develop customer specific feed adapters
- Can develop custom display applications or integrate with existing display applications
- Can perform platform integration consultation
- Can assist with global engineering and deployment

To learn more about IBM Software Services or to contact a software services sales specialist, visit http://www.ibm.com/software/sw-services/

**Ordering information**

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**Product information**

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<td>Authorized user</td>
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</table>

**Charge metrics definitions**

**Authorized User**

An authorized user is one and only one individual (named or unnamed) within or outside your enterprise. A proof of entitlement (POE) must be obtained for each individual user accessing the program in any manner. A program licensed under an authorized user POE may be installed on a single computer or server, and accessed by multiple users, provided that a POE has been obtained for each individual user accessing the program either directly or indirectly (via a multiplexing program, device, or application server) through any means on behalf of the user.

**Per feed**

The term “feed” is a stream of machine-readable information provided by an external entity that is supplied to the program.

For example, in determining the number of PoEs for feeds, if:

- A particular feed is bidirectional between the external source and the program, then a single PoE applies
- A particular feed source, such as from a particular stock exchange, market data aggregator or the customer, is fed as separate streams of machine-readable information, then separate PoEs apply
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**Agreement:** IBM International Program License Agreement and License Information (LI) document. PoEs are required for all authorized use.

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This software license includes Software Maintenance, previously referred to as Software Subscription and Technical Support.

**LI form number**

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On or near the planned availability date, the LI will be available for review on the IBM Software License Agreement Web site


**Limited warranty:** Yes

**Warranty:** This program includes a warranty for one year from acquisition from IBM or an authorized IBM Business Partner. For one year from acquisition of the Program, this warranty provides the customer with access to databases containing Program information and FAQs, including any known fixes to defects, which the customer can download or otherwise obtain and install.

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Customers will be notified, via announcement letter, of discontinuance of support with 12 months’ notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

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**iSeries™ Software Maintenance applies:** No

**Educational allowance available:** Not applicable

**Prices**

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