



IBM WebSphere MQ Low Latency Messaging V2.5 delivers enhanced management, monitoring, reliability, filtering, and performance optimizations

Table of contents

1 Overview	5 Publications
3 Key prerequisites	5 Technical information
3 Planned availability date	9 Ordering information
3 Description	12 Terms and conditions
4 Product positioning	14 Prices
5 Program number	15 Order now

At a glance

WebSphere® MQ Low Latency Messaging V2.5 offers the following new capabilities:

- Enhanced intelligent self-management to ease configuration and enhance usability
- Enhanced persistent messaging
- Networking enhancements
- Performance enhancements
- High-availability enhancements
- Extended platform support

For ordering, contact your IBM® representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference:).

Overview

WebSphere MQ Low Latency Messaging V2.5 delivers new features to the high-volume, low-latency reliable messaging capabilities:

- Improved client monitoring and subscription management
- Durable subscriptions
- Enhanced message filtering
- New message delivery styles
- Enhanced intelligent self-management
- Networking, availability, reliability

These new features can make WebSphere MQ Low Latency Messaging an even more attractive solution for trading firms, exchanges, and other organizations that need assured delivery of high volumes of data with low latency.

Low Latency Messaging can help deliver a flexible, manageable messaging environment with a wide range of messaging quality of service options along with support for a highly-available, replicated, or load-balanced environment.

WebSphere MQ Low Latency Messaging is a messaging transport that is highly optimized for the high-volume, low-latency requirements of financial market firms, and other industries. In these environments applications require extremely low-

latency (sub-millisecond) and high-message volumes (ranging from many thousands to millions of messages per second), with varying delivery styles and message qualities of service.

WebSphere MQ Low Latency Messaging can be used for high-speed delivery of market data, transactional data, reference data, and event data in or between front-, middle-, and back-office environments. Using the full IBM Messaging portfolio, WebSphere MQ Low Latency Messaging can be integrated with classic WebSphere MQ for back-office applications requiring the highest levels of assured delivery.

Although initially designed to meet the high-speed and throughput requirements of financial services firms, WebSphere MQ Low Latency Messaging is suitable for use by other industries with similar requirements.

Version 2.5 introduces new message delivery styles including better support for seamless message delivery to remote locations and load-balanced delivery to multiple receivers over a single topic. This is in addition to other enhancements to the message store for persistent messaging and durable subscriptions.

The unique high-availability capabilities of WebSphere MQ Low Latency Messaging provided by Reliable and Consistent Message Streaming (RCMS) minimize outages and downtime even when using commodity hardware.

WebSphere MQ Low Latency Messaging is ideal for organizations that require:

- High-messaging throughput and extremely low latency
- One-to-many multicast and point-to-point unicast messaging
- Support for simultaneous use of User Datagram Protocol (UDP) and Transmission Control Protocol (TCP)
- Stream failover for high availability even when using commodity hardware
- Message traffic rate and congestion control
- A Low Latency Message Store for lightweight persistence
- Remote direct memory access (RDMA) using native InfiniBand for lowest latency communication
- Shared memory for inter-process communication
- A coordination manager for simplified topic provisioning and subscription management
- Native InfiniBand support
- 10 GbE support
- Flexible, fine-grained message filtering
- Robust application and network statistics monitoring for internal and external latency

WebSphere MQ Low Latency Messaging is particularly suitable for financial markets use cases, including:

- Efficient market data distribution - Enables low-latency communication to downstream applications that perform functions like trading, analytics and compliance.
- Congestion management - Detects and actively manages congestion, offering memory buffer usage limits with notification; limits on data retransmission with notification; transmission rate limitation; and slow consumer policies.
- Reliable trade execution - Delivers highly reliable communication with persistence to the downstream execution infrastructure without performance degradation, with high availability for complex execution routing.
- Real-time market analytics - Offers robust message filtering to deliver relevant information to downstream applications that perform analytics and compliance.

WebSphere MQ Low Latency Messaging can be used as a key element of low-latency solutions for financial firms or within other industries that require reliable, high-speed data delivery, such as telecommunications, manufacturing, aerospace and

defense. The software is also embedded in the WebSphere Front Office, a scalable, high-performance, low-latency market data delivery platform.

Key prerequisites

Selected levels of:

- Linux®
- Windows®
- Solaris
- HP-UX

Planned availability date

November 30, 2010

Description

WebSphere MQ Low Latency Messaging offers a reliable, high-speed, high-throughput transport for a broad range of messages that enables extremely low latency distribution of information. WebSphere MQ Low Latency Messaging is designed to address the needs of the front-, middle-, and back-offices of financial markets and for other industries with similar needs.

New capabilities now available in WebSphere MQ Low Latency Messaging V2.5 include:

- Enhanced Intelligent self-management

Offered through a topic mapping service introduced in V2.3, this service provides centralized management of topic mapping rules by automatically configuring topics transport destination details to help make it easier for developers to create applications that can take advantage of low latency messaging capabilities.

In this update, the topic mapping service is further enhanced with improved topic subscription management and support for centralized monitoring, making it easier to manage and monitor topics. In addition, the topic mapping service is enhanced with new events for transmitters and receivers, and topic mapping for wildcard topics.

- Enhanced Message Store

Assured delivery is an enhancement to the Low Latency Message Store that was announced in Version 2.2 (for details, refer to Software Announcement [209-120](#), dated May 4, 2009) .

This capability enables applications to confirm that messages were written to disk or other non-volatile storage. In this update, the message store facility is enhanced with support for durable subscriptions. A durable subscription can be used to preserve messages published on a topic while the subscriber is not active. If there is no active subscriber for a durable subscription, WebSphere MQ Low Latency Messaging retains the subscription's messages until they are received by the subscriber, or until they expire, or until the durable subscription is deleted. This enables subscribers to be disconnected from WebSphere MQ Low Latency Messaging for periods of time, and then reconnect and process messages that were published while these were absent.

- Enhanced networking and performance

This update delivers networking enhancements that provide support for bridging between WAN and LAN networks for low-latency messaging between remote sites, including transmit side filtering for remote sites, and automatic topic creation.

It also provides networking enhancements that enable load balanced delivery of messages and provide TCP support via the Reliable Multicast Messaging (RMM) interface offering unified APIs. This update includes enhancements to help increase performance including single threaded transmit.

- Enhanced high availability

WebSphere MQ Low Latency Messaging enables highly available messaging through its Reliable and Consistent Message Streaming (RCMS) capability. RCMS provides a layer of high availability and consistent ordered delivery using the high-performance transport fabric offered by WebSphere MQ Low Latency Messaging. RCMS utilizes Reliable Multicast Messaging (RMM), which provides high-delivery performance, reliability, late joiner support, congestion and traffic control.

RCMS defines the concept of a tier, which consists of a group of components (tier members) that are replicas of each other. Each replica executes the application logic as if it were the only component. RCMS connects the tier members and ensures availability in the case of a failure. The application can define the level of redundancy it wants to use; with X tier members running, up to X-1 members can fail and the application will continue to function. RCMS detects component failure and migrates the data stream to a backup member without message loss.

This update extends support for high availability, enabling recovery for scenarios where a total tier fails.

- Extended platform support

This update extends platform coverage to include AIX® for a subset of the core product functionality. For details, refer to the [Specified operating environment](#) section.

Accessibility by people with disabilities

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Section 508 of the U.S. Rehabilitation Act

WebSphere MQ Low Latency Messaging is capable as of November 30, 2010, when used in accordance with IBM's associated 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.

Product positioning

WebSphere MQ Low Latency Messaging is positioned as a member of the MQ family of messaging transports, which provides a messaging backbone with a range of capabilities for the enterprise, both inter- and intracompany. The objective of the MQ family is to offer a comprehensive suite of seamless, interconnected transport protocols and quality-of-service levels.

WebSphere MQ Low Latency Messaging is highly optimized for the high-volume, low-latency requirements of financial market firms. Applications include the high-speed delivery of market, transactional, reference, and event data in or between front-, middle-, and back-office. With RCMS with single acknowledgment and multiple multicast reliability, WebSphere MQ Low Latency Messaging offers a store and forward form of assured delivery, in contrast to the queuing style of assured delivery offered by WebSphere MQ.

In addition to financial markets, WebSphere MQ Low Latency Messaging is potentially suitable for military, transportation, chemical and petroleum processing, multimedia, or other industries that require high-volume, low-latency, reliable message delivery.

Program number

Program Name	Program number
IBM WebSphere MQ Low Latency Messaging V2.5.0	5724-T21

Offering Information

Product information is available via the Offering Information website

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

Also, visit the Passport Advantage® website

<http://www.ibm.com/software/passportadvantage>

Publications

No publications are shipped with this product.

Technical information

Specified operating environment

Hardware requirements

Minimum requirements are listed. The actual requirements for your system may be greater depending on the complexity of your specific environment, latency, throughput, and data requirements.

Additional hardware that may be required based on capacity requirements:

- CPUs (processors or multicore processors)
- Memory
- Servers (for added capacity or redundancy)
- Disks

Gigabit network adapters and routers are required for high-speed transport. Native InfiniBand and IP over InfiniBand are also supported.

Processor requirements

- Processor
 - AMD or Intel® x86 architecture 32- or 64-bit
 - Solaris UltraSPARC
 - PowerPC® with Linux
 - Intel Itanium® IA64 processor with HP-UX
 - IBM System z® z9™ or z10™ with Linux
- One processor, with a minimum speed of 2.0 GHz (dual processor or dual core recommended)
- Minimum 300 MB required free disk space for installation
- One or more of the following network adapters:
 - For Ethernet, 1 or 10 Gigabit Ethernet adapters

- For InfiniBand, host channel adapters supported by OFED-1.3 or later
- For the Low Latency Message Store feature, enough disk space to hold the messages that are to be stored, and a fast enough disk system to support the rate of messages to be stored

Software requirements

Operating system

For RMM and RUM over Ethernet, RCMS, and IPv6, one of the following operating system platforms:

- Red Hat Enterprise Linux 4 (x86 or x86-64)
- Red Hat Enterprise Linux 5 (x86, x86-64, ppc64, z9, or z10)¹
- Red Hat Enterprise MRG 1.1 (x86 or x86-64)
- SUSE Enterprise Linux 10 (x86, x86-64, z9, or z10¹)
- SUSE Enterprise Linux 11 (x86, x86-64, or ppc64)
- SUSE Linux Enterprise Real Time Extension 10 (x86, x86-64)
- Microsoft® Windows 7 (x86 or x64)
- Microsoft Windows XP SP2 and above (x86 or x64)
- Microsoft Windows Server 2003 SP1 and above (x86 or x64)
- Microsoft Windows Server 2003 R2 (x86 or x64)
- Microsoft Windows Vista (x86 or x64)
- Microsoft Windows Server 2008 (x86 or x64)
- Microsoft Windows Server 2008 R2 (x86 or x64)
- Solaris 10 UltraSPARC (32- or 64-bit)
- Solaris 10 (x86 or x86-64)
- AIX 5.3 (32- or 64-bit)
- AIX 6.1 (32- or 64-bit)
- HP-UX 11i v2²

1 RCMS and IPv6 are not supported on Linux on System z.

2 RCMS, and IPv6 are not supported on HP-UX.

For the Low Latency Coordination Manager and Low Latency Message Store, one of the following operating system platforms:

- Red Hat Enterprise Linux 4 (x86 or x86-64)
- Red Hat Enterprise Linux 5 (x86, x86-64, or ppc64)
- Red Hat Enterprise MRG 1.1 (x86 or x86-64)
- SUSE Enterprise Linux 10 (x86 or x86-64)
- SUSE Enterprise Linux 11 (x86, x86-64, or ppc64)
- SUSE Linux Enterprise Real Time Extension 10 (x86, x86-64)
- Microsoft Windows XP SP2 and above (x86 or x64)
- Microsoft Windows 7 (x86 or x64)
- Microsoft Windows Server 2003 SP1 and above (x86 or x64)
- Microsoft Windows Vista (x86 or x64)
- Microsoft Windows Server 2008 (x86 or x64)
- Microsoft Windows Server 2008 R2 (x86 or x64)
- Solaris 10 UltraSPARC (32- or 64-bit)
- Solaris 10 (x86 or x86-64)

For RMM and RUM over Native InfiniBand, shared memory transport, and RCMS split brain feature, one of the following operating system platforms:

- Red Hat Enterprise Linux 4 (x86 or x86-64)
- Red Hat Enterprise Linux 5 (x86, x86-64, or ppc64)
- Red Hat Enterprise MRG 1.1 (x86 or x86-64)
- SUSE Linux Enterprise 10 (x86 or x86-64)
- SUSE Linux Enterprise 11 (x86, x86-64, or ppc64)
- SUSE Linux Enterprise Real Time Extension 10 (x86, x86-64)

Run-time requirements

- C and C++ applications -- Windows platform: Microsoft Visual C++ 2005 SP1 Redistributable Package (shipped)
- Java™ applications
 - Linux on x86 platform: IBM JRE 5.0 (shipped) or Sun Java SE 5 or 6
 - Linux on IBM system p or system z, or HP-UX: IBM JRE 5.0 (shipped)
 - Solaris platform Sun Java SE 5 or 6
 - Windows platform
 - IBM JRE 5.0 (shipped) or Sun Java SE 5 or 6
 - Microsoft Visual C++ 2005 SP1 Redistributable Package (shipped)
- .NET applications -- Windows platform: Microsoft Visual C++ 2005 SP1 Redistributable Package (shipped), with a prerequisite of Microsoft .Net Framework 2.0

InfiniBand runtime requirements

- OpenFabrics Enterprise Distribution (OFED) V1.3, or later

Development system software requirements

- C and C++ applications
 - Windows platform -- Microsoft Visual Studio 8.0 or 9.0 (32- or 64-bit), on one of the following:
 - Microsoft Windows XP (SP2+), or
 - Microsoft Windows 7, or
 - Windows Server 2003 (SP1+), or
 - Microsoft Windows Vista, or
 - Microsoft Windows 2008
 - Linux platform
 - GCC 3.4.3 or GCC 4.1.0 (32- or 64-bit) on Red Hat Enterprise Linux Advanced Server 4, or
 - GCC 4.1.2 (32- or 64-bit) on Red Hat Enterprise Linux Server 5, or
 - GCC 4.1.0 (32- or 64-bit) on SuSE Linux Enterprise Server 10, or
 - GCC 4.3.2 (32- or 64-bit) on SuSE Linux Enterprise Server 11, or
 - GCC 4.1.2 (64-bit) on SuSE Linux Enterprise Server 10 on IBM System p® or System z
 - GCC 4.1.2 (64-bit) on Red Hat Enterprise Linux Server 5 on IBM System p or System z
 - Solaris platform: Sun Studio 11 (32- or 64-bit) on Solaris 10 (SPARC)
 - HP/UX platform: HP C/aC++ for HP Integrity servers (32- or 64-bit) on HP-UX 11i v2
- Java applications
 - Linux platform: IBM SDK for Java 5.0 (shipped) or Sun JDK 5 or 6

- Windows platform: IBM SDK for Java 5.0 (shipped) or Sun JDK 5 or 6
- Solaris platform: Sun JDK 5 or 6
- HP/UX platform: IBM SDK for Java 5.0 (shipped)
- .NET applications -- Windows platform: Microsoft Visual Studio 8.0 or 9.0 and Microsoft .NET Framework 2.0
- AIX XLC C/C++ v10.1 on AIX 5.3 or AIX 6.1

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Limitations

For additional information, refer to [Usage restriction](#) in the [Terms and conditions](#) section of this announcement, or to the license information document that is available on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

Performance considerations

WebSphere MQ Low Latency Messaging is a scalable product. Performance depends on the complexity of the specific environment, volume of data traffic, and the data object size. The stated performance numbers are based on measurements using standard IBM benchmarks in a controlled environment. The actual throughput that any application will experience may vary depending upon considerations such as message size, transmission rate, hardware platform, and network configuration. Therefore, no assurance can be given that an individual application will achieve the throughput or latency stated here.

Customers should conduct their own testing. For more detailed performance information, consult your IBM representative.

Planning information

Customer responsibilities

IBM Services are available to assist in the installation, design, implementation, and maintenance of WebSphere MQ Low Latency Messaging. The following skills are required for implementation of WebSphere MQ Low Latency Messaging:

- Networking
- C, Java, and/or .NET programming
- Thorough understanding of the WebSphere MQ Low Latency Messaging

Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express®. Product upgrades and technical support are provided by the Software Subscription and Support (also referred to as Software Maintenance) offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software, and technical support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available.

Packaging

WebSphere MQ Low Latency Messaging is distributed as a single package containing:

- Quick Start CD, which includes a readme file, quick start guide, and installation and configuration guide
- IBM program package on CD media
- Program Directory
- Proof of Entitlement
- IBM International Program License Agreement (IPLA)
- License Information

Security, auditability, and control

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 Software 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. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

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

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Product group: WebSphere

Product Identifier	Description	(PID)
WebSphere MQ Low Latency Messaging		5724-T21

Product category: Application Integration Middleware Other

Charge metric

WebSphere MQ Low Latency Messaging:

Program name	PID number	Charge unit description
IBM WebSphere MQ LLM for Linux on System z Non-Production Environment	5724-T21	Per PVU(3)
IBM WebSphere MQ Low Latency Message Store	5724-T21	Per PVU
IBM WebSphere MQ Low Latency Message Store for Non-Production Environment	5724-T21	Per PVU
IBM WebSphere MQ Low Latency	5724-T21	Per PVU

Messaging

IBM WebSphere MQ Low Latency Messaging	5724-T21	Per Client Device
IBM WebSphere MQ Low Latency Messaging	5724-T21	Per PVU for Linux on System z
IBM WebSphere MQ Low Latency Messaging for Non-Production Environment	5724-T21	Per Client Device
IBM WebSphere MQ Low Latency Messaging for Non-Production Environment	5724-T21	Per PVU

(3) Processor Value Unit

Charge metrics definitions Client Device

Client Device is a unit of measure by which the program can be licensed. A Client Device is a single user computing device or special purpose sensor or telemetry device that requests the execution of or receives for execution a set of commands, procedures, or applications from or provides data to another computer system that is typically referred to as a server or is otherwise managed by the server. Multiple Client Devices may share access to a common server. A Client Device may have some processing capability or be programmable to allow a user to do work.

Examples include, but are not limited to actuators, appliances, automated teller machines, automatic meter readers, cash registers, disk drives, desktop computers, kiosks, notebook computers, personal digital assistant, point-of-sale terminals, sensors, smart meters, tape drives, and technical workstations.

Licensee must obtain entitlements for every Client Device which runs, provides data to, uses services provided by, or otherwise accesses the program and for every other computer or server on which the program is installed.

Processor Value Unit

Processor Value Unit (PVU) is a unit of measure by which the program can be licensed. The number of PVU entitlements required is based on the processor technology (defined within the PVU Table by Processor Value, Brand, Type and Model Number at http://www.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html) and the number of processors made available to the program. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip. A dual-core processor chip, for example, has two processor cores.

Licensee can deploy the program using either Full Capacity licensing or Virtualization Capacity (Sub-Capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (see webpage below). If using Full Capacity licensing, Licensee must obtain PVU entitlements sufficient to cover all activated processor cores⁴ in the physical hardware environment made available to or managed by the program, except for those servers from which the program has been permanently removed. If using Virtualization Capacity licensing, Licensee must obtain entitlements sufficient to cover all activated processor cores made available to or managed by the program, as defined according to the Virtualization Capacity License Counting Rules at http://www.ibm.com/software/lotus/passportadvantage/Counting_Software_licenses_using_specific_virtualization_technologies.html)

⁴ An Activated processor core is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions.

Notes

Some programs may require licenses for the program and what is being managed. In that case, the following applies: In addition to the entitlements required for the program directly, Licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.

Some programs may be licensed on a managed basis only. In that case, the following applies: Instead of the entitlements required for the program directly, Licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.

A few programs on an exception basis may be licensed on a referenced basis. In that case, the following applies: Rather than obtaining entitlements for the activated processor cores available to the program, Licensee must obtain PVU entitlements for this program sufficient to cover the environment made available to the Referenced program as if the program itself were executing everywhere the Referenced program was executing, independent of the basis on which the Referenced program is licensed.

Express and Workgroup programs may be licensed with maximum use terms. In that case, the following applies: The maximum authorized use terms and conditions for PVU licensed IBM Express and Middleware Programs can be found in the *IBM Express and Middleware Licensing Guide*.

Passport Advantage program licenses

There is no change to the license part numbers announced with IBM WebSphere MQ Low Latency Messaging V2.4. Refer to Software Announcement [210-147](#), dated April 27, 2010.

Passport Advantage trade up

Below is a list of precursor products for which you must have already acquired a license, in order to be eligible to acquire equivalent licenses using the trade-up part numbers.

Precursor product	Trade-up product	Trade-up part number
Qualified competitor license	MQ Low Latency Msg PVU Lic + SW Subscr and Spt 12 mos	D0GA8LL
Qualified competitor license	MQ Low Latency Msg Linux on System z PVU Lic + SW Subscr and Spt 12 mos	D0GA9LL
Qualified competitor license	MQ Low Latency Msg Client Device Lic + SW Subscr and Spt 12 mos	D0GABLL
Qualified competitor license	MQ Low Latency Msg Store PVU Lic + SW Subscr and Spt 12 mos	D0GADLL
Qualified competitor license	MQ Low Latency Msg Non-Prod PVU Lic + SW Subscr and Spt 12 mos	D0GA7LL
Qualified competitor license	MQ Low Latency Msg for Linux on System z Non-Prod PVU Lic + SW Subscr and Spt 12 mos	D0GACLL

Qualified competitor license	MQ Low Latency Msg Client Device Non-Prod Lic + SW Subscr and Spt 12 mos	D0GAALL
Qualified competitor license	MQ Low Latency Msg Store Non-Prod PVU Lic + SW Subscr and Spt 12 mos	D0GAELL

Consult your IBM representative if you have any questions.

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

The IBM WebSphere MQ Low Latency Messaging V2.5 Multiplatform for English Media Pack (BAOZXEN) applies for all editions of IBM WebSphere MQ Low Latency Messaging V2.5.

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information form number

- WebSphere MQ Low Latency Messaging: L-AVIL-88MRNV

The program's License Information will be available for review on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

<http://www.ibm.com/support/handbook>

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Program technical support

This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You 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.

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Volume orders (IVO)

No

Passport Advantage applies

Yes, and through the Passport Advantage website at

<http://www.ibm.com/software/passportadvantage>

Usage restriction

Yes. For information, refer to the License Information document that is available on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/slabd.nsf>

Software Subscription and Support (Software Maintenance) applies

Yes. Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express. Product upgrades and Technical Support are provided by the Software Subscription and Support (Software Maintenance) offering as described

in the Agreements. Product upgrades provide the latest versions and releases to entitled software and Technical Support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support (Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option, if available.

While your Software Subscription and Support (Software Maintenance) is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, 7 days a week. For additional details, consult your *IBM Software Support Handbook* at

<http://www.ibm.com/support/handbook>

Software Subscription and Support (Software Maintenance) does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under the applicable agreements.

For additional information about the International Passport Advantage Agreement and the IBM International Passport Advantage Express Agreement, visit the Passport Advantage website at

<http://www.ibm.com/software/passportadvantage>

Other support

Passport Advantage

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Not applicable.

Prices

For additional information and current prices, contact your local IBM representative.

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit

<http://www.ibm.com/financing>

IBM Global Financing offerings are provided through IBM Credit LLC in the United States, and other IBM subsidiaries and divisions worldwide to qualified commercial

and government customers. Rates are based on a customer's credit rating, financing terms, offering type, equipment type, and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

Financing from IBM Global Financing helps you preserve cash and credit lines, enables more technology acquisition within current budget limits, permits accelerated implementation of economically attractive new technologies, offers payment and term flexibility, and can help match project costs to projected benefits. Financing is available worldwide for credit-qualified customers.

For more financing information, visit

<http://www.ibm.com/financing>

Order now

To order, contact the Americas Call Centers or your local IBM representative, or your IBM Business Partner.

To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

Phone: 800-IBM-CALL (426-2255)
Fax: 800-2IBM-FAX (242-6329)
Internet: callserv@ca.ibm.com
Mail: IBM Teleweb Customer Support
ibm.com® Sales Execution Center, Americas North
3500 Steeles Ave. East, Tower 3/4
Markham, Ontario
Canada
L3R 2Z1

Reference:

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

Trademarks

z9 and z10 are trademarks of IBM Corporation in the United States, other countries, or both.

WebSphere, IBM, AIX, Passport Advantage, PowerPC, System z, System p, Express and ibm.com are registered trademarks of IBM Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Windows and Microsoft are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

Intel and Itanium are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Terms of use

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions,

and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Additional terms of use are located at:

<http://www.ibm.com/legal/us/en/>

For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

<http://www.ibm.com/planetwide/us/>