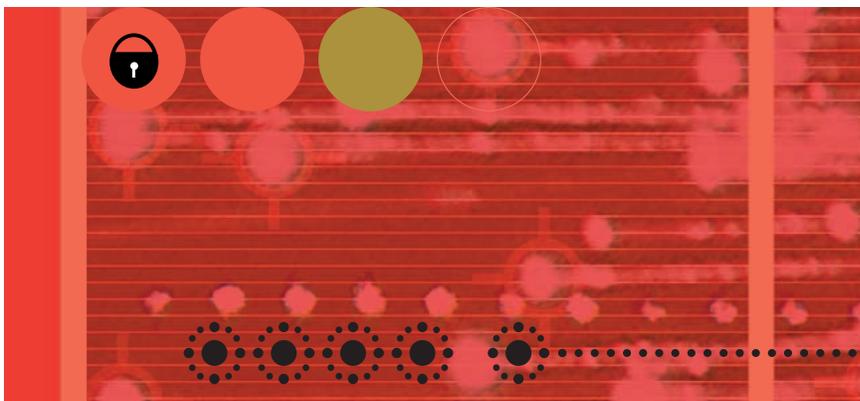


Secure WebSphere MQ applications with IBM Tivoli Access Manager for Business Integration



Business process integration

The IBM® WebSphere® MQ family of business integration software products helps business applications exchange information across different operating system platforms by sending and receiving data as messages. Large and small companies rely on it to process their critical line-of-business transactions involving everything from monetary transfers to human resources record processing to inventory management.

WebSphere MQ (previously known as MQSeries®) provides delivery of messages across more than 35 different platforms, making it an ideal messaging middleware for

you to rely on to help reduce your application-integration costs. It helps enable the delivery of messages, deals with communications protocols and handles recovery if system problems occur.

WebSphere MQ features time-independent processing so that your message can be dealt with even if a recipient is temporarily unavailable. Customers worldwide use it extensively to conduct critical line-of-business transactions.

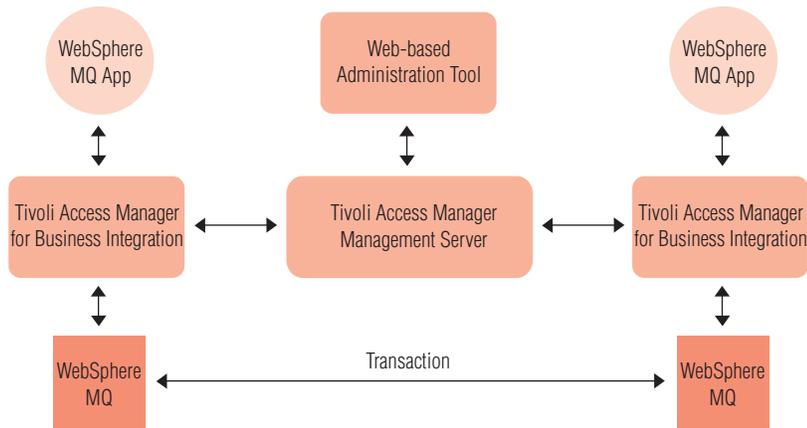
Securing WebSphere MQ-based applications

Although WebSphere MQ provides some security services out of the box,

they might not meet all the security requirements customers have, especially if the data being processed requires end-to-end data integrity and confidentiality. To address these needs, Tivoli® software from IBM offers a security management solution to help meet these extended WebSphere MQ security needs: IBM Tivoli Access Manager for Business Integration. This IBM security solution can provide you with the security services you need to protect your most sensitive message data, both within your company and between your company and customers or business partners.

Application-level security without application changes

Tivoli Access Manager for Business Integration is a value-added security management solution that greatly enhances the native security environment of WebSphere MQ. It upgrades WebSphere MQ data protection to provide application-level data protection for existing MQ-based applications, without the need to modify or even recompile them. This is critical if you need to



Tivoli Access Manager for Business Integration controls access to WebSphere MQ resources and provides message protection by intercepting WebSphere MQ application requests. It then enforces the security policies you specify, and only authorized requests get passed to WebSphere MQ. Messages are signed or signed and encrypted based on the policy you set.

comply with regulations, such as the Health Insurance Portability and Accountability Act, or if you use WebSphere MQ to process other types of sensitive data, such as financial transactions.

Tivoli Access Manager for Business Integration also allows you to consolidate the administration of put and get access control permissions on queues across your enterprise. These security policies can be administered remotely by using a Web-based tool that replaces the need for administrators to visit each physical system. Tivoli Access Manager for Business Integration also supports the extended WebSphere MQ family, including both WebSphere MQ Integrator and MQSeries Workflow.

WebSphere MQ security overview

Basic security features included with WebSphere MQ:

- *Application authentication based on operating system identity of local process*

- *Authorization administered locally at each server*
- *Message data confidentiality and integrity enforced while messages move between systems using an SSL connection—message data not secured while a message is resident on a queue*

Additional security for WebSphere MQ available with Tivoli Access Manager for Business Integration:

- *Provides application-level data protection, securing each message before it's passed on to WebSphere MQ for processing, leaving no gaps of protection from the originating application to the target application*
- *Can associate a unique public/private key pair with individual applications, allowing the tracking of an individual message back to the application that originated it, not just to the server*
- *Provides message-level audit function, and generates audit records that can demonstrate specific compliance with the defined security policy*

- *Provides centralized administration of security policies across multiple servers*
- *Delivers application-level security without requiring changes to existing applications*

Tivoli Access Manager for Business Integration at work

Tivoli Access Manager for Business Integration provides an interceptor process that sits between a WebSphere MQ application and WebSphere MQ itself. Calls made by the application to WebSphere MQ for services are captured by the interceptor, which determines if the request is authorized and if the data in the transaction should be digitally signed, signed and encrypted or have no data protection applied before the message is placed in the queue requested.

The interceptor receives policy information from a master policy server that is managed by a Web-based administration tool. If you are using IBM Tivoli Access Manager for

e-business or IBM Tivoli Access Manager for Operating Systems, a single copy of the master policy server can be shared among all three products. Administrators can then manage policy for queues, both WebSphere MQ objects and Web objects and operating system resources, from their browser using a single instance of the administration tool.

Implement high WebSphere MQ security

Tivoli Access Manager for Business Integration can provide application-level data protection for WebSphere MQ without requiring application coding changes or re-linking. Application-level data protection secures messages from being read or modified when they are sitting in a queue, as well as when they are in transit from one system to another. Tivoli Access Manager for Business Integration also allows you

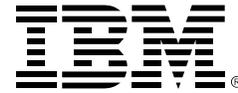
to centrally define which specific queue manager or queues an application can put messages to or get messages from, and then it enforces that policy. It is also compatible with WebSphere MQ Integrator, Version 2.1 and MQSeries Workflow, Version 3.3.2 when running on distributed servers.

Tivoli Access Manager for Business Integration allows you to associate a set of strong public/private key-based credentials with a specific application. It then uses these credentials to digitally sign message data, allowing later verification that the message has not been tampered with while being processed by WebSphere MQ or while in transmission from server to server. Tivoli Access Manager for Business Integration supports credentials issued by popular Certificate Authorities, including those from VeriSign, Entrust, Baltimore, Netscape and IBM. Credentials generated by

other Certificate Authorities that follow the X.509, Version 3 standard may also be compatible.

The overall value of Tivoli Access Manager for Business Integration:

- *Upgrades the base security services in WebSphere MQ to protect data both as it sits in a queue and as it flows across the network*
- *Implements application-level security without the need to write complex security code, helping accelerate deployment and reduce development costs*
- *Manages security of WebSphere MQ resources across a network of heterogeneous systems*
- *Allows central definition and enforcement of security policies, including data protection and queue put and get permissions*
- *Shares a common set of core services with the other members of the Tivoli Access Manager family*



IBM software integrated solutions

Tivoli Access Manager for Business Integration supports a wealth of other offerings from IBM software. IBM software solutions can give you the power to achieve your priority business and IT goals.

- *DB2® software helps you leverage information with solutions for data enablement, data management and data distribution.*
- *Lotus® software helps your staff be productive with solutions for authoring, managing, communicating and sharing knowledge.*
- *Tivoli software helps you manage the technology that runs your e-business infrastructure.*
- *WebSphere software helps you extend your existing business-critical processes to the Web.*

To learn more

For information on Tivoli Access Manager for Business Integration and integrated solutions from IBM, contact your IBM sales representative or visit tivoli.com/security

Tivoli software from IBM

An integral part of the comprehensive IBM e-business infrastructure solution, Tivoli technology management software helps traditional enterprises, emerging e-businesses and Internet businesses worldwide maximize their existing and future technology investments. Backed by world-class IBM services, support and research, Tivoli software provides a seamlessly integrated and flexible e-business infrastructure management solution that uses robust security to connect employees, business partners and customers.

© Copyright IBM Corporation 2002

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

Printed in the United States of America
09-02
All Rights Reserved

IBM, the e-business logo, the IBM logo, DB2, MQSeries, Tivoli and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries or both.

Lotus is a registered trademark of Lotus Development Corporation and/or IBM Corporation.

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

The Tivoli home page on the Internet can be found at ibm.com/tivoli

The IBM home page on the Internet can be found at ibm.com

Printed in the United States on recycled paper containing 10% recovered post-consumer fiber.