

IBM MQ V9.1 for Multiplatforms delivers new features and enhancements for robust and secure messaging offering

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Overview

As a new Long Term Support release (LTSR), IBM[®] MQ V9.1 is the follow-on offering to MQ V9.0 LTSR. It is also the next release for clients who use the Continuous Delivery (CD) releases, which follows MQ V9.0.5. MQ V9.0.5 is the final CD release for MQ V9.0 LTSR.

MQ V9.1 includes the features that were previously delivered in the CD releases of MQ V9.0.1 through MQ V9.0.5 along with some minor enhancements.

- MQ Advanced entitlement
 - High availability and Disaster Recovery options with Replicated Data Queue Manager support
 - More flexible packaging and deployment along with enhanced control for MQ Managed File Transfer (MQ MFT)
 - Connectivity to Blockchain with the IBM Bridge to Blockchain now with Hyperledger Composer support
 - Identification of MQ Advanced installs
- New capabilities for both MQ base and MQ Advanced clients
 - Powerful and flexible configuration and operational tooling options with MQ Console and REST API for administration
 - Increased logging options
 - Connectivity to Salesforce with the IBM Bridge to Salesforce
 - REST API for messaging

With the LTSR release, the fixpacks only provide fixes with no new function.

Key prerequisites

MQ V9.1 runs on a variety of operating systems. For container deployments, MQ supports Docker. The MQ Resource Adapter is compatible with application servers that support the Java™ EE 7.0 specification.

For details, see the [Software requirements](#) section.

Planned availability date

Electronic download: July 23, 2018

Media Pack: July 27, 2018

See the [Availability of national languages](#) section for national language availability.

Description

MQ V9.1 delivers features and enhancements beyond those that were available in MQ V9.0. Many of these features were provided in the CD releases for MQ V9.0.1 through MQ V9.0.5. Some of the updates and enhancements are available in:

- The base MQ offering
- The MQ Advanced offering

MQ Advanced new features and enhancements include:

- New High Availability and Disaster Recovery options with Replicated Data Queue Managers

Clients with MQ Advanced V9.1 entitlement on Redhat 7 Linux^(R) x86 systems can take advantage of this new, easy, and powerful high-availability and disaster recovery solution for Linux, called Replicated Data Queue Managers. This capability provides the option for queue managers to be deployed across three nodes with synchronous replication of data between local storage on the nodes. In the case of a queue manager or system failure, the queue manager is automatically started on one of the other nodes.

There is an option for a disaster recovery configuration. Replicated Data Queue Managers configured for disaster recovery are deployed across two nodes and data is replicated either synchronously or asynchronously. This option does not provide automatic failover of queue managers. Manual failover can be initiated when required. Disaster recovery solutions generally use asynchronous replication because they require the data to be transmitted over longer distances, where network latency might be high. The new disaster recovery option, when used with synchronous replication, can be used in environments where any loss of data during failover is unacceptable.

Licensing for use of Replicated Data Queue Managers for both high-availability and disaster recovery scenarios typically requires a combination of MQ Advanced and MQ Advanced High Availability Replica entitlements.

- MFT enhancements

There are multiple functional enhancements to the MFT capabilities of MQ Advanced in the Version 9.1 release.

- MQ Advanced allows businesses to send and receive file data more reliably and securely through the MQ network as MQ messages.
- Revised packaging allows MQ MFT agents to be embedded as a part of another application. To enable this, the agents are available as a zip file with a redistributable license. This enables applications to include the MFT function. That function can be made available within the client or externally. Combined with license changes, MFT agents are not chargeable when connecting to MQ Advanced Queue Managers. This makes MFT agents more useful in many more possible scenarios.
- For diagnosing and reporting problems with MFT transfers, information about the MFT agent status and changes to the behavior of the File Transfer Protocol Bridge alert clients in the case of failures.

- For more flexible deployments of MQ MFT, the logger can be run remotely from the MQ queue manager.
- Additional support for administration through a RESTful API adds the option to list all current MFT transfers and to query the status of MFT agents.

- Connectivity to Blockchain

In this release, MQ adds a bridge to Blockchain. This enables MQ applications to connect through MQ into a blockchain to support Hyperledger Composer. Applications that are connected to the blockchain can send query messages and receive responses. They can also query and update the ledger.

- MQ Advanced identification

Increasing numbers of clients deploy MQ Advanced queue managers in key parts or throughout their infrastructure. Different capabilities and features are available depending on whether a MQ queue manager is MQ Advanced that is entitled or just MQ base that is entitled.

In MQ Advanced V9.1, MQ Advanced queue managers can identify themselves as advanced queue managers. This allows other components such as MQ clients, MQ MFT agents, and MQ Bridge to Blockchain to ensure they connect to a correctly entitled queue manager. This feature also helps clients to identify which queue manager entitlements are installed, MQ Advanced or MQ base.

New functions and enhancements available for both MQ base and MQ Advanced include:

- Monitoring and Administration

MQ V9.1 includes many new features for configuring, monitoring, and administering MQ.

- The MQ Console, which was previously available only in the MQ Appliance, provides a customizable, browser-based tool. It is deployed within an embedded IBM WebSphere[®] Application Server Liberty runtime and enables a simple view of MQ resources. Widgets can be added to the display to show only what the client wants to see and can access. The MQ Explorer remains available as an additional option.

- MQ V9.1 includes a RESTful API for administration. This is designed to provide an additional interface to the existing MQ Script Commands (MQSC) and PCF tools.

The MQ REST API provides an alternative programmable interface. It is designed to allow for new HTTPS-based applications that offer custom tooling to meet the needs of every user, helping to embed IBM MQ administration into popular DevOps and automation tooling.

As more programming becomes reliant on using RESTful APIs, some developers want to use the same approach for sending and receiving messaging data. The MQ REST API also provides a simple means to send and receive messages.

- Use of a single deployment of MQ V9.1 allows that queue manager, which uses the MQ REST API, to be used as a proxy to administer other queue managers on older versions of MQ, that do not offer the MQ REST API.
- Recovery Logging improvements

Recovery from failures makes use of the information that is recorded in the recovery log files. Media recovery re-creates objects from information that is recorded in a linear log. For example, if an object file is inadvertently deleted or becomes unusable for some other reason, media recovery can re-create it. The information in the log required for media recovery of an object is called a media image. Taking these media images on a regular basis to ensure timely recoverability was an administrative burden.

In MQ V9.1, media images can be scheduled automatically by the queue manager. This can improve message throughput. In addition, the queue manager can now be configured to automatically reuse or delete log files that are no longer required for media recovery.

- Syncpoint performance enhancement

Many clients use MQ as a critical part of their infrastructure where the data that is moved must be persisted to ensure it is not lost in the case of failure.

The nature of persistent writes can lead to performance impacts on applications waiting for log writes. This is especially true if the application puts persistent messages to a queue outside of a syncpoint. While it can be recommended to change the application to implement syncpointing, this might be difficult if the application is owned by a third party or when changes and retesting may not be desired. If the queue is locked by an application without syncpointing, other applications that use the same queue can be impacted.

In Version 9.1, this performance impact is reduced without the need to add application syncpointing. Implicit syncpoint support enables persistent message puts outside of syncpoint to perform better when multiple applications are using the same queue. To optimize performance, the default setting is to implicitly put all persistent messages in syncpoint, if two or more applications have a queue open.

- LDAP query options

Many clients use LDAP for user ID administration. Most configurations associate users with groups that use the users' distinguished name. This allows for MQ to query membership of the LDAP group through the distinguished name.

Some configurations associate users with groups that use the users' short name. In Version 9.1, MQ can query LDAP by using short names for group members.

- Salesforce bridge

Events in Salesforce can be published into MQ through the deployment of a bridge deployed on a Linux system. The bridge can also publish MQ messages into the Salesforce system.

- Enabling Advanced Message Queuing Protocol (AMQP) Service by default

MQ is widely used to exchange data as messages between applications by using the MQ wire protocol to ensure efficient, secure, and reliable connections between applications, queue managers, and servers. This protocol provides a wide range of qualities of service and supports many different programming languages. MQ supports an alternative protocol, AMQP V1.0, to allow use of the MQ Light API. This may benefit applications that tend to be simpler and require reduced qualities of service. While support for AMQP has been available for years, clients had to turn on the AMQP listener.

In the MQ V9.1 release, the AMQP listener service is now enabled by default on queue managers. This simplifies the use of the service in support of suitable applications.

- REST API for messaging

As more programming becomes reliant on using RESTful APIs, some developers need to use the same approach for sending and receiving messaging data. In MQ V9.1, there is support for using the MQ REST API for point-to-point messaging.

Functional deprecations and removals

- The MQ classes for Java package `com.ibm.mq.pcf` is now deprecated. Any new code developed for PCF operations under Java should use the `com.ibm.mq.headers.pcf` package. Existing code should be migrated to this package when it is convenient to do so.
- Transport Layer Security (TLS) 1.0 is disabled by default for MQ V9.1. TLS 1.2 should be used. TLS 1.0 will be removed in a future release.
- The support for connecting to MQ by using the MQ Multicast protocol is deprecated in this release. No further enhancements are planned.

- The MQ transport for SOAP and MQ HTTP bridge components were deprecated in earlier releases of the product. These components are removed from MQ V9.1.
- Red-hat Package Manager (RPM) support on Ubuntu is removed in MQ V9.1. MQ install images are now provided as native .deb packages for Ubuntu.
- Microsoft™ Internet Explorer 11 browser support is removed. The Microsoft Edge browser is now supported by the MQ Console.
- Support for the HP-UX operating system for all MQ components, including server and clients, is removed.

Section 508 of the US Rehabilitation Act

IBM MQ for Multiplatforms V9.1 is capable as of July 23, 2018, 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 Accessibility Conformance Statement can be requested on the [Product accessibility information](#) website.

Statement of general direction

IBM MQ on IBM Cloud™, which has been available since March 2018, and aligns with MQ V9.0.5. MQ on IBM Cloud, intends to follow continuous delivery release cycles for future MQ updates.

IBM intends to deliver updates to MQ both as continuous delivery updates and Long Term Support releases.

Function for reporting information of MQ deployments in containers is added. IBM intends to provide the means to use a separate metering tool and the ability to license container deployments that are based on container size and by hours that are deployed.

Statements by IBM regarding its plans, directions, and intent are subject to change or withdrawal without notice at the sole discretion of IBM. Information regarding potential future products is intended to outline general product direction and should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for IBM products remain at the sole discretion of IBM.

Reference information

For more information on MQ for Multiplatforms, see Software Announcement [218-069](#), dated March 13, 2018.

For more information about MQ Appliance, see Software Announcement [218-249](#), dated July 3, 2018.

For more information about MQ Advanced on z/OS^(R) VUE, see Software Announcement [218-213](#), dated July 3, 2018.

For more information about MQ Advanced on z/OS, see Software Announcement [218-252](#), dated July 3, 2018.

Availability of national languages

Description	Availability date	Language
IBM MQ V9.1	July 23, 2018	English, Japanese, Spanish, Korean, French, Traditional Chinese, Simplified Chinese, Polish, German, Hungarian, Russian, Brazilian Portuguese, Italian, Czech

Translation information, if available, can be found at the [Translation Reports](#) website.

Program number

Program number	VRM	Program name
5724-H72	9.1.0	IBM MQ for Multiplatforms

Publications

MQ V9.1 documentation is published in IBM Knowledge Center at [IBM MQ Version 9.1 documentation](#) website, which can be viewed from a web browser with internet access.

Services

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, contact your Lab Services Sales or Delivery Leader.

Technical information

Specified operating environment

Software requirements

The MQ Version 9.1 includes the following support:

- Operating system support for:
 - Microsoft™ Windows™
 - Linux^(R)
 - Solaris
 - AIX^(R)
 - IBM i
 - z/OS
- Cloud support with Docker 1.6, or later and IBM Cloud Private. See the [MQ Container example on the IBM Messaging GitHub community](#) website.
- Programming language support for Java, C, C++ and COBOL with further language binding options that are available on the [IBM Messaging GitHub community](#) website.

Details of the software requirements are included in the [IBM MQ System Requirements](#) website.

Compatibility

Queue managers and clients in the MQ V9.1 offering interoperate with queue managers and clients from current and previous levels of MQ, WebSphere^(R) MQ, or MQSeries^(R).

- The MQ Explorer runs on the Linux x86-64 and Windows platforms.
- The MQ Explorer, which is supplied with MQ V9.1, can use a client connection to connect to any supported level of MQ or WebSphere MQ on any platform.
- MQ Managed File Transfer supports file transfer to and from server and client installations at any level of WebSphere MQ File Transfer Edition.

IBM Electronic Support

The IBM Support Portal is your gateway to technical support. This includes IBM Electronic Support tools and resources, for software and hardware, to help save time and simplify support. The Electronic Support tools can help you find answers to questions, download fixes, troubleshoot, automate data collection, submit and track problems through the Service Request online tool, and build skills. All these tools are made available through your IBM support agreement. Read about the Electronic Support portfolio of tools on the [IBM Electronic Support](#) website.

You can also access the [IBM Support Portal](#) page and the online [Service requests and PMRs](#) tool for more support.

Planning information

Packaging

MQ V9.1 is delivered through the internet as an electronic download. It is also available as a DVD media pack.

Security, auditability, and control

MQ uses the security and auditability features of the host software.

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

Ordering information

For ordering information, consult your IBM representative or authorized IBM Business Partner, or go to the [Passport Advantage^{\(R\)}](#) website.

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

These products may only be sold directly by IBM or by authorized IBM Business Partners for Channel Value Rewards.

More information can be found on the [IBM Channel Value Rewards](#) website.

To locate IBM Business Partners for Channel Value Rewards in your geography for a specific Channel Value Rewards portfolio, go to the [Find a Business Partner](#) page.

Product group: WebSphere

Product: IBM MQ for Multiplatforms (5724-H72)

Product category: MQ Series

Passport Advantage

IBM MQ

Program name/Description	Part number
IBM MQ Per Processor Value Unit (PVU) License + SW S&S 12 Months	D55V1LL
IBM MQ Per Processor Value Unit (PVU) Annual SW S&S Renewal	E0256LL
IBM MQ Per Processor Value Unit (PVU) SW S&S Reinstatement 12 Months	D55V2LL
IBM MQ High Availability Replica Processor Value Unit (PVU) License + SW Subscription & Support 12 Months	D0GGQLL
IBM MQ High Availability Replica Processor Value Unit (PVU) Annual SW Subscription & Support Renewal	E0ALULL
IBM MQ High Availability Replica Processor Value Unit (PVU) SW Subscription & Support Reinstatement 12 Months	D0GGSLL
IBM MQ High Availability Replica Virtual Processor Core Monthly License	D1VAILL
IBM MQ Virtual Processor Core Monthly License	D1RYSLL
IBM MQ Processor Value Unit (PVU) Monthly License	D1D2FLL
IBM MQ High Availability Replica Processor Value Unit (PVU) Monthly License	D193BLL

IBM MQ Advanced

Program name/Description	Part number
IBM MQ Advanced Per Processor Value Unit (PVU) License + SW S&S 12 Months	D1GZULL
IBM MQ Advanced Per Processor Value Unit (PVU) Annual SW S&S Renewal	E0LNALL
IBM MQ Advanced Per Processor Value Unit (PVU) SW S&S Reinstatement 12 Months	D1GZVLL
IBM MQ Advanced High Availability Replica Processor Value Unit (PVU) License + SW S&S 12 Months	D1H5GLL
IBM MQ Advanced High Availability Replica Processor Value Unit (PVU) Annual SW S&S Renewal	E0LNDLL
IBM MQ Advanced High Availability Replica Processor Value Unit (PVU) SW S&S Reinstatement 12 Months	D1H5HLL
IBM MQ Advanced High Availability Replica Virtual Processor Core Monthly License	D1VAKLL
IBM MQ Advanced Virtual Processor Core Monthly License	D1RYWLL

IBM MQ Telemetry

Program name/Description	Part number
IBM MQ Telemetry per Install Annual SW S&S Renewal	E0DRHLL

IBM MQ Advanced Message Security Component

Program name/Description	Part number
IBM MQ Advanced Message Security Component Per PVU Annual SW S&S Renewal	E0DS8LL

Program name/Description	Part number
IBM MQ Advanced Message Security Component High Availability Replica 10 PVUs Annual SW S&S Renewal	E0DS0LL

IBM MQ Managed File Transfer Component

Program name/Description	Part number
IBM MQ Managed File Transfer Service Processor Value Unit (PVU) Annual SW S&S Renewal	E0LNELL
IBM MQ Managed File Transfer Service High Availability Replica 10 PVUs Annual SW S&S Renewal	E0LNKLL
IBM MQ File Transfer Agent Install Annual SW S&S Renewal	E0LNLLL

IBM MQ Advanced for Developers

Program name/Description	Part number
IBM MQ Advanced for Developers Install Annual SW Subscription & Support Renewal 12 Months	E0MZPLL
IBM MQ Advanced for Developers Install License + SW Subscription & Support 12 Months	D1PI3LL
IBM MQ Advanced for Developers Install SW Subscription & Support Reinstatement 12 Months	D1PI4LL

Passport Advantage trade-up

Clients must have previously acquired licenses for the following precursor products to be eligible to acquire equivalent licenses of the trade-up products.

Precursor product	Trade-up product	Trade-up part number
IBM MQ Trade Up License + SW Subscription & Support 12 Months	IBM MQ Advanced Processor Value Unit (PVU)	D1GZWLL
IBM MQ High Availability Replica Processor Value Unit Trade Up License + SW Subscription & Support 12 Months	IBM MQ Advanced High Availability Replica Processor Value Unit (PVU)	D1H5ILL
IBM MQ for Linux on z Systems ^(R) Processor Value Unit (PVU) Trade Up License + SW Subscription & Support 12 Months	IBM MQ Advanced for Linux on z Systems Processor Value Unit (PVU)	D1H00LL
IBM MQ High Availability Replica for Linux on z Systems PVU Trade Up License + SW Subscription & Support 12 Months	IBM MQ Advanced High Availability Replica for Linux on z Systems Processor Value Unit (PVU)	D1H6ELL

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.

Media packs description	Part number
IBM MQ V9.1 for Multiplatform Multilingual Media Pack	BA1AQML

Cross-platform product for use on IBM Z^(R) Integrated Facility for Linux (IFL) engines

Order the part numbers that follow when the product is intended to run on the Linux operating system on IBM Z IFL engines. If the product is not intended

to run in these environments, order from the other set of part numbers in this announcement. This set of part numbers provides the identical supply and authorization as the other set in this announcement.

IBM MQ

Program name/Description	Part number
IBM MQ for Linux on z Systems Processor Value Unit (PVU) License + SW Subscription & Support 12 Months	D55V4LL
IBM MQ for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal	E0257LL
IBM MQ for Linux on z Systems Processor Value Unit (PVU) SW Subscription & Support Reinstatement 12 Months	D55V5LL
IBM MQ High Availability Replica for Linux on z Systems Processor Value Unit (PVU) License + SW Subscription & Support 12 Months	D0GGNLL
IBM MQ High Availability Replica for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal	E0ALTLL
IBM MQ High Availability Replica for Linux on z Systems Processor Value Unit (PVU) SW Subscription & Support Reinstatement 12 Months	D0GGPLL
MQ High Availability Replica for Linux on z Systems Processor Value Unit (PVU) Monthly License	D193ALL
IBM MQ for Linux on z Systems Processor Value Unit (PVU) Monthly License	D1938LL
IBM MQ High Availability Replica Linux on z Systems Virtual Processor Core Monthly License	D1VAJLL
IBM MQ Linux on z Systems Virtual Processor Core Monthly License	D1RYTLL

IBM MQ Managed File Transfer

Program name/Description	Part number
IBM MQ File Transfer Agent for Linux on z Systems Install Annual SW Subscription & Support Renewal 12 Months	E0LNGLL
IBM MQ Managed File Transfer Service for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal 12 Months	E0LNCLL
IBM MQ Managed File Transfer Service High Availability Replica for Linux on z Systems 10 Processor Value Unit (PVU) Annual SW Subscription & Support Renewal 12 Months	E0LNJLL

IBM MQ Advanced

Program name/Description	Part number
IBM MQ Advanced for Linux on z Systems Processor Value Unit (PVU) License + SW Subscription & Support 12 Months	D1GZYLL
IBM MQ Advanced for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal 12 Months	E0LNBLL
IBM MQ Advanced for Linux on z Systems Processor Value Unit (PVU) SW	D1GZZLL

Program name/Description	Part number
Subscription & Support Reinstatement 12 Months	
IBM MQ Advanced High Availability Replica for Linux on z Systems Processor Value Unit (PVU) License + SW Subscription & Support 12 Months	D1H6BLL
IBM MQ Advanced High Availability Replica for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal 12 Months	E0LNILL
IBM MQ Advanced High Availability Replica for Linux on z Systems Processor Value Unit (PVU) SW Subscription & Support Reinstatement 12 Months	D1H6CLL
IBM MQ Advanced High Availability Replica Linux on z Systems Virtual Processor Core Monthly License	D1VALLL
IBM MQ Advanced Linux on z Systems Virtual Processor Core Monthly License	D1RYZLL

IBM MQ Advanced Message Security

Program name/Description	Part number
IBM MQ Advanced Message Security Component for Linux on z Systems Processor Value Unit (PVU) Annual SW Subscription & Support Renewal	E0DS7LL
IBM MQ Advanced Message Security Component High Availability Replica for Linux on z Systems 10 Processor Value Units (PVUs) Annual SW Subscription & Support Renewal	E0DRZLL

IBM MQ for Developers

Program name/Description	Part number
IBM MQ Advanced for Developers Linux on z Systems Install Annual SW Subscription & Support Renewal 12 Months	E0MZQLL
IBM MQ Advanced for Developers Linux on z Systems Install License + SW Subscription & Support 12 Months	D1PI7LL
IBM MQ Advanced for Developers Linux on z Systems Install SW Subscription & Support Reinstatement 12 Months	D1PI8LL

Charge metric

Program name	Part number or PID number	Charge metric
IBM MQ for Multiplatforms	5724-H72	Processor Value Unit (PVU), Install, Virtual Processor Core

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 [Processor Value Unit \(PVU\) licensing for Distributed Software](#) website) 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 web page below). If using full capacity licensing, Licensee must obtain PVU entitlements sufficient to cover all activated processor cores* 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](#) website.

* 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.

Install

Install is a unit of measure by which the Program can be licensed. An Install is an installed copy of the Program on a physical or virtual disk made available to be executed on a computer. Licensee must obtain an entitlement for each Install of the Program.

Virtual Processor Core

Virtual Processor Core is a unit of measure by which the Program can be licensed. A Physical Server is a physical computer that is comprised of processing units, memory, and input/output capabilities and that executes requested procedures, commands, or applications for one or more users or client devices. Where racks, blade enclosures, or other similar equipment is being employed, each separable physical device (for example, a blade or a rack-mounted device) that has the required components is considered itself a separate Physical Server. A Virtual Server is either a virtual computer created by partitioning the resources available to a Physical Server or an unpartitioned Physical Server. A Processor Core (commonly called a processor or CPU) is a functional unit within a computing device that interprets and executes instructions. A Processor Core consists of at least an instruction control unit, and one or more arithmetic or logic unit. A Virtual Processor Core is a Processor Core in an unpartitioned Physical Server, or a virtual core assigned to a Virtual Server. Licensee must obtain entitlement for each Virtual Processor Core made available to the Program.

Note: Some programs may require licenses for the Program of the lesser of the sum of all virtual cores or all physical cores. In that case, the following applies. For each Physical Server, Licensee must have sufficient entitlements for the lesser of 1) the sum of all available Virtual Processor Cores on all Virtual Servers made available to the Program or 2) all available Processor Cores on the Physical Server.

Processor Value Unit (PVU) sub-capacity licensing

This software product is eligible for sub-capacity licensing. Clients must obtain Proofs of Entitlement (PoEs) for the maximum processor core capacity available to an eligible sub-capacity product when deployed in an eligible virtualization environment. This is also referred to as sub-capacity or virtualization capacity licensing.

Clients must use the IBM License Metric Tool (ILMT) unless they meet the exceptions described on the [ILMT](#) website.

For information regarding PVU sub-capacity licensing, see the [Passport Advantage Virtualization Capacity \(Sub-capacity\) Licensing](#) website.

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 through Passport Advantage.

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.

Software Maintenance

Licenses under the IBM Program License Agreement (IPLA) provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option, if available. Two charges apply: 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 number

Program name	License Information number
IBM MQ V9.1	L-APIG-AV6GTE
IBM MQ Advanced V9.1	L-APIG-AV6GV5
IBM MQ Advanced for Developers V9.1	L-APIG-AV6HPW
IBM MQ Managed File Transfer Service V9.1	L-APIG-AV6HR2
IBM MQ Managed File Transfer Agent V9.1	L-APIG-AV6HR2
IBM MQ Advanced Message Security V9.1	L-APIG-AV6HS6
IBM MQ Telemetry V9.1	L-APIG-AV6HT5
IBM MQ Advanced High Availability Replica V9.1	L-APIG-AV6HMB
IBM MQ Managed File Transfer Service High Availability Replica V9.1	L-APIG-AV6HU3
IBM MQ Advanced Message Security High Availability Replica V9.1	L-APIG-AV6HU3
IBM MQ High Availability Replica V9.1	L-APIG-AV6HUX

See the [License Information documents](#) page on the IBM Software License Agreement website for more information.

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, see the [IBM Software Support Handbook](#).

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

Program technical support

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect.

This technical support allows you to obtain assistance (by 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 versions, releases, and updates (CD releases, Long Term Support Releases or fixes) of the program. You will be notified, through an announcement letter, of discontinuance of support with six 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.

Defect support for a CD release is available for 12 months from the availability of the release or while it remains one of the two most recent CD releases, whichever is longer.

For additional information on the IBM Software Support Lifecycle Policy, see the [IBM Software Support Lifecycle Policy](#) website.

MQ V9.1 is a LTSR and provides predictable support through iFixes and fixpacks for a minimum period of five years from the general availability date. A minimum three-year extension of support is available for an additional 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, information is available on the [Passport Advantage and Passport Advantage Express[®]](#) website.

Usage restrictions

This offering is subject to usage restrictions. See these License Information documents for details.

Program name	License Information number
IBM MQ V9.1	L-APIG-AV6GTE
IBM MQ Advanced V9.1	L-APIG-AV6GV5
IBM MQ Advanced for Developers V9.1	L-APIG-AV6HPW
IBM MQ Managed File Transfer Service V9.1	L-APIG-AV6HR2
IBM MQ Managed File Transfer Agent V9.1	L-APIG-AV6HR2
IBM MQ Advanced Message Security V9.1	L-APIG-AV6HS6
IBM MQ Telemetry V9.1	L-APIG-AV6HT5
IBM MQ Advanced High Availability Replica V9.1	L-APIG-AV6HMB
IBM MQ Managed File Transfer Service High Availability Replica V9.1	L-APIG-AV6HU3
IBM MQ Advanced Message Security High Availability Replica V9.1	L-APIG-AV6HU3
IBM MQ High Availability Replica V9.1	L-APIG-AV6HUX

Software Subscription and Support applies

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IBM Operational Support Services - SoftwareXcel

No

Variable charges apply

No

Educational allowance available

Not applicable.

Statement of good security practices

IT system security involves protecting systems and information through intrusion prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a regulatory compliant, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

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Now integrated into the base operating system of AIX V5.3, AIX V6.1, and AIX V7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type `smitty esa_main`, and select Configure Electronic Service Agent. In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, go to the [IBM Support](#) website.

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