

BlackBerry Mobile Data System dramatically reduces the amount of time and resources required to develop and deploy wireless applications for mobile workers.

BlackBerry Mobile Data System

A Development Framework for Wirelessly Extending Applications



BlackBerry® Mobile Data System™ (BlackBerry MDS™) is an optimized application development framework for the BlackBerry Enterprise Solution.

BlackBerry MDS provides organizations with:

Everything needed for building and deploying applications for the BlackBerry Enterprise Solution™

- Provides multiple development options and developer tools so organizations can choose the methods that best suit their needs
- Uses standards-based mechanisms and protocols to simplify integration with applications and systems

Simplified application lifecycle management to reduce administrative overhead

- Centralizes deployment and management of applications using familiar BlackBerry Enterprise Server™ administration tools
- Over-the-air (OTA) application installation, deployment, upgrade and deletion capabilities

Low total cost of ownership (TCO)

- Protects IT investments by ensuring technologies and systems are reusable
- Saves time and money by reducing development time and complexity
- Optimizes wireless data transmissions for increased performance and lower operating costs

“Extending applications and information with BlackBerry MDS is easier and more secure than any competing solution.”

*Brad Anderson,
Windows Systems Administrator,
Energen*

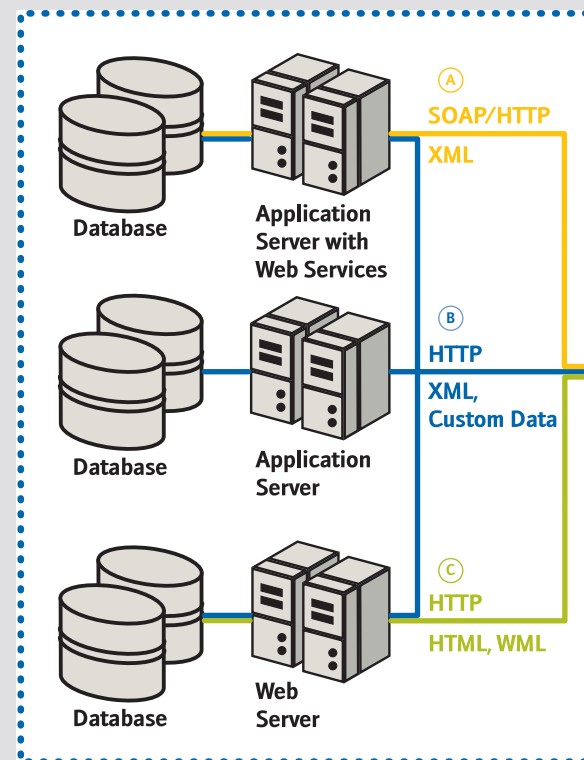
BlackBerry MDS Architecture

BlackBerry MDS provides the essential components for creating, deploying, and managing BlackBerry Enterprise Solution. It delivers access to wireless applications and an advanced security model used for BlackBerry email.

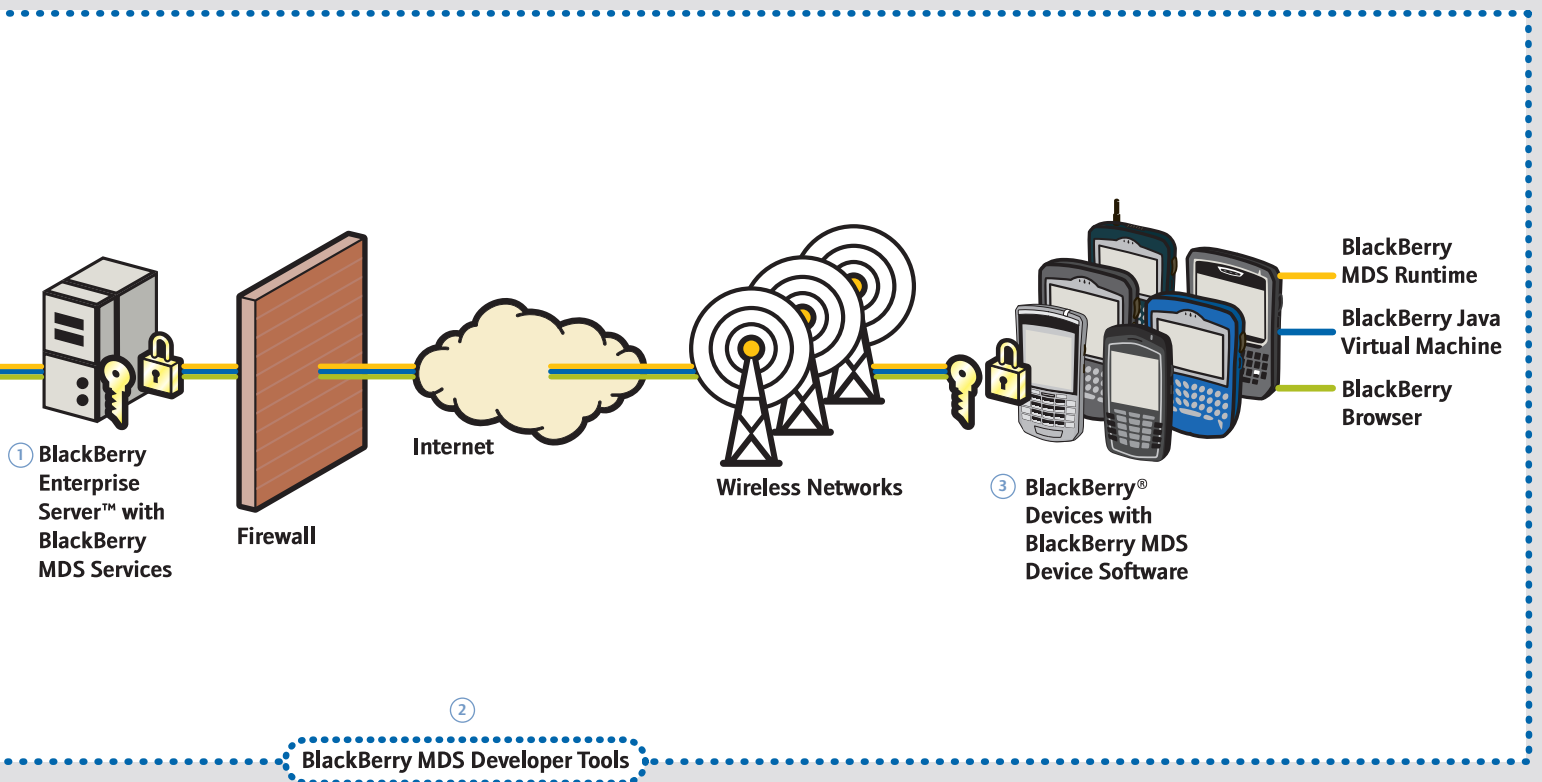
There are three main components to BlackBerry MDS:

- ① **BlackBerry MDS Services™** reside on the BlackBerry Enterprise Server and are responsible for managing interactions and requests between BlackBerry devices and enterprise applications:
 - BlackBerry MDS Administrative and Management Service deals with policies, such as those specifying allowed applications for users, services available to applications and more
 - BlackBerry MDS Provisioning Service controls and manages which applications users can download to BlackBerry devices
 - BlackBerry MDS Data Optimization Service transforms data for efficient wireless transmission and use on mobile devices
 - BlackBerry MDS Connection Service provides TCP/IP and HTTP-based connectivity between BlackBerry MDS Java Applications, BlackBerry MDS Browser Applications and enterprise applications
 - BlackBerry MDS Application Integration Service supports both the integration of and data transmission between BlackBerry MDS Studio™ Applications and Web Services
 - BlackBerry MDS Application Repository centrally manages published BlackBerry MDS Studio Applications
- ② **BlackBerry MDS Developer Tools™** are used to create wireless applications for the BlackBerry Enterprise Solution. BlackBerry MDS Developer Tools include:
 - BlackBerry MDS Studio is a powerful visual application design and assembly tool that allows developers to quickly create rich-client applications that integrate with Web Services using a component-based drag and drop approach
 - BlackBerry Java Development Environment™ (BlackBerry JDE) provides development and simulation tools for building rich-client Java® ME® applications for BlackBerry devices that integrate with standard application servers
 - BlackBerry Browser Development Guides demonstrate how to optimize new and existing web applications for the BlackBerry Browser™ using standard web development tools
 - Plazmic Content Developer's Kit™ enhances the user experience of any BlackBerry MDS Application with interactive media and rich graphical content
- ③ **BlackBerry MDS Device Software™** resides on BlackBerry devices and permits the use of applications built with BlackBerry MDS Developer Tools:
 - BlackBerry MDS Runtime™ provides runtime services for applications developed with BlackBerry MDS Studio
 - BlackBerry Java Virtual Machine™ (BlackBerry JVM) provides a secure environment for running Java applications created using the BlackBerry JDE
 - BlackBerry Browser allows access to web-based applications and supports Internet standards, such as HTML, WML, CGI, ASP and JSP

BlackBerry MDS Architecture



Deploying and managing applications for the BlackBerry devices using the same proven BlackBerry push delivery



BlackBerry MDS Development Options

BlackBerry MDS provides developers with a range of application development options, including easy integration with Web Services using BlackBerry MDS Studio.

| | |
|--------------------------------------|--|
| <p>(A) Web Services</p> | <p>Use BlackBerry MDS Studio and BlackBerry MDS Runtime to quickly mobilize applications with standards such as WSDL, XML, SOAP and HTTP.</p> |
| <p>(B) Traditional Client-Server</p> | <p>Use the BlackBerry JDE to develop rich, custom Java client applications that extend virtually any type of enterprise application and load directly on the BlackBerry JVM.</p> |
| <p>(C) Browser-Based</p> | <p>Easily extend existing web-based applications and content using the BlackBerry Browser Development Guides, standard web development tools and the BlackBerry Browser.</p> |

A Comprehensive New Application Development Framework

The next generation of BlackBerry MDS now includes:
BlackBerry MDS Services, BlackBerry MDS Developer Tools
and BlackBerry MDS Device Software.

| | MDS v4.0 | BlackBerry MDS v4.0 Upgrade Pack for BlackBerry Enterprise Server v4.0 | BlackBerry MDS v4.1 (1) (6) |
|--|----------|--|--|
| BlackBerry MDS Services | | | |
| • BlackBerry MDS Administrative and Management Service | ✓ | ✓ New Management Console for BlackBerry MDS Studio Applications | ✓ Uses BlackBerry Manager for all BlackBerry MDS Applications |
| • BlackBerry MDS Provisioning Service | ✓ | ✓ Added Provisioning for BlackBerry MDS Studio Applications | |
| • BlackBerry MDS Data Optimization Service | ✓ | ✓ Added Optimization for BlackBerry MDS Studio Applications | ✓ Enhanced (4), (5) |
| • BlackBerry MDS Connection Service | ✓ | ✓ Uses existing MDS v4.0 | ✓ Enhanced (2), (3) |
| • BlackBerry MDS Application Integration Service | - | ✓ New for BlackBerry MDS Studio Applications | |
| • BlackBerry MDS Application Repository | - | ✓ New for BlackBerry MDS Studio Applications | |
| BlackBerry MDS Developer Tools | | | |
| BlackBerry MDS Studio | - | | ✓ New for Web Services |
| BlackBerry Java Development Environment | ✓ | | ✓ Updated |
| BlackBerry Browser Development Guides | ✓ | | ✓ Updated |
| Plazmic Content Developer's Kit | ✓ | | ✓ Updated |
| BlackBerry MDS Device Software | | | |
| BlackBerry MDS Runtime | - | ✓ New for BlackBerry MDS Studio Applications | |
| BlackBerry Java Virtual Machine | ✓ | ✓ | ✓ Updated |
| BlackBerry Browser | ✓ | ✓ | ✓ Updated |

Enhancements with BlackBerry MDS v4.1

In addition to adding support for Web Services, BlackBerry MDS v4.1 includes other new features:

Increased Scalability

- (1) BlackBerry MDS Services and BlackBerry Enterprise Server can be installed on separate machines for greater performance and stability
- (2) Improved handling of push traffic at peak times for the organization
- (3) Broadcast push allows simultaneous content distribution to groups of users for BlackBerry MDS Java Applications and BlackBerry MDS Browser Applications

Greater Performance

- (4) Support for additional simultaneous persistent socket connections, increasing efficiency and portability of applications using sockets
- (5) Improved BlackBerry transcoder architecture decreases browser rendering times

Additional Security Features

- (6) RSA Securid® token support for two factor authentication provides extra control for accessing content wirelessly



Get More Information or Download BlackBerry MDS

Visit the BlackBerry web site for all the tools and resources you need to get started with BlackBerry MDS. For access to the latest documentation, information and developer tools, visit: www.blackberry.com/go/mds

Purchase BlackBerry Enterprise Solution v4.1

BlackBerry MDS v4.1 is available with BlackBerry Enterprise Solution v4.1. To find out how to purchase the BlackBerry Enterprise Solution:

By telephone: 1-877-255-2377

Online: www.blackberry.com/go/purchase

or by contacting your wireless service provider

* Check with service provider for availability, roaming arrangements, service plans and features. Certain features outlined in this document require a minimum version of BlackBerry Enterprise Server Software, BlackBerry Desktop Software and/or BlackBerry device software and may require additional development or third party products and/or services for access to corporate applications and use of certain models of BlackBerry devices. Prior to subscribing to or implementing any third party products and services, it is your responsibility to ensure that the airtime service provider you are working with has agreed to support all of the features of the third party products and services. Installation and use of third party products and services with RIM's products and services may require one or more patent, trademark or copyright licenses in order to avoid infringement of the intellectual property rights of others. You are solely responsible for determining whether such third party licenses are required and are responsible for acquiring any such licenses. To the extent that such intellectual property licenses may be required, RIM expressly recommends that you do not install or use these products and services until all such applicable licenses have been acquired by you or on your behalf. Your use of third party software shall be governed by and subject to you agreeing to the terms of separate software licenses, if any, for those products or services. Any third party products or services that are provided with RIM's products and services are provided "as is". RIM makes no representation, warranty or guarantee whatsoever in relation to the third party products or services and RIM assumes no liability whatsoever in relation to the third party products and services even if RIM has been advised of the possibility of such damages or can anticipate such damages.

©2006 Research In Motion Limited. All Rights Reserved. The BlackBerry and RIM families of related marks, images and symbols are the exclusive properties and trademarks of Research In Motion Limited. RIM, Research In Motion, "Always On, Always Connected" and BlackBerry are registered with the U.S. Patent and Trademark Office and may be pending or registered in other countries. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by RIM is under license. All other brands, product names, company names, trademarks and service marks are the properties of their respective owners. The specifications and features contained in this document are subject to change without notice. Printed in Canada. MAT-11190-001