BlackBerry Enterprise Server for Microsoft Exchange
Version 4.1.4

Upgrade Guide

BlackBerry Enterprise Server Version 4.1.4 for Microsoft Exchange Upgrade Guide

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Upgrading to BlackBerry Enterprise Server Version 4.1.4

When you upgrade to BlackBerry® Enterprise Server Version 4.1.4, the changes to your BlackBerry environment depend on the version from which you are upgrading.

Confirm the version from which you are upgrading

1. On the taskbar, click **Start** > **Settings** > **Control Panel**.

2. Double-click **Add/Remove Programs**.

3. In the list of currently installed programs, click **BlackBerry Enterprise Server**.

4. Click **Support Information**.

5. Retrieve the version number.

Changes to the BlackBerry Enterprise Server Version 3.5.2 and earlier environment

When you upgrade from BlackBerry Enterprise Server Version 3.5.2 or BlackBerry Enterprise Server Version 2.1.5, the following changes occur:

*   updates to the BlackBerry Enterprise Server software

*   removal of the Microsoft® administrative extensions

*   creation of a new schema for the BlackBerry Configuration Database

*   migration of user accounts to the new schema

Changes to the BlackBerry Enterprise Server Version 3.6 environment

When you upgrade from BlackBerry Enterprise Server Version 3.6, the following changes occur:

* updates to the BlackBerry Enterprise Server software

* consolidation of BlackBerry Enterprise Server instances

* creation of a new schema for the BlackBerry Configuration Database

* migration of user accounts to the new schema

You can preview the user account migration into the BlackBerry Configuration Database to identify any issues that might occur (for example, identifying inactive user accounts that you cannot migrate) and to estimate the time that it should take to migrate user accounts during the upgrade process.

Changes to the BlackBerry Enterprise Server Version 4.0 environment

When you upgrade from BlackBerry Enterprise Server Version 4.0, the following changes occur:

* updates to the BlackBerry Enterprise Server software, including any BlackBerry components that you installed separately (for example, the BlackBerry Manager)

* upgrades to the schema of the BlackBerry Configuration Database

Before you upgrade to BlackBerry Enterprise Server Version 4.1.4, make sure that all BlackBerry Enterprise Servers in your environment that share a BlackBerry Configuration Database are Version 4.0.3 or higher. Certain components in earlier versions of the BlackBerry Enterprise Server are not optimized for use with the BlackBerry Enterprise Server Version 4.1.4.

Choosing a BlackBerry Enterprise Server upgrade option

Upgrade option	Description	Advantages	Disadvantages	User impact
Upgrade the BlackBerry Enterprise Server using an in-place process.	The in-place upgrade process installs BlackBerry Enterprise Server Version 4.1.4 over the existing version.	• you do not require additional computers to perform this upgrade • when the upgrade completes, user accounts are active and no additional administrative action is required	• you cannot remove BlackBerry Enterprise Server Version 4.1.4 and return to the earlier version automatically • you turn off the BlackBerry Enterprise Server during the upgrade, so the BlackBerry service interruption lasts for as long as the upgrade process • if you upgrade from a version earlier than BlackBerry Enterprise Server Version 4.0, the BlackBerry Enterprise Server takes longer than it did previously to start because it sends new service books to all the BlackBerry devices that are capable of wireless synchronization	• BlackBerry devices running BlackBerry® Device Software Version 4.0 or later receive new service books and wireless synchronization occurs • all BlackBerry devices receive new IT policies

Upgrade option	Description	Advantages	Disadvantages	User impact
Upgrade the BlackBerry Enterprise Server using a cutover process.	The cutover upgrade process installs BlackBerry Enterprise Server Version 4.1.4 on a new computer and migrates user accounts and server information from the old BlackBerry Enterprise Server to the new one. After you migrate the user accounts and server information, you stop the old BlackBerry Enterprise Server and start the new one. This upgrade process uses the same SRP credentials on both the old and new BlackBerry Enterprise Servers. Use this upgrade process only when upgrading from BlackBerry Enterprise Server Version 3.6.	• you can add user accounts back to the old BlackBerry Enterprise Server if you encounter any problems on the new one • you can move to new server hardware and start with a clean environment • you experience minimal service interruption using this upgrade process because user accounts remain active on the old BlackBerry Enterprise Server until you start the new BlackBerry Enterprise Server	• you require one extra computer • if you upgrade from a version earlier than BlackBerry Enterprise Server Version 4.0, the BlackBerry Enterprise Server takes longer that it did previously to start because it sends new service books to all the BlackBerry devices that are capable of wireless synchronization	• BlackBerry devices running BlackBerry Device Software Version 4.0 or later receive new service books and wireless synchronization occurs • all BlackBerry devices receive new IT policies
Upgrade the BlackBerry Enterprise Server using a phased process.	The phased upgrade process maintains earlier versions of the BlackBerry Enterprise Servers while you gradually create Version 4.1.4 BlackBerry Enterprise Servers and migrate user accounts to them. In a mixed-version environment that includes BlackBerry components at Version 4.1.4, the BlackBerry Manager must not be at a higher version than the BlackBerry Configuration Database.	• you can migrate user accounts to the new BlackBerry Enterprise Servers at your own pace • you can move user accounts gradually to limit the number of service books and IT policies that the BlackBerry Policy Service sends at one time • you can monitor system performance as you add user accounts • you can reorganize your BlackBerry environment during the upgrade by changing user distribution patterns	• you require additional computers • you require additional SRP credentials • if you are moving user accounts from one BlackBerry Configuration Database to another, BlackBerry device options that you back up to the BlackBerry Configuration Database are lost during this move	• BlackBerry devices running BlackBerry Device Software Version 4.0 or later receive new service books and wireless synchronization occurs • all BlackBerry devices receive new IT policies

Upgrading to BlackBerry Device Software Version 4.1 and later

When you upgrade the BlackBerry Enterprise Server you might also want to upgrade the BlackBerry Device Software so that users can use the BlackBerry Enterprise Server Version 4.1.4 features.

You are not required to upgrade the BlackBerry Device Software. The BlackBerry Enterprise Server Version 4.1.4 supports BlackBerry devices that are running BlackBerry Device Software Version 4.0.*x* and earlier.

You can upgrade only BlackBerry devices with 32 MB of flash memory to BlackBerry Device Software Version 4.1.

To upgrade the BlackBerry Device Software, you must connect a BlackBerry device to a computer. You cannot distribute the BlackBerry Device Software over the wireless network. If users' BlackBerry devices are running BlackBerry Device Software Version 4.0 or later, wireless synchronization occurs after the BlackBerry Enterprise Server upgrade completes. Visit www.blackberry.com/knowledgecenterpublic to read article KB-04295 for more information about which software versions cause an automatic wireless synchronization to occur.

Choosing a BlackBerry Device Software upgrade option

Upgrade option	Description	Advantages	Disadvantages	User impact
Enable users to upgrade the BlackBerry Device Software at their computers.	This upgrade process requires you to install the BlackBerry Device Software and the BlackBerry Application Loader in a shared network drive that is accessible by computers in your organization.	• you can use a shared network drive to make the BlackBerry Device Software upgrade available to users • you can enable users to upgrade their BlackBerry devices at their computers by sending them a link to the BlackBerry Device Software installation files • you can automate the BlackBerry Device Software upgrade loading process to remove user interaction for USB BlackBerry devices • you can upgrade BlackBerry devices remotely	• you cannot manage BlackBerry Device Software upgrades using software configurations • you cannot force users to upgrade their BlackBerry Device Software • this upgrade process increases network traffic to the network drive	• users must have either the BlackBerry® Desktop Software Version 3.6 or later or the BlackBerry Handheld Manager Version 3.6 or later installed on their computers

Upgrade option	Description	Advantages	Disadvantages	User impact
Upgrade the BlackBerry Device Software at a central computer or kiosk.	This upgrade process uses software configurations to help control the BlackBerry Device Software upgrade process for each BlackBerry device at a central administration computer or kiosk. This upgrade process requires you to install the BlackBerry Device Software in a shared network drive that is accessible by the administration computer or kiosk. You must also install the BlackBerry Manager on the computer from which you plan to upgrade BlackBerry devices.	• you can monitor the BlackBerry Device Software upgrade process at the administration computer • you can use software configurations to help control BlackBerry Device Software upgrades • you can upgrade multiple BlackBerry devices at the same time • you can upgrade BlackBerry devices for users who do not have the BlackBerry Handheld Manager or the BlackBerry® Desktop Manager installed on their computers • you can share a single software location between multiple administration computers	• you cannot force users to upgrade their BlackBerry Device Software	• users must bring their BlackBerry devices to an administrator to upgrade the BlackBerry Device Software
Push the BlackBerry Device Software and BlackBerry Desktop Software to user computers.	This upgrade process enables you to use third-party software to create and distribute a single installation file that contains the BlackBerry Desktop Software and the BlackBerry Device Software. This customized installation file installs the complete BlackBerry Desktop Software and the BlackBerry Device Software on users' computers. Users then upgrade the BlackBerry Device Software interactively.	• you can install the BlackBerry Device Software and the BlackBerry Desktop Software on users' computers automatically • you can force users to upgrade their BlackBerry Device Software through IT policies • you can upgrade BlackBerry Device Software for users who have BlackBerry Desktop Software version 3.5 or earlier	• you must distribute large installation packages over the corporate local area network (LAN)	• users must connect their BlackBerry devices to their computers and start the BlackBerry Desktop Manager

Additional upgrade resources

The following upgrade options might apply to your BlackBerry environment. Use the resources listed in the following table to plan and perform the upgrade.

Upgrade option	Description	Resource
Move the BlackBerry Configuration Database to a different database application.	You must upgrade from Microsoft® SQL Server™ Database Engine (MSDE) Version 7 to MDSE 2000 or to Microsoft SQL Server.	Visit www.blackberry.com/knowledgecenterpublic to read article KB-03112 for more information.
Change to a new license model during the upgrade.	If you are changing from the BlackBerry® Enterprise Server - Small Business Edition to the BlackBerry Enterprise Server, you require a new client access license key in addition to the software.	Visit www.blackberry.com/knowledgecenterpublic to read article KB-03535 for more information.
Upgrade a pilot environment to a production environment.	If you have a separate BlackBerry Configuration Database in your pilot environment, you must consider how to use the BlackBerry Configuration Database in your production environment.	Visit www.blackberry.com/knowledgecenterpublic to read article KB-04246 for more information.
	You can make the pilot BlackBerry Configuration Database your new production BlackBerry Configuration Database. When you upgrade the BlackBerry Enterprise Server to use this new BlackBerry Configuration Database, use wireless enterprise activation to migrate user accounts to the new database.	
	You can also upgrade your existing production BlackBerry Configuration Database to BlackBerry Enterprise Server Version 4.1.4. When you configure the pilot BlackBerry Enterprise Server to use the production BlackBerry Configuration Database, use wireless enterprise activation to migrate user accounts to the new database.	
	BlackBerry devices must be running BlackBerry Device Software Version 4.0 or later to use wireless enterprise activation.	

System requirements

Hardware requirements

Visit www.blackberry.com/knowledgecenterpublic to read the *BlackBerry Enterprise Server Version 4.1 for Microsoft Exchange Server Capacity Calculator* and the *BlackBerry Enterprise Server Version 4.1 for Microsoft Exchange Performance Benchmarking* for more information about calculating hardware requirements based on the expected use of the BlackBerry Enterprise Server in your environment.

System requirements for the BlackBerry Enterprise Server

You must confirm that the computer on which you plan to install the BlackBerry Enterprise Server meets the system requirements.

Checklists	Description	Reference
Checklist: Operating system requirements	This checklist describes the operating system software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server.	See page 18.
Checklist: Messaging and collaboration server software requirements	This checklist describes the messaging server software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server.	See page 19.
Checklist: Security support requirements	This checklist describes the security software that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to support specific security features.	See page 19.
Checklist: Multilanguage support requirements	This checklist describes the configuration that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to support localized message content.	See page 20.
Checklist: Virtual computer support requirements	This checklist describes the configuration that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you have a virtual computer environment.	See page 20.
Checklist: Additional software requirements	This checklist describes the additional software that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to read the documentation and help file, or if you want to implement multiple BlackBerry devices from a single computer.	See page 20.

Checklist: Operating system requirements

ℹ **Note**: You must install the most current service pack for each Microsoft product.

Considerations	
Install one of the following operating systems on the computer on which you plan to install the BlackBerry Enterprise Server: • Microsoft® Windows® 2000 Service Pack (SP) 4 (Server or Advanced Server editions) • Microsoft® Windows Server® 2003 (SP1 is required for Microsoft Windows Messenger support and if you are using Microsoft Exchange 2007)	☐
Install Microsoft Messaging Queue (MSMQ) Version 3.0 (required for Microsoft Windows Messenger support). **Note**: If you install MSMQ separately from Windows Server 2003, clear the default **Active Directory Integration** and **Triggers** subcomponents and select only the **Common** subcomponent.	☐
Install Microsoft® .NET Framework Version 1.1 (SP1 is required for Microsoft Windows Messenger support). You can install this program during the BlackBerry Enterprise Server installation.	☐
If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1.	☐
If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit www.microsoft.com/netframework/downloads/ for more information.	☐
Install one of the following Microsoft Data Access Component (MDAC) versions on the computer on which you plan to install the BlackBerry Enterprise Server: • MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00) • MDAC Version 2.8 SP2 (Version 2000.86.1830.00) **Note**: MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.	☐
Install Java® 2 Platform, Standard Edition (J2SE™) Runtime Environment Version 5.0 update 9. You can install this program during the BlackBerry Enterprise Server installation.	☐
If you are using Microsoft Exchange 2007, install the Internet Service Manager component of Internet Information Services from your Microsoft Windows installation media	☐

Checklist: Messaging and collaboration server software requirements

⚠ **Warning**: Do *not* install Microsoft® Outlook® on the same computer as the BlackBerry Enterprise Server. Visit www.support.microsoft.com/kb/266418 for more information.

Considerations	
Install one of the following Microsoft Exchange administration tools on the computer on which you plan to install the BlackBerry Enterprise Server: • Microsoft Exchange Version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 (see http://support.microsoft.com/kb/929590 for more information) • if you are using Microsoft Exchange 2007, either Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 or Microsoft Exchange 2003 System Tools with SP2 **Note**: Do not install Microsoft Exchange 2007 on the computer on which you plan to install the BlackBerry Enterprise Server.	☐
Install the BlackBerry Enterprise Server in the same Microsoft Exchange Organization as your messaging server.	☐
Review the Microsoft known issues that impact wireless calendar synchronization. See "Configuring Microsoft Exchange to support wireless calendar synchronization" on page 43 for more information	☐
If you are using Microsoft Exchange 2003 and use unicode text in calendars, download and install the following hotfixes: • visit http://support.microsoft.com/kb/913643 to install the hotfix on the messaging server • visit http://support.microsoft.com/kb/923537/en-us to install the hotfix on the computer on which you will install the BlackBerry Enterprise Server	☐

If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Enterprise Server:
 	
    • If your instant messaging server is Microsoft® Live Communications Server 2005™, you must install or import a Mutual TLS (MTLS) certificate.
    • If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account.
 	
Visit www.office.microsoft.com/en-us/FX011526591033.aspx for more information about configuring certificates on Microsoft Live Communications Server 2005.
	☐

If your instant messaging server is IBM® Lotus® Sametime®, you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server.	☐
If your instant messaging server is Novell® GroupWise® Messenger, you must turn on support for Secure Sockets Layer (SSL) authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit www.novell.com/documentation to read the *Messenger 1.0 Administration Guide* for more information.	☐

Checklist: Security support requirements

Considerations	
If you are using RSA® SecurID® authentication, you must install the Security Dynamics Technologies Ace/Agent® for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service.	☐

Checklist: Multilanguage support requirements

Considerations	
Set your language preferences in Microsoft® Internet Explorer® to display encoded web pages correctly.	☐

Checklist: Virtual machine support requirements

Considerations	
Install VMware® ESX Server Version 2.5.2 on the computer on which you plan to install the BlackBerry Enterprise Server.	☐

Checklist: Additional software requirements

Considerations	
If you run a Universal Serial Bus (USB) hub to implement BlackBerry devices while connected to the BlackBerry Manager, verify that the USB driver supports USB1.1-compliant hubs.	☐
Install Adobe® Acrobat® Reader® Version 3.0 or later so that you can view the product guides.	☐
Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript® enabled as your default browser so that you can view the online help.	☐
Install Microsoft® XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	☐
If you are using SNMP monitoring, you must install the SNMP service before you install the BlackBerry Enterprise Server. Visit www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.mspx for more information about installing and configuring the SNMP service.	☐
Install Microsoft® Windows Media® Player Version 9 or later to support audio attachments.	☐

System requirements for your corporate environment

You must confirm that settings in your network, messaging and collaboration, instant messaging, and database environments are configured to support the BlackBerry Enterprise Server.

Checklists	Description	Reference
Checklist: Network environment settings	This checklist describes how your BlackBerry Enterprise Server must connect to your firewall.	See page 21.
Checklist: Messaging and collaboration environment settings	This checklist describes the software and settings that are required on your messaging server and your desktop email program.	See page 21.
Checklist: Instant messaging environment settings	This checklist describes the software and settings that are required on your instant messaging server.	See page 21.
Checklist: Terminal service settings	This checklist describes the supported software and settings for installing the BlackBerry Enterprise Server using a terminal or remote desktop session.	See page 22.
Checklist: Database environment settings	This checklist describes the software and settings that are required on your database server.	See page 22.

Checklist: Network environment settings

Considerations	
Verify that the BlackBerry Enterprise Server is physically close to the messaging servers. Use a high-speed switched connection between the BlackBerry Enterprise Server and the messaging servers. Network latency impacts the performance of the BlackBerry Enterprise Server.	☐
Verify that the BlackBerry Enterprise Server is not installed in a perimeter network (demilitarized zone). Visit www.blackberry.com/knowledgecenterpublic to read article TAE-00038 for more information.	☐
Verify that you have configured the corporate firewall or proxy to permit the BlackBerry Enterprise Server to initiate and maintain an outbound connection to the BlackBerry® Infrastructure on TCP port 3101.	☐
Verify that the corporate firewall can resolve Internet addresses using the Domain Name System (DNS).	☐
Verify that the proxy server is transparent, if you are using a proxying firewall.	☐

Checklist: Messaging and collaboration environment settings

Considerations	
Your messaging environment must be one of the following: • Microsoft Exchange Version 5.5 native environment • Microsoft Exchange 2000 native environment • Microsoft Exchange 2003 native environment • Microsoft Exchange 2007 native environment • mixed environment (any combination of Microsoft Exchange Version 5.5, Microsoft Exchange 2000, Microsoft Exchange 2003, and Microsoft Exchange 2007) **Note**: Do not install Microsoft Exchange 2007 on the computer on which you plan to install the BlackBerry Enterprise Server.	☐

Checklist: Instant messaging environment settings

Considerations	
Your instant messaging server must be one of the following: • Sametime Version 3.0 Community Server • Sametime Version 3.1 Community Server • Sametime Version 6.5.1 Community Server (Version 6.5.1 or later is required to support dormant mode.) • Sametime Version 7.0 Community Server • Sametime Version 7.5 Community Server • Microsoft Live Communications Server 2005 (SP1 is required to support Microsoft Office Communicator and dormant mode.) • Novell GroupWise Messenger Server Version 1.0.2 or later • Novell GroupWise Messenger Server Version 2.0	☐
If your instant messaging environment supports Microsoft Office Communicator, your environment must also include a Microsoft Office Communicator Web Access Server. Verify that your Communicator Web Access Server meets the following criteria: • includes the MTLS and HTTPS certificates required for communication with your Microsoft Live Communications Server Visit office.microsoft.com/en-us/assistance/HA100240791033.aspx for more information.	☐

Considerations	
If your instant messaging environment supports Microsoft Office Communicator, you must download and install the following hotfixes to support the AJAX Service: • visit www.support.microsoft.com/kb/911996 to install the hotfix on your Microsoft Live Communications Server • visit www.support.microsoft.com/kb/915066 to install the hotfix on your Communicator Web Access server	☐
If your instant messaging environment supports Microsoft Office Communicator, you must install or configure an additional virtual server to support the AJAX Service on your Communicator Web Access server that meets the following criteria: • uses all unassigned IP addresses • uses forms-based authentication only (RIM does not recommend using integrated authentication when supporting HTTPS connections) • supports HTTPS browser connections • contains an Internet Server API (ISAPI) filter for both the cwaauth.dll file and the ajax.dll file Visit office.microsoft.com/en-us/assistance/HA100240791033.aspx to read the *Microsoft Office Communicator Web Access Planning and Deployment Guide* for more information about enabling the AJAX Service for Communicator Web Access.	☐

Checklist: Terminal service settings

Considerations	
If your operating system is Microsoft Windows Server 2000, you can install and access the BlackBerry Enterprise Server using the Terminal Services program. You must install the Terminal Services program using Remote Administration mode. Visit www.support.microsoft.com/kb/306624 for more information. **Note**: RIM does not recommend using Application Server mode. If you install the Terminal Services program using Application Server mode and then install the BlackBerry Enterprise Server, unpredictable results might occur.	☐
If your operating system is Microsoft Windows Server 2003, you can install and access the BlackBerry Enterprise Server using the Microsoft Remote Desktop Connection program that is included with Microsoft Windows Server 2003. **Note**: Do not install the Terminal Services program. If you install the Terminal Services program on Microsoft Windows Server 2003, the Terminal Services program installs in Application Server mode automatically, which RIM does not recommend.	☐

Checklist: Database environment settings

Considerations	
Install one of the following database programs on the computer on which you plan to install the BlackBerry Configuration Database: • Microsoft SQL Server 2000 Desktop Engine (MSDE 2000) • Microsoft SQL Server 2000 SP3a • Microsoft SQL Server 2005 (Standard, Enterprise, or Express) **Notes**: If you are installing BlackBerry MDS Services, you cannot use Microsoft SQL Server 2005 Express as your database program. You can install MSDE 2000 during the BlackBerry Enterprise Server installation.	☐
Install one of the following MDAC versions on the computer on which you plan to install the BlackBerry Configuration Database: • MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00) • MDAC Version 2.8 SP2 (Version 2000.86.1830.00) MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.	☐

Considerations	
You must manage the BlackBerry Configuration Database using a BlackBerry Manager that is configured to support the database management system (DBMS) type. You select the DBMS type of the BlackBerry Manager during the BlackBerry Enterprise Server installation.	☐
The version of MSDE 2000 (MSDE 2000 Release A) provided with the BlackBerry Enterprise Server does not support upgrading from a previous version of MSDE. Visit www.support.microsoft.com/kb/829925 for more information.	☐
If you are using Microsoft SQL Server, install the program using the default case-insensitive collation setting. The collation setting for the BlackBerry Configuration Database must be the same as the collation setting for the database server.	☐
If you are using Microsoft SQL Server, you can install the BlackBerry Configuration Database on a nondefault instance. During the installation process, you can specify *servername\instancename*.	☐
If the BlackBerry Configuration Database is on a remote computer or you want to use a remote BlackBerry Manager, you must enable named pipes and TCP/IP network protocols.	☐
If you are installing the BlackBerry MDS Services, you must install the BlackBerry MDS Services databases on the same DBMS and on the same database server as the BlackBerry Configuration Database.	☐
If you are installing the BlackBerry MDS Services and if you are using Microsoft SQL Server, the Microsoft SQL Server must support mixed-mode authentication. If you install the BlackBerry Configuration Database on MSDE 2000, you receive a prompt to accept this change in authentication.	☐
If you are installing the BlackBerry MDS Services, you must use SQL authentication to create the BlackBerry MDS Services databases. If you are using SQL authentication to create the BlackBerry Configuration Database, you must use a different SQL account to create the BlackBerry MDS Services databases. **Note**: The BlackBerry MDS Services store their BlackBerry MDS Services database access credentials in plain text form in *<installation directory>*\MDSS\jakarta-tomcat-5.5.9\conf\server.xml. To protect the access credentials in that storage location, you must limit read and write control to that location.	☐

System requirements for remote components

If you plan to install BlackBerry components on remote computers, you must confirm that those computers meet the system requirements.

Checklists	Description	Reference
Checklist: BlackBerry MDS Services system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry MDS Services.	See page 24.
Checklist: BlackBerry Enterprise Server with the BlackBerry MDS Services system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services.	See page 25.
Checklist: BlackBerry Attachment Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Attachment Service.	See page 27.
Checklist: BlackBerry Manager system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Manager.	See page 28.
Checklist: BlackBerry Router system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Router.	See page 29.
Checklist: BlackBerry MDS Connection Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry MDS Connection Service.	See page 29.

Checklists	Description	Reference
Checklist: BlackBerry Collaboration Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Collaboration Service.	See page 30.

Checklist: BlackBerry MDS Services system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry MDS Services: • Microsoft Windows 2000 (Server or Advanced Server editions) • Microsoft Windows Server 2003 (Standard, Enterprise or Small Business Server) • Microsoft Windows XP Verify that the operating system is installed in one of English, French, German, Italian, or Spanish.	☐
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	☐

Checklist: BlackBerry Enterprise Server with the BlackBerry MDS Services system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services:	☐

Install one of the following operating systems on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services:

- Microsoft Windows 2000 SP4 (Server or Advanced Server editions)
- Microsoft Windows Server 2003 (Standard, Enterprise or Small Business Server), and, if you are using Microsoft Exchange 2007, with SP1

Install MSMQ Version 3.0 (required for Microsoft Windows Messenger support).

Note: If you install MSMQ separately from Windows Server 2003, clear the default **Active Directory Integration** and **Triggers** subcomponents and select only the **Common** subcomponent.

Install Microsoft .NET Framework Version 1.1 SP1. You can install this program during the BlackBerry Enterprise Server installation.

If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1.

If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit www.microsoft.com/netframework/downloads/ for more information.

Install one of the following MDAC versions:

- MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00)
- MDAC Version 2.8 SP2 (Version 2000.86.1830.00)

Note: MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.

Install J2SE Runtime Environment Version 5.0 update 9. You can install this program during the BlackBerry Enterprise Server installation.

If you are using Microsoft Exchange 2007, install the Internet Service Manager component of Internet Information Services from your Microsoft Windows installation media.

System requirement	Considerations	
messaging and collaboration server software	Install one of the following Microsoft Exchange administration tools on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services: • Microsoft Exchange Version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 (see http://support.microsoft.com/kb/929590 for more information) • if you are using Microsoft Exchange 2007, either Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 or Microsoft Exchange 2003 System Tools with SP2 Review the Microsoft known issues that impact wireless calendar synchronization. Install the BlackBerry Enterprise Server in the same Microsoft Exchange Organization as your messaging server. **Note**: Do not install Microsoft Exchange 2007 on the computer on which you plan to install the BlackBerry Enterprise Server with MDS Services. If you are using Microsoft Exchange 2003 and use unicode text in calendars, download and install the following hotfixes: • visit http://support.microsoft.com/kb/913643 to install the hotfix on the messaging server • visit http://support.microsoft.com/kb/923537/en-us to install the hotfix on the computer on which you will install the BlackBerry Enterprise Server	☐
messaging and collaboration server software, continued	If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Collaboration Service: • If your instant messaging server is Microsoft Live Communications Server 2005, you must install or import an MTLS certificate. • If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account. Visit www.office.microsoft.com/en-us/FX011526591033.aspx for more information about configuring certificates on Microsoft Live Communications Server 2005. If your instant messaging server is Sametime, you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server. If your instant messaging server is Novell GroupWise Messenger, you must turn on support for SSL authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit www.novell.com/documentation to read the *Messenger 1.0 Administration Guide* for more information.	☐
multilanguage support	Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly.	☐
security support	If you are using RSA SecurID authentication, you must install the Security Dynamics Technologies Ace/Agent for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service.	☐

System requirement	Considerations	
additional software	If you run a USB hub to implement BlackBerry devices that are connected to the BlackBerry Manager, verify that the USB driver supports USB1.1-compliant hubs.	☐
	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	
	Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help.	
	Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	
	If you are using SNMP monitoring, you must install the SNMP service before you install the BlackBerry Enterprise Server. Visit www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.mspx for more information about installing and configuring the SNMP service.	
	Install Microsoft Windows Media Player Version 7.1 or later so that you can support audio attachments.	

Checklist: BlackBerry Attachment Service system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Attachment Service: • Microsoft Windows 2000 SP4 (Server or Advanced Server editions) • Microsoft Windows Server 2003 • Microsoft Windows XP	☐
multilanguage support	Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly.	☐
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	☐
	Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help.	
	Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	
	Install Microsoft Windows Media Player Version 7.1 or later so that you can support audio attachments.	

Checklist: BlackBerry Manager system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Manager: • Microsoft Windows 2000 (Professional, Server, or Advanced Server editions) • Microsoft Windows Server 2003 • Microsoft Windows XP Professional Install Microsoft .NET Framework Version 1.1 SP1. You can install this program during the BlackBerry Enterprise Server installation. If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1. If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit www.microsoft.com/netframework/downloads/ for more information. In the operating system, turn on printer and file sharing to implement BlackBerry devices. If you are using Microsoft Exchange 2007, install the Internet Service Manager component of Internet Information Services from your Microsoft Windows installation media.	☐
messaging and collaboration server software	Install one of the following on the computer on which you plan to install the BlackBerry Manager: • Microsoft Exchange Version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Outlook 2000 (Corporate or Workgroup installation) • Microsoft Outlook 2002 (XP) (Corporate or Workgroup installation) • Microsoft Outlook 2003 (Corporate or Workgroup installation) • Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 (see http://support.microsoft.com/kb/929590 for more information) • if you are using Microsoft Exchange 2007, either Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 or Microsoft Exchange 2003 System Tools with SP2	☐
multilanguage support	Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly.	☐
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides. Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help. Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	☐

Checklist: BlackBerry Router system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Router: • Microsoft Windows 2000 (Server or Advanced Server editions) • Microsoft Windows Server 2003 • Microsoft Windows XP	☐
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides. Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	☐
network environment settings	You can install the BlackBerry Router in a perimeter network (demilitarized zone). Verify that the firewall settings permit the BlackBerry Router computer to initiate a two-way TCP/IP connection to an external server on port 3101. Verify that the corporate firewall can resolve Internet addresses using the DNS. Verify that the proxy is transparent, if you are using a proxying firewall.	☐

Checklist: BlackBerry MDS Connection Service system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry MDS Connection Service: • Microsoft Windows 2000 (Server or Advanced Server editions) • Microsoft Windows Server 2003 • Microsoft Windows XP	☐
security support	If you are using RSA SecurID authentication, you must install the Security Dynamics Technologies Ace/Agent for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service.	☐
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	☐

Checklist: BlackBerry Collaboration Service system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Collaboration Service: • Microsoft Windows 2000 (Server or Advanced Server editions) • Microsoft Windows Server 2003 SP1 (required for Microsoft Windows Messenger support) • Microsoft Windows XP Install Microsoft .NET Framework Version 1.1 SP1 (required for Microsoft Windows Messenger support). You can install this program during the BlackBerry Enterprise Server installation. If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1 If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit www.microsoft.com/netframework/downloads/ for more information. Install MSMQ Version 3.0 (required for Microsoft Windows Messenger support). **Note**: If you install MSMQ separately from Windows Server 2003, clear the default **Active Directory Integration** and **Triggers** subcomponents and select only the **Common** subcomponent. If you are using Microsoft Exchange 2007, install the Internet Service Manager component of Internet Information Services from your Microsoft Windows installation media.	☐
messaging and collaboration server software	If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Collaboration Service: • If your instant messaging server is Microsoft Live Communications Server 2005, you must install or import a MTLS certificate. • If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account. Visit www.office.microsoft.com/en-us/FX011526591033.aspx for more information about configuring certificates on Microsoft Live Communications Server 2005. If your instant messaging server is Sametime, you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server. If your instant messaging server is Novell GroupWise Messenger, you must turn on support for SSL authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit www.novell.com/documentation to read the *Messenger 1.0 Administration Guide* for more information.	☐
additional software requirement	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	☐

3

Preparing your BlackBerry Enterprise Server environment for upgrade

Preparing to upgrade from BlackBerry Enterprise Server Version 3.5.2 and earlier
Preparing to upgrade from BlackBerry Enterprise Server Version 3.6
Preparing to upgrade from BlackBerry Enterprise Server Version 4.0

Preparing to upgrade from BlackBerry Enterprise Server Version 3.5.2 and earlier

You can upgrade from either BlackBerry Enterprise Server Version 3.5.2 or Version 2.1.5. When you upgrade from these versions, you migrate the BlackBerry Enterprise Server and user configuration information from Microsoft Exchange administrative extensions to the BlackBerry Server Management console. Prepare for this upgrade by migrating Microsoft Exchange administrative extensions, cleaning up the data, and creating backups before upgrading the BlackBerry Configuration Database.

If you want wireless synchronization to occur automatically after the upgrade process completes, you must also instruct users to synchronize their BlackBerry device capabilities before you upgrade the BlackBerry Enterprise Server. See "Synchronize BlackBerry device capabilities" on page 33 for more information.

Migrate BlackBerry Enterprise Server information from Microsoft Exchange 5.5 administration extensions

> Perform the following actions:

Action	Procedure
Export the BlackBerry Enterprise Server Version 2.1.5 information from the Microsoft Exchange 5.5 administration extensions.	1. Using the Microsoft Exchange Administration tool, export the **BlackBerry Servers** configuration list from the **Configuration** container. 2. Save the server configuration information to a text file.
Create the BlackBerry Configuration Database if it does not already exist.	1. In the BlackBerry Enterprise Server Version 2.1.5 installation media, open the **BESManMMC** folder. 2. Double-click the **setup.exe** file. 3. Follow the instructions on the screen to create the BlackBerry Configuration Database. See the *BlackBerry Enterprise Server Management (MMC Snapin) Software Version 2.1 Installation & Getting Started Guide* for more information.
Import the BlackBerry Enterprise Server information.	> Using the BlackBerry Enterprise Server Management console, import the text file that contains the BlackBerry Enterprise Server configuration information.

Action	Procedure
Remove the BlackBerry Enterprise Server administration extensions.	> On the taskbar, click **Start** > **Programs** > **BlackBerry Enterprise Server** > **Uninstall Administration Extension**.
	Warning: The WinBBinstaller tool is required to remove the Microsoft Exchange 5.5 administration extensions after upgrading and importing any system information. Contact technical support to obtain a copy of the WinBBinstaller tool.

Perform system maintenance

Perform system maintenance to help minimize the upgrade time and to help promote an uninterrupted upgrade and user migration.

> Remove inactive user accounts from the BlackBerry Enterprise Server. See the *BlackBerry Enterprise Server for Microsoft Exchange Version 3.5.2 Administration Guide* or the *BlackBerry Enterprise Server Software for Microsoft Exchange 5.5 Version 2.1 Administration and Getting Started Guide* for more information.

Verify BlackBerry device assignments

Use the HandheldCleanup tool to locate out-of-date assignments between BlackBerry devices and user mailboxes. This tool checks for any BlackBerry devices that are assigned to user mailboxes that do not have a current server domain name. When the tool locates user mailboxes with different server domain names, it changes the server domain name to the Global Address List server domain name and adds the BlackBerry device to the report list.

1. At the command prompt, switch to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Utility.

2. Type **HandheldCleanup.exe.**

3. Type any of the following parameters, in the order in which they appear:

Parameter	Procedure
-d [*<filename>*] [-p *<MAPI profile name>*]	1. Type the name of the file in which to save information for each BlackBerry device on the BlackBerry Enterprise Server.
	2. Type the name of the Messaging Application Programming Interface (MAPI) profile that you use to connect to the messaging server.
	Notes: If you do not specify a file name, the information displays on the screen.
	The tool prompts you for the name of the BlackBerry Enterprise Server.
-u [-p *<MAPI profile name>*]	> Type the name of the MAPI profile that you use to connect to the messaging server.

For example, to retrieve BlackBerry device information using a MAPI profile named BESAdmin and to write the results in a file named results.txt, type **handheldcleanup.exe -d results.txt -p BESAdmin -u**.

4. Press ENTER.

Back up system information

> Perform the following actions:

Action	Procedure
Back up the BlackBerry Enterprise Server registry settings.	1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, open the Registry Editor.
	2. In the left pane, browse to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion.
	3. Back up all the registry keys.
Back up the BlackBerry Enterprise Server log files.	1. Back up the BlackBerry Enterprise Server log files to another computer.
	2. Delete the log files from the BlackBerry Enterprise Server computer.

Synchronize BlackBerry device capabilities

When users connect their BlackBerry devices to the BlackBerry Desktop Manager, the BlackBerry Desktop Manager writes whether the BlackBerry device is capable of wireless synchronization into the user's mailbox. When the BlackBerry Enterprise Server is upgraded, the BlackBerry Synchronization Service sends service books to those BlackBerry devices that are capable of wireless synchronization automatically.

If you do not perform the following task for BlackBerry devices that are capable of wireless synchronization, the BlackBerry Enterprise Server cannot update the service books automatically after upgrade, and those BlackBerry devices cannot send or receive email messages.

> To ensure wireless synchronization occurs automatically after the upgrade process completes, instruct users with BlackBerry Device Software Version 4.0 or later to connect their BlackBerry devices to the BlackBerry Desktop Manager Version 3.6.3 or later before you upgrade the BlackBerry Enterprise Server.

  Users must connect their BlackBerry devices to the BlackBerry Desktop Manager. Connecting the BlackBerry device to a BlackBerry Manager or a Legacy BlackBerry Manager MMC Snap-in will not enable wireless synchronization to occur automatically.

If you do not support the BlackBerry Desktop Manager in your BlackBerry environment, you must activate BlackBerry devices over the wireless network to enable wireless synchronization.

Preparing to upgrade from BlackBerry Enterprise Server Version 3.6

When you upgrade from BlackBerry Enterprise Server Version 3.6.3 or later, you consolidate the BlackBerry Enterprise Server and user configuration information from earlier database versions. You migrate server state and user configuration information from the messaging server to the BlackBerry Configuration Database. You replace earlier implementations of multiple BlackBerry Enterprise Server instances that connect to the messaging server with multiple BlackBerry Messaging Agents on a single BlackBerry Enterprise Server. Prepare for this upgrade by cleaning up the data, creating backups, and removing unused instances before upgrading the BlackBerry Configuration Database.

If you have applications in your BlackBerry environment that connect to the BlackBerry® Mobile Data Service on custom ports, you must change those applications to connect on standard ports.

If you want wireless synchronization to occur automatically after the upgrade process completes, you must also instruct users to synchronize their BlackBerry device capabilities before you upgrade the BlackBerry Enterprise Server. See "Synchronize BlackBerry device capabilities" on page 40 for more information

Perform system maintenance

Perform system maintenance to help minimize the upgrade time and to help promote an uninterrupted upgrade and user migration.

> Remove inactive user accounts from the BlackBerry Enterprise Server. See the *BlackBerry Enterprise Server for Microsoft Exchange Version 3.6.x Administration Guide* for more information.

Verify BlackBerry device assignments

Use the HandheldCleanup tool to locate out-of-date assignments between BlackBerry devices and user mailboxes. This tool checks for any BlackBerry devices that are assigned to user mailboxes that do not have a current server domain name. When the tool locates user mailboxes with different server domain names, it changes the server domain name to the Global Address List server domain name and adds the BlackBerry device to the report list.

1. At the command prompt, switch to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Utility.

2. Type **HandheldCleanup.exe.**

3. Type any of the following parameters, in the order in which they appear:

Parameter	Procedure
-d [*<filename>*] [-p *<MAPI profile name>*]	1. Type the name of the file in which to save information for each BlackBerry device on the BlackBerry Enterprise Server.
	2. Type the name of the MAPI profile you use to connect to the messaging server.
	Notes: If you do not specify a file name, the information displays on screen.
	The tool prompts you for the name of the BlackBerry Enterprise Server.
-u [-p *<MAPI profile name>*]	> Type the name of the MAPI profile you use to connect to the messaging server.

For example, to retrieve BlackBerry device information using a MAPI profile named BESAdmin and to write the results in a file named results.txt, type **handheldcleanup.exe -d results.txt -p BESAdmin -u**.

4. Press ENTER.

Back up system information

> Perform the following actions:

Action	Procedure
Back up the BlackBerry Enterprise Server registry settings.	1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, open the Registry Editor.
	2. In the left pane, browse to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion.
	3. Back up all the registry keys.
Back up the BlackBerry Enterprise Server log files.	1. Back up the BlackBerry Enterprise Server log files to another computer.
	2. Delete the log files from the BlackBerry Enterprise Server computer.

Prepare to consolidate multiple instances of the BlackBerry Enterprise Server

When you upgrade multiple instances of the BlackBerry Enterprise Server, the setup program makes the name of the primary instance the new BlackBerry Enterprise Server name. After defining this new name, the setup program migrates all user accounts to this BlackBerry Enterprise Server and then deletes all other service information, files, and registry settings from the obsolete instances.

At the time of the upgrade, the user's BlackBerry device continues to function correctly. The user account association to the old Server Routing Protocol (SRP) identifier is maintained until the BlackBerry device receives new service books that contain the SRP identifier of the new BlackBerry Enterprise Server. If users have BlackBerry Device Software Version 4.0 or later, they receive the service books over the wireless network. If users have a version of the BlackBerry Device Software earlier than 4.0, they receive the service books the next time they connect their BlackBerry device to the BlackBerry Desktop Manager.

If you have instances of the BlackBerry Enterprise Server installed that have never been added to the BlackBerry Enterprise Server Management console, you must either add the instances to the BlackBerry Enterprise Server Management console or remove the instances of the BlackBerry Enterprise Server before you start the upgrade process. If you have instances of the BlackBerry Enterprise Server installed that are not added to the BlackBerry Enterprise Server Management console, the BlackBerry Configuration Database upgrade does not complete successfully.

You can only consolidate multiple instances of the BlackBerry Enterprise Server that connect to the same SRP address. If you have multiple BlackBerry Enterprise Server instances that connect to different SRP addresses, you must either edit the instances to use the same SRP address, or you must move the instances and the associated user accounts to separate computers.

> Perform any of the following actions:

Action	Procedure
Identify the primary instance.	1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, open the Registry Editor.
	2. In the left pane, browse to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Servers.
	3. Click the first BlackBerry Enterprise Server instance key (for example, <*ComputerName*>*1*).
	4. Check the **ServerInstance** for the following values:
	• If the value is 1, this is the primary instance.
	• If the value is not 1, repeat steps 3 through 4 for the remaining server instance keys.
	• If you no longer have an instance with a value of 1, the minimum value (for example, 2) is the primary instance.
Add all instances of the BlackBerry Enterprise Server that you plan to upgrade to the BlackBerry Enterprise Server Management console.	> See the *BlackBerry Enterprise Server for Microsoft Exchange Version 3.6.x Administration Guide* for more information.
Remove all instances of the BlackBerry Enterprise Server that you do not plan to upgrade.	> See the *BlackBerry Enterprise Server for Microsoft Exchange Version 3.6.x Installation and Getting Started Guide* for more information.
Edit the SRP addresses so that all instances use the same address.	> See the *BlackBerry Enterprise Server for Microsoft Exchange Version 3.6.x Administration Guide* for more information.
Move all instances that connect to different SRP addresses to new computers.	1. Install the BlackBerry Enterprise Server Version 3.6 on a new computer using the different SRP address (for example, SRP2.na.blackberry.net).
	2. Add the BlackBerry Enterprise Server to the BlackBerry Enterprise Server Management console.
	3. In the management console, move the user accounts from the instance using SRP2 to the new BlackBerry Enterprise Server using SRP2.
	4. Instruct users to connect their BlackBerry devices to the BlackBerry Desktop Manager to activate the BlackBerry devices on the new BlackBerry Enterprise Server.
	5. Remove the obsolete instance that used SRP2 from that BlackBerry Enterprise Server.
	6. Repeat steps 1 through 5 for all other SRP addresses.

Preview the user migration

You can test the user migration by running the BESMigration tool in preview mode on a copy of the BlackBerry Configuration Database. You must upgrade the BlackBerry Configuration Database to Version 4.1 before you can preview the user migration. Use the CreateDB tool to upgrade the BlackBerry Configuration Database.

After you upgrade the test BlackBerry Configuration Database, you can use the preview setting to identify any issues that might occur (for example, identifying inactive user accounts that you cannot migrate) and to estimate the time that it should take to migrate user accounts during the upgrade process.
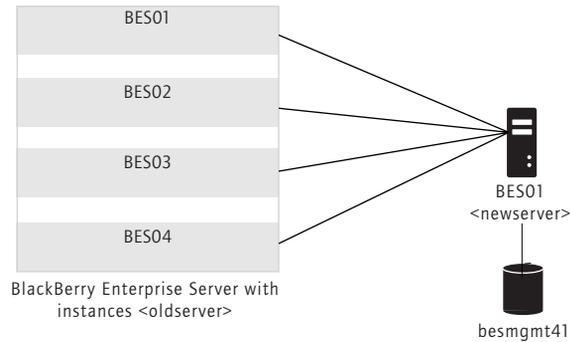
Migrating the user accounts from multiple instances

If you are previewing the user migration from a BlackBerry Enterprise Server that uses multiple instances, you must use the same definitions for the new BlackBerry Enterprise Server that the setup program uses when it consolidates the instances. You must specify the primary instance as the *<new server>* name and if you are previewing the user migration from the primary instance, the *<old server>* and *<new server>* names must be the same.

1. In the BlackBerry Enterprise Server installation media, open the D**atabase** folder.

2. Perform the following actions:

Action	Procedure

Define settings for the BlackBerry Configuration Database.	1. Open the **BESMgmt.cfg** file.
	
	2. Specify the following settings:
	  • **Database_name**: Type the name of the test BlackBerry Configuration Database.
	  • **Userid**: Set a user name with server administrator and database creator permissions if you do not want to use your own NTLM account.
	  • **Password**: Set a password for the user name.
	  • **Script_root**: Set the path to the **DBInstallScripts** folder if this folder is not located in the same root folder as the **createdb.exe** file.
	  • **Log_dir**: Set the path to the folder in which to create log files if this folder is not located in the same root folder as the **createdb.exe** file.
	  • **Db_file_dir**: Set a folder in which to save the database files if this folder is not located in the same root folder as the **createdb.exe** file. This folder must already exist.
	  • **Backup_dir**: Set a folder in which to save the database backup if this folder is not located in the same root folder as the **createdb.exe** file. This folder must already exist.
	
	3. Save the file and close it.

Upgrade the test BlackBerry Configuration Database.	1. At the command prompt, type **CreateDB.exe <*path*>BESMgmt.cfg**. 2. Press ENTER.

3. At the command prompt, switch to the **Tools** folder in the BlackBerry Enterprise Server installation media.

4. Type **besmigration.exe**.

5. Type any of the following parameters, in the order in which they appear:

Parameter	Procedure
-s *<MAPI profile> <old server> <new server>*	1. Type the MAPI profile to use when migrating BlackBerry Enterprise Server and user account information.
	2. Type the name of the BlackBerry Enterprise Server or instance from which you are migrating user accounts.
	3. Type the name of the BlackBerry Enterprise Server primary instance to which you are migrating user accounts.
-d *<DB server name> <DB name>*	> Type the computer name and the database name of the BlackBerry Configuration Database.
-l	> Type the name of and the path to the log file.
	Note: If the migration fails for any reason, check this log file for error messages.
-t	> Type the name of and the path to the status file used to track the progress of the migration.
	Note: On subsequent migration attempts, the BESMigration tool reads this file to determine which user records already exist in the BlackBerry Configuration Database.
-w	> Include this parameter to write status and progress information to the registry.
-u *<username> <password>*	> If you are using SQL authentication, type the login and password.
-p	> Include this parameter to run the migration tool in preview mode without making any changes to the BlackBerry Configuration Database.
	Note: This parameter displays migration errors that might occur, but it does not check for server errors.
-q	> Include this parameter to run the migration tool silently.
-g	> Include this parameter to print user properties retrieved from the user's mailbox to the migration log file.
	Note: Use this command for troubleshooting purposes only.

For example, to preview the user migration from a BlackBerry Enterprise Server instance named BES02 to a BlackBerry Enterprise Server named BES01, using a MAPI profile named BESAdmin, with a database server named sqlserver1 and a BlackBerry Configuration Database named besmgmt, and to write migrate.log and status.tmp files to the root directory, type **besmigration.exe -s"BESADMIN" "BES02" "BES01" -d "sqlserver1" "besmgmt" -l migrate.log -t status.tmp -w -p**.

6. Press ENTER.

Standardize connections to the BlackBerry Mobile Data Service

>   Verify that applications connect to the BlackBerry Mobile Data Service on the following ports:

*   BlackBerry Mobile Data Service host port: 3200

*   web server listen port: 8080

*   web server SSL listen port: 8443

Synchronize BlackBerry device capabilities

When users connect their BlackBerry devices to the BlackBerry Desktop Manager, the BlackBerry Desktop Manager writes whether the BlackBerry device is capable of wireless synchronization into the user's mailbox. When the BlackBerry Enterprise Server is upgraded, the BlackBerry Synchronization Service sends service books to those BlackBerry devices that are capable of wireless synchronization automatically.

If you do not perform the following task for BlackBerry devices that are capable of wireless synchronization, the BlackBerry Enterprise Server cannot update the service books automatically after upgrade, and those BlackBerry devices cannot send or receive email messages.

> To ensure wireless synchronization occurs automatically after the upgrade process completes, instruct users with BlackBerry Device Software Version 4.0 or later to connect their BlackBerry devices to the BlackBerry Desktop Manager Version 3.6.3 or later before you upgrade the BlackBerry Enterprise Server.

> Users must connect their BlackBerry devices to the BlackBerry Desktop Manager. Connecting the BlackBerry device to a BlackBerry Manager or a Legacy BlackBerry Manager MMC Snap-in will not enable wireless synchronization to occur automatically.

If you do not support the BlackBerry Desktop Manager in your BlackBerry environment, you must activate BlackBerry devices over the wireless network to enable wireless synchronization.

Preparing to upgrade from BlackBerry Enterprise Server Version 4.0

When you upgrade from BlackBerry Enterprise Server Version 4.0, you upgrade the database schema from earlier versions. Prepare for this upgrade by cleaning up the data and creating backups before upgrading the BlackBerry Configuration Database.

Before you upgrade to BlackBerry Enterprise Server Version 4.1.4, make sure that all BlackBerry Enterprise Servers in your environment that share a BlackBerry Configuration Database are Version 4.0.3 or higher. Certain components in earlier versions of the BlackBerry Enterprise Server are not optimized for use with the BlackBerry Enterprise Server Version 4.1.4.

Perform system maintenance

Perform system maintenance to help minimize the upgrade time and to help promote an uninterrupted upgrade and user migration.

> Remove inactive user accounts from the BlackBerry Enterprise Server. See the *BlackBerry Enterprise Server for Microsoft Exchange Version 4.0 Administration Guide* for more information.

Back up system information

> Perform the following actions:

Action	Procedure
Back up the BlackBerry Enterprise Server registry settings.	1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, open the Registry Editor.
	2. In the left pane, browse to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion.
	3. Back up all the registry keys.
Back up the BlackBerry Enterprise Server log files.	1. Back up the BlackBerry Enterprise Server log files to another computer.
	2. Delete the log files from the BlackBerry Enterprise Server computer.

Back up the BlackBerry Configuration Database

If your database environment is Microsoft SQL Server, use the backup and restore tools provided by Microsoft.

If your database environment is MSDE 2000, you can use the BlackBerry Database Backup tool that is provided with the BlackBerry Enterprise Server software to perform a full backup of the BlackBerry Configuration Database. By default, the backup file is named *<database name><YYYYMMDDHHMMSS>*.bak.

1. On the server on which the BlackBerry Configuration Database is located, at the command prompt, switch to the **Tools** folder in the BlackBerry Enterprise Server installation media.

2. Type **BlackBerryDBBackup.exe**.

3. Type any of the following parameters, in the order in which they appear:

Parameter	Procedure
-d	> Type the database name.
-f	> Type the folder in which the backup file is saved. By default, this parameter is set to the current location.
	Note: If you specify a different location, the folder must already exist.
-S	> Type the name of the server on which the database is located. By default, this parameter is set to the local server.
-E	> Include this parameter if you want to use your own NTLM account to connect to the database instead of SQL authentication. By default, this parameter is set to False.
	Note: Your account must have server administrator and database owner permissions.
-U	> Type the SQL authentication user name. By default, this parameter is set to System Administrator.
	Note: If you want to use a different account, it must have server administrator and database owner permissions.
-P	> Type the SQL authentication password. By default, this parameter is blank.
-p	> Type the interval at which you want progress reported. By default, this parameter is set to 10%.

For example, to back up a BlackBerry Configuration Database named BESMgmt to a folder called DB_backup_folder using the SQL credentials sqlusername and sqlpassword, type **BlackBerryDBBackup.exe -d BESMgmt -f C:\DB_backup_folder -U sqlusername -P sqlpassword**.

4. Press ENTER.

4

Configuring your environment

Configuring Microsoft Exchange to support wireless calendar synchronization

The BlackBerry Enterprise Server uses Microsoft Exchange System Manager tools to support wireless calendar synchronization with the Microsoft Exchange messaging server.

The version of the Microsoft Exchange System Manager tools that you install on the BlackBerry Enterprise Server must match the version—including service pack—that is on your messaging servers.

Review the Microsoft known issues that might impact your messaging environment. If you experience a problem that is described in an article and have not upgraded your messaging servers to the service pack that contains the fix, download and install the hotfix on the computer on which you plan to install the BlackBerry Enterprise Server.

> **Note**: Before you install the hotfix, verify that you meet the requirements described in the hotfix.

If your BlackBerry Enterprise Server connects to multiple messaging servers, select the hotfix that is applicable to the latest version of the Exchange software in your environment.

Review the following Microsoft known issues that might impact your messaging environment.

Microsoft Exchange System Manager tools	Microsoft Knowledge Base articles
Microsoft Exchange Version 5.5 Administrator	• www.support.microsoft.com/kb/312273 • www.support.microsoft.com/kb/818709
Microsoft Exchange 2000 System Manager	• www.support.microsoft.com/kb/314606 • www.support.microsoft.com/kb/824960
Microsoft Exchange 2003 System Manager	• www.support.microsoft.com/kb/823343 • www.support.microsoft.com/kb/894470

Setting database permissions

When you run the setup program, the account that you use must have permissions on the database server. The type of permission depends on the setup type that you choose and whether you are creating the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server or on a remote database server.

If you create the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server, you also install a custom event-based notification system that is designed to reduce the number of database queries made by the BlackBerry Enterprise Server to the BlackBerry Configuration Database. You require a higher level of permission for this installation because you must register this database notification system.

If you create the BlackBerry Configuration Database on a remote database server, you do not install the database notification system automatically, so you require a lower level of permission. You can install the database notification system manually after you complete the setup program.

If you install the BlackBerry MDS Services, you must use a database login instead of a Windows account to create and access the BlackBerry MDS Services databases. If you are using a database login to create the BlackBerry Configuration Database, you must use a different login for the BlackBerry MDS Services databases.

The BlackBerry MDS Services store their BlackBerry MDS Service database access credentials in plain text form in *<Installation directory>*\BlackBerry MDS Services 4.1.1\jakarta-tomcat-5.5.9\conf\server.xml. To protect the access credentials in that storage location, you must limit read and write control to that location.

If you install MSDE 2000 during the BlackBerry Enterprise Server installation, you do not need to set additional permissions. When you select Windows (trusted) authentication during the BlackBerry Enterprise Server installation, the required permissions are given to the account that you use to run the setup program.

Visit http://msdn2.microsoft.com/en-us/library/aa905156(SQL.80).aspx for more information about Microsoft SQL Server security.

Set Microsoft SQL Server permissions

> Perform one of the following actions:

Action	Procedure
Create or upgrade the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server, and register the database notification system.	> Assign System Administrator permission.
Create or upgrade the BlackBerry Configuration Database on a remote database server during the BlackBerry Enterprise Server installation.	> Assign Server Administrator and Database Creator permissions. If you are using Microsoft SQL Server 2005, also assign the System Administrator permission or the following roles: SQLAgentUserRole, SQLAgentReaderRole, and SQLAgentOperatorRole.
Create the BlackBerry MDS Services databases during the BlackBerry MDS Services or BlackBerry Enterprise Server with BlackBerry MDS Services installations.	> Assign System Administrator permission.

5

Upgrading the BlackBerry Enterprise Server using an in-place process

Checklist: Confirm the upgrade requirements

Use the following checklist to confirm that you are ready to start the upgrade:

Step	
Verify that you have met all the system requirements. See "System requirements for the BlackBerry Enterprise Server" on page 17 for more information.	☐
You can upgrade from BlackBerry Enterprise Server Version 2.1.5, Version 3.5.2, and Version 3.6.3 or later, and Version 4.0 or later.	☐
Perform system maintenance.	☐
Back up system information.	☐
Upgrade from Microsoft Exchange Version 5.5 administrative extensions, if you are upgrading from a version earlier than BlackBerry Enterprise Server Version 3.6. See "Migrate BlackBerry Enterprise Server information from Microsoft Exchange 5.5 administration extensions" on page 31 for more information.	☐
Prepare for instance consolidation, if you are upgrading from BlackBerry Enterprise Server Version 3.6. See "Prepare to consolidate multiple instances of the BlackBerry Enterprise Server" on page 35 for more information.	☐
Estimate the time that it should take to migrate user accounts during the upgrade process. See "Preview the user migration" on page 36 for more information.	☐
Verify that applications connect to the BlackBerry Mobile Data Service on standard ports. See "Standardize connections to the BlackBerry Mobile Data Service" on page 39 for more information.	☐
Synchronize BlackBerry device capabilities. See "Synchronize BlackBerry device capabilities" on page 40 for more information.	☐
Log into the computer using the service account with the appropriate administrator and database permissions. See "Setting database permissions" on page 43 for more information. **Note**: The service account is added automatically to the Security administrator role in the BlackBerry Configuration Database.	☐
If you are installing the BlackBerry Enterprise Server using Terminal Services, stop all BlackBerry services and close the Services and Computer Management panels before you start the BlackBerry Enterprise Server setup program.	☐
Confirm that you have the following required credentials from your environment: • computer name and port of the instant messaging server • computer name and port of the proxy server **Note**: If you are using a .pac file to configure the connection, you can specify the file after you complete the upgrade process.	☐

Upgrade the BlackBerry Enterprise Server

1. Log in to your computer using the BESAdmin service account.

2. Double-click the **setup.exe** file.

3. Complete the instructions on the screen.

4. When prompted to restart the computer, click **Yes**.

5. Log in using the same account that you used for the setup program.

6. Complete the instructions on the screen.

7. Before completing the setup program, clear the **Start Service(s)** option.

Improve the startup performance of the BlackBerry Enterprise Server

After some BlackBerry Enterprise Server upgrades, new service books are sent to every BlackBerry device. Sending all the new service books at once can result in slow startup times. To improve startup performance, set a limit to how many service books the BlackBerry Enterprise Server sends each hour.

Complete the following task on any BlackBerry Enterprise Server installation that includes the Policy Server.

1. On the computer on which you upgraded the BlackBerry Enterprise Server, open the Registry Editor.

2. In the HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\BlackBerry IT Admin Server key, create the following DWORD values:

    *   **SBThrottlingEnabled**: Set to 1.

    *   **SBThrottleLimit**: Set, in decimal format, to the maximum number of service books the BlackBerry Enterprise Server should send every hour. The default is .60.

3. In the Windows Services panel, start the BlackBerry Enterprise Server and other BlackBerry services.

Troubleshooting the BlackBerry Enterprise Server upgrade process

Resolving issues during the upgrade process

Symptom	Possible solution
You encounter errors when previewing the user migration.	1. Browse to the location that you specified for the migration log file.
	2. Check the log file for errors.
	3. Preview the user migration again, using the -e parameter to create an extended log file that contains events reported by other components (for example, the BlackBerry Configuration Database).
	Notes:
	The the extended log file contains user's BlackBerry information that is stored in the mailbox, which may be sensitive, for example, encryption keys.
	The extended log file is large, so the computer on which you create the log file must have a large volume of free hard disk space
You cannot resolve errors that occur when migrating user accounts.	1. Remove the user accounts from the BlackBerry Enterprise Server before you start the upgrade.
	2. Add the user accounts to the BlackBerry Enterprise Server when the upgrade is complete.
	3. Activate users' BlackBerry devices over the wireless network.
You encounter errors while upgrading the BlackBerry Configuration Database.	1. Browse to the C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Installer folder, or to the location that you defined in the setup program.
	2. Locate the DB_InstallV<*YYMMDDHHMMSS*>.log, where <*YYMMDDHHMMSS*> specifies the date and time in 24-hour clock format when you upgraded the BlackBerry Configuration Database.
	3. Check the log file for errors.
You cannot resolve errors that occur when upgrading the BlackBerry Configuration Database, and you want to restore the backup that you made with the BlackBerry Database Backup tool.	1. On the server where the BlackBerry Configuration Database is located, at the command prompt, switch to the **Tools** folder in the BlackBerry Enterprise Server installation media.
	2. Type **BlackBerryDBRestore.exe.**
	3. Type the same parameters that you used when you created the database backup. See "Back up the BlackBerry Configuration Database" on page 41 for more information.
	4. Press ENTER.
One of the third-party tools installed by the setup program does not install successfully and the setup program ends.	1. In the BlackBerry Enterprise Server installation media, open the **Tools** folder and locate the program that you want to install.
	2. Install the third-party tool manually.
	3. Restart the setup program.

Symptom	Possible solution
When you start the setup program, the message "Previous version detected but no database available" appears and the setup program ends.	Verify that the registry keys identifying your BlackBerry Configuration Database are present. 1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, start the Registry Editor. 2. In the left pane, browse to HKEY_LOCAL_MACHINE\Research In Motion\BlackBerry Enterprise Server\Database\. 3. Create the following string values (if they do not exist): • **DatabaseName**: Type the name of the BlackBerry Configuration Database. • **DatabaseServerMachineName**: Type the computer name of the database server. **Note**: These values are case sensitive. 4. Restart the setup program.
You were not prompted to edit or confirm the MAPI profile during the installation.	You can create and edit the MAPI profile manually. 1. In the BlackBerry Enterprise Server installation media, open the **Tools** folder. 2. Double-click the **Fixmapisvc.exe** file. The **mapisvc.inf** file installs at C:\winnt\system32\ or C:\windows\system32\ automatically. 3. On the taskbar, click **Start** > **BlackBerry Enterprise Server** > **Edit MAPI Profile**. 4. Type the Microsoft Exchange server name. 5. Select the mailbox associated with the MAPI profile. 6. Click **OK**.
When you install service pack 1 to a previously installed version of Microsoft .NET Framework Version 1.1, the setup program prompts you for access to the original installation media for Microsoft .NET Framework Version 1.1.	1. When the setup program prompts you for the location of the **netfx.msi** file, browse to the **Tools** folder in the BlackBerry Enterprise Server installation media. 2. Click the file.

Resolving issues after the upgrade process

Symptom	Possible solution
The BlackBerry Collaboration Service is not connecting to the Microsoft Live Communications Server.	If you are using TLS as the communication protocol, verify that authentication is configured. 1. Visit www.microsoft.com/downloads to download Microsoft Office Communicator 2005 Trial Edition. 2. Install the Microsoft Office Communicator 2005 client on the computer on which the BlackBerry Collaboration Service is located. 3. Use Microsoft Office Communicator 2005 to connect to the Microsoft Live Communications Server. 4. If a connection cannot be made, confirm that you have installed or imported the required authentication certificates.

Upgrading the BlackBerry Enterprise Server using a cutover process

Checklist: Confirm the upgrade preparation on the existing BlackBerry Enterprise Servers

Step	
Perform system maintenance on the existing BlackBerry Enterprise Servers.	☐
Back up system information on the existing BlackBerry Enterprise Servers.	☐
Estimate the time that it should take to migrate user accounts during the upgrade process. See "Preview the user migration" on page 36 for more information.	☐
Verify that applications connect to the Mobile Data Service on standard ports. See "Standardize connections to the BlackBerry Mobile Data Service" on page 39 for more information.	☐
Synchronize BlackBerry device capabilities. See "Synchronize BlackBerry device capabilities" on page 40 for more information.	☐

Checklist: Confirm the installation requirements on the new computer

Step	
Verify that you have met all the system requirements on the new computer. See "Hardware requirements" on page 17 for more information.	☐
Log into the new computer using the service account with the appropriate server administrator and database permissions. See "Setting database permissions" on page 43 for more information. **Note**: The setup program adds this account automatically to the Security administrator role in the BlackBerry Configuration Database.	☐

Step	
Verify that the local system account on the new computer can access the BlackBerry Configuration Database. See "Setting database permissions" on page 43 for more information.	☐
If you are installing the BlackBerry Enterprise Server using Terminal Services, stop all BlackBerry services and close the Services and Computer Management panels before you start the BlackBerry Enterprise Server setup program.	☐
Confirm that you have the following credentials for the BlackBerry Enterprise Server Version 4.1.4 installation: • computer name and port of the instant messaging server • computer name and port of the proxy server **Note**: If you are using a .pac file to configure the connection, you can specify the file after the installation completes.	☐

Install the BlackBerry Enterprise Server Version 4.1.4 on a new computer

When you install the new BlackBerry Enterprise Server, use the same name and the same SRP credentials as one of the BlackBerry Enterprise Servers that you plan to replace. In a Version 3.6 environment, you can use the name and credentials from the primary instance. See "Prepare to consolidate multiple instances of the BlackBerry Enterprise Server" on page 35 for more information about identifying the primary instance.

1. Log in to your computer using the BESAdmin service account.

2. Double-click the **setup.exe** file.

3. Complete the instructions on the screen.

4. When prompted to restart the computer, click **Yes**.

5. Log in using the same account that you used for the setup program.

6. Create or specify a new BlackBerry Configuration Database during the installation. Do not upgrade your existing BlackBerry Configuration Database.

7. Complete the instructions on the screen.

8. Before completing the setup program, clear the **Start Service(s)** option.

Migrate the user accounts

1. On the BlackBerry Enterprise Server on which the user accounts reside, at the command prompt, switch to the **Tools** folder in the BlackBerry Enterprise Server installation media.

2. Type **besmigration.exe.**

3. Type any of the following parameters, in the order in which they appear:

Parameter	Procedure
-s *<MAPI profile> <old server> <new server>*	1. Type the MAPI profile to use when migrating the BlackBerry Enterprise Server and user account information.
	2. Type the name of the BlackBerry Enterprise Server or instance from which you are migrating users.
	3. Type the name of the BlackBerry Enterprise Server to which you are migrating users.
	Note: When you migrate users from the primary instance on the old BlackBerry Enterprise Server to the new BlackBerry Enterprise Server, the *<old server>* and *<new server>* names must be the same.
-d *<DB server name> <DB name>*	> Type the computer name and the database name of the BlackBerry Configuration Database.
-l	> Type the name of and the path to the log file.
	Note: If the migration fails for any reason, check this log file for error messages.
-t	> Type the name of and the path to the status file used to track the progress of the migration.
	Note: On subsequent migration attempts, the BESMigration tool reads this file to determine which user records already exist in the BlackBerry Configuration Database.
-w	> Include this parameter to write status and progress information to the registry
-u *<username> <password>*	> If you are using database authentication, type the login and password.

For example, to migrate users from a BlackBerry Enterprise Server instance named BES02 to the new BlackBerry Enterprise Server named BES01 using a MAPI profile named BESAdmin, with a database server named sqlserver1, and a new BlackBerry Configuration Database named besmgmt41, and to write migrate.log and status.tmp files to the root directory, type **besmigration.exe -s"BESADMIN" "BES02" "BES01" -d "sqlserver1" "besmgmt41" -l migrate.log -t status.tmp -w**.

4. Press ENTER.

Stop the old BlackBerry Enterprise Server

After you migrate the user accounts to the new BlackBerry Enterprise Server, you must prevent the old BlackBerry Enterprise Server from connecting to the wireless infrastructure. If you attempt to connect two BlackBerry Enterprise Servers to the wireless infrastructure using the same SRP credentials, the credentials are deactivated.

1. In the Windows Services panel, stop all BlackBerry services.
2. Set the startup type for all BlackBerry services to **Disabled**.

Improve the startup performance of the BlackBerry Enterprise Server

After some BlackBerry Enterprise Server upgrades, new service books are sent to every BlackBerry device. Sending all the new service books at once can result in slow startup times. To improve startup performance, set a limit to how many service books the BlackBerry Enterprise Server sends each hour.

Complete the following task on any BlackBerry Enterprise Server installation that includes the Policy Server.

1. On the computer on which you installed the new BlackBerry Enterprise Server, open the Registry Editor.

2. In the HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\BlackBerry IT Admin Server key, create the following DWORD values:

    - **SBThrottlingEnabled**: Set to 1.

    - **SBThrottleLimit**: Set, in decimal format, to the maximum number of service books the BlackBerry Enterprise Server should send every hour. The default is .60.

Start the new BlackBerry Enterpriser Server

Verify that the BlackBerry Enterprise Server from which you copied the SRP credentials is stopped before starting the new BlackBerry Enterprise Server.

1. In the Windows Services panel, start the BlackBerry services in the following order:

    - BlackBerry Controller

    - BlackBerry Router

    - BlackBerry Dispatcher

    - all remaining services

2. In the BlackBerry Manager, start the BlackBerry Enterprise Server and other BlackBerry services.

Reactivate user accounts

>   Activate BlackBerry devices over the wireless network or serially.

Troubleshooting the BlackBerry Enterprise Server upgrade

Resolving issues during the upgrade

Symptom	Possible solution
One of the third-party tools installed by the setup program does not install successfully and the setup program ends.	1. In the BlackBerry Enterprise Server installation media, open the **Tools** folder and locate the program that you want to install. 2. Install the third-party tool manually. 3. Restart the setup program.

Symptom	Possible solution

When you start the setup program, the message "Previous version detected but no database available" appears and the setup program ends.	Verify that the registry keys identifying the BlackBerry Configuration Database are present.
	
	1. On the computer on which you plan to upgrade the BlackBerry Enterprise Server, start the Registry Editor.
	2. In the left pane, browse to HKEY_LOCAL_MACHINE\Research In Motion\BlackBerry Enterprise Server\Database\.
	3. Create the following string values (if they do not exist):
	  • **DatabaseName**: Type the name of the BlackBerry Configuration Database.
	  • **DatabaseServerMachineName**: Type the computer name of the database server.
	  Note: These values are case sensitive.
	4. Restart the setup program.

You encounter errors when migrating users.	1. Browse to the location you specified for the migration log file. 2. Check the log file for errors. 3. Preview the user migration again, using the -g parameter to print properties retrieved from the user's mailbox to the migration log file.
You cannot resolve errors that occur when migrating users.	1. Remove the users from the BlackBerry Enterprise Server before you start the upgrade. 2. Add the users to the BlackBerry Enterprise Server when the upgrade is complete. 3. Activate users' BlackBerry devices over the wireless network.
You were not prompted to edit or confirm the MAPI profile during the installation.	You can create and edit the MAPI profile manually. 1. In the BlackBerry Enterprise Server installation media, open the **Tools** folder. 2. Double-click the **Fixmapisvc.exe** file. The **mapisvc.inf** file installs in C:\winnt\system32\ or C:\windows\system32\ automatically. 3. On the taskbar, click **Start** > **BlackBerry Enterprise Server** > **Edit MAPI Profile**. 4. Type the Microsoft Exchange server name. 5. Select the mailbox associated with the MAPI profile. 6. Click **OK**.
When installing service pack 1 to a previously installed version of Microsoft .NET Framework version 1.1, the setup program prompts you for access to the original installation media for Microsoft .NET Framework version 1.1.	> When the setup program prompts you for the location of the **netfx.msi** file, browse to the **Tools** folder in the BlackBerry Enterprise Server installation media, and select the file. Visit support.microsoft.com/kb/320474 for more information.

Resolving issues after the upgrade

Symptom	Possible solution
The BlackBerry Collaboration Service is not connecting to the Microsoft Live Communications Server.	If you are using TLS as the communication protocol, verify that authentication is configured.
	1. Visit www.microsoft.com/downloads to download Microsoft Office Communicator 2005 Trial Edition.
	2. Install the Microsoft Office Communicator 2005 client on the computer on which the BlackBerry Collaboration Service is installed.
	3. Use Microsoft Office Communicator 2005 to connect to the Microsoft Live Communications Server.
	4. If a connection cannot be made, confirm that you have installed or imported the required authentication certificates.

Returning user accounts to their previous BlackBerry Enterprise Server version

You can return user accounts to their previous BlackBerry Enterprise Server version, but you have a limited amount of time in which to do so.

After users connect their BlackBerry devices to the BlackBerry Desktop Manager and receive their new SRP routing and service name information, you can no longer migrate their accounts back to a BlackBerry Enterprise Server Version 3.6. You must remove the user accounts from the BlackBerry Enterprise Server Version 4.1.4, instruct the users to clear their BlackBerry devices, and then add the accounts to the BlackBerry Enterprise Server at Version 3.6.

Any updates that you perform to your user accounts in the BlackBerry Manager Version 4.1.4 for MMC—for example, any user accounts that you add or remove—are not retained when you migrate the user accounts back to the BlackBerry Enterprise Server Version 3.6.

Upgrading the BlackBerry Enterprise Server using a phased process

Phased upgrades

You can upgrade your BlackBerry Enterprise Servers to Version 4.1.4 in phases while maintaining BlackBerry Enterprise Servers at versions earlier than 4.1.4.

When you upgrade your BlackBerry environment gradually, you must use different administrative tools to manage the different versions of the BlackBerry Enterprise Server. When you upgrade to BlackBerry Enterprise Server Version 4.1.4 and your environment contains BlackBerry components at Version 4.1.1 and earlier, you must verify which BlackBerry component version combinations are supported. You must also consider how changes to the configuration and user access information impact existing versions of the BlackBerry Mobile Data Service (BlackBerry MDS Connection Service).

Managing a mixed-version environment

The administrative tools that you use to manage a mixed-version environment depend on the versions of the BlackBerry Enterprise Server that you continue to operate.

You can create a BlackBerry Domain—multiple BlackBerry Enterprise Servers sharing a single BlackBerry Configuration Database—with BlackBerry Enterprise Servers Version 4.0 and Version 4.1 so that you can move user accounts easily and limit their service interruption.

After you upgrade the BlackBerry Configuration Database to Version 4.1, you must administer all BlackBerry Enterprise Servers in that BlackBerry Domain using BlackBerry Manager Version 4.1. You must also use the BlackBerry Manager Version 4.1 for MMC to perform some administrative tasks on BlackBerry Enterprise Servers earlier than Version 4.1. See the *Managing multiple versions of the BlackBerry Enterprise Server for Microsoft Exchange in a BlackBerry Domain* guide for more information.

BlackBerry Mobile Data Service (BlackBerry MDS Connection Service) considerations

After you upgrade the BlackBerry Mobile Data Service to Version 4.1 or later, the service name becomes the BlackBerry MDS Connection Service.

In a mixed-version environment that includes BlackBerry Enterprise Server Version 3.6 and earlier and BlackBerry Enterprise Server Version 4.0 or later, the BlackBerry Mobile Data Service push server must be Version 4.0 or later.

The BlackBerry Enterprise Server Version 3.6 and earlier uses different locations to store the BlackBerry Mobile Data Service files and uses different tables in the BlackBerry Configuration Database. You can only push application data to user accounts on a BlackBerry Enterprise Server Version 4.0 or later from a BlackBerry Mobile Data Service push server at Version 4.0 or later.

In a mixed-version environment that includes BlackBerry Enterprise Server Version 4.1 and earlier, the BlackBerry MDS Connection Service central push server must be Version 4.1.

BlackBerry Enterprise Server Version 4.1.2 or later considerations

In a mixed-version environment that includes BlackBerry components at Version 4.1.2 or later, the BlackBerry Manager must not be at a higher version than the BlackBerry Configuration Database.
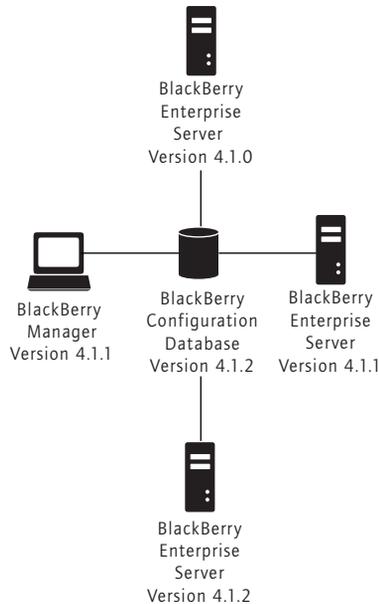
Sample supported mixed-version environment
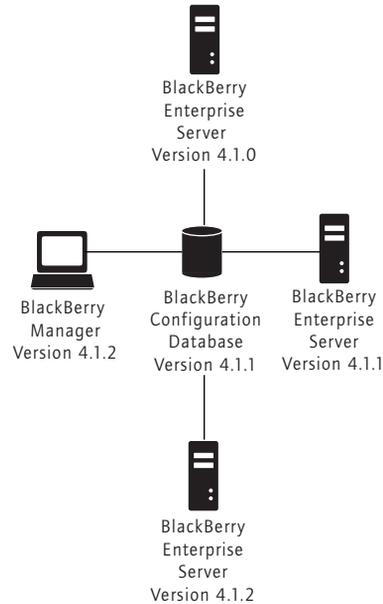
Sample unsupported mixed-version environment

New features in the BlackBerry Enterprise Server Version 4.1.2 or later—for example, one-to-many relationships between a BlackBerry MDS Connection Service or a BlackBerry Collaboration Service and multiple BlackBerry Enterprise Servers—require that all BlackBerry components be at Version 4.1.2 or later. If you are administering a BlackBerry Enterprise Server Version 4.1.0 or Version 4.1.1 with a BlackBerry Manager Version 4.1.2 or later, these new features are hidden.

Proxy settings

A BlackBerry Manager Version 4.1.2 or later cannot change proxy settings on a BlackBerry MDS Connection Service at Version 4.1.0 or Version 4.1.1.

You must re-type the BlackBerry MDS Services proxy settings created on Version 4.1.0 or Version 4.1.1 in the BlackBerry Manager after you upgrade to Version 4.1.2 or later.

Example 1: Upgrade BlackBerry Enterprise Servers at Version 4.0.3 using a phased process

This example shows how to upgrade a BlackBerry Domain of BlackBerry Enterprise Servers at Version 4.0.3. You create one new BlackBerry Enterprise Server Version 4.1.4 and use this as the first destination server in a series of user moves and in-place upgrades.

Before you upgrade to BlackBerry Enterprise Server Version 4.1.4, make sure that all BlackBerry Enterprise Servers in your environment that share a BlackBerry Configuration Database are Version 4.0.3 or higher. Certain components in earlier versions of the BlackBerry Enterprise Server 4.0 are not optimized for use with the BlackBerry Enterprise Server Version 4.1.4.

When you install the BlackBerry Enterprise Server Version 4.1.4, you specify the existing BlackBerry Configuration Database so that it upgrades to Version 4.1.4. After you complete the upgrade, you must upgrade any additional installations of the BlackBerry Manager so that they are at the same version as the BlackBerry Configuration Database.

When you move user accounts between BlackBerry Enterprise Servers in the same BlackBerry Domain, the BlackBerry Policy Service sends new service books and IT policies to the affected BlackBerry devices over the wireless network. You can move user accounts gradually to limit the number of service books and IT policies that the BlackBerry Policy Service sends at one time.

After you move all user accounts to the new BlackBerry Enterprise Server, you upgrade the empty BlackBerry Enterprise Server to Version 4.1.4. This BlackBerry Enterprise Server becomes the destination for user accounts moving from another BlackBerry Enterprise Server Version 4.0.

Continue to move user accounts to BlackBerry Enterprise Server Version 4.1 and upgrade the empty BlackBerry Enterprise Servers until all BlackBerry Enterprise Servers in the BlackBerry Domain are running Version 4.1.4.

> Perform the following actions:

Action	Procedure
Install the BlackBerry Enterprise Server Version 4.1.4 on a new computer.	1. Log in to your computer using the BESAdmin service account.
	2. Double-click the **setup.exe** file.
	3. Complete the instructions on the screen.
	4. When prompted to restart the computer, click **Yes**.
	5. Log in using the same account that you used for the setup program.
	6. Complete the instructions on the screen.
	7. When prompted to provide information for the BlackBerry Configuration Database, specify the existing BlackBerry Configuration Database for the BlackBerry Domain so that it upgrades to Version 4.1.4.
Upgrade the BlackBerry Manager to Version 4.1.4.	> Upgrade additional installations of the BlackBerry Manager in your BlackBerry Domain to Version 4.1.4, if applicable.
Move user accounts to the new BlackBerry Enterprise Server.	> Move user accounts to the BlackBerry Enterprise Server Version 4.1.4. See the *BlackBerry Enterprise Server System Administration Guide* for more information.
Upgrade the empty BlackBerry Enterprise Server to Version 4.1.4 using an in-place upgrade process.	> Upgrade the BlackBerry Enterprise Server to Version 4.1.4. See "Upgrading the BlackBerry Enterprise Server using an in-place process" on page 45 for more information.

Example 2: Upgrade BlackBerry Enterprise Servers at Version 4.0 and earlier using a phased process

The following tasks show how to upgrade several BlackBerry Enterprise Servers at Version 4.0 and earlier including the optional creation of a new BlackBerry Configuration Database.

Upgrade the BlackBerry Enterprise Server at Version 4.0 and earlier and create a new BlackBerry Configuration Database

You do not have to replace the existing BlackBerry Configuration Database before you perform the upgrade; doing so results in more administrative tasks. However, you might choose to make this change as part of an update to your overall BlackBerry environment (for example, a change in hardware).

> Perform the following actions:

Action	Procedure
Install the BlackBerry Enterprise Server Version 4.1.4 on a new computer.	1. Log in to your computer using the BESAdmin service account. 2. Double-click the **setup.exe** file. 3. Complete the instructions on the screen. 4. When prompted to restart the computer, click **Yes**. 5. Log in using the same account that you used for the setup program. 6. Complete the instructions on the screen. 7. When prompted to provide information for the BlackBerry Configuration Database, specify a new BlackBerry Configuration Database instead of the existing one(s).
Remove user accounts from the BlackBerry Enterprise Server Version 4.0 or earlier.	1. Inform users that they must perform the following actions: • back up their BlackBerry device • clear their Blackberry device 2. Remove user accounts from the BlackBerry Enterprise Server.
Add user accounts to the new BlackBerry Enterprise Server Version 4.1.4. Any BlackBerry device options that are stored in the BlackBerry Configuration Database are lost when you add user accounts to the new BlackBerry Configuration Database.	1. Add user accounts to the new BlackBerry Enterprise Server. 2. Activate users' BlackBerry devices over the wireless network.
Upgrade the empty BlackBerry Enterprise Server to Version 4.1.4 using an in-place process.	1. Upgrade the BlackBerry Enterprise Server to Version 4.1.4. See "Upgrading the BlackBerry Enterprise Server using an in-place process" on page 45 for more information. 2. When prompted to provide information for the BlackBerry Configuration Database, specify the new BlackBerry Configuration Database Version 4.1.4 to create a BlackBerry Domain.
Remove and add user accounts to the BlackBerry Enterprise Servers Version 4.1.4 and upgrade the empty BlackBerry Enterprise Servers until all BlackBerry Enterprise Servers in the BlackBerry Domain are running Version 4.1.4.	

Upgrade the BlackBerry Enterprise Server at Version 4.0 and earlier and keep the existing BlackBerry Configuration Database

1. Create a new BlackBerry Enterprise Server Version 4.1.4 and upgrade the BlackBerry Configuration Database to Version 4.1.4.

2. Upgrade the BlackBerry Manager to Version 4.1.4.

3. Move user accounts to the new BlackBerry Enterprise Server.

4. Upgrade the empty BlackBerry Enterprise Server.

See "Example 1: Upgrade BlackBerry Enterprise Servers at Version 4.0.3 using a phased process" on page 57 for more information.

>

Upgrading BlackBerry Device Software

Enabling users to upgrade the BlackBerry Device Software at their computers

Use this upgrade method to provide a link to the BlackBerry Device Software on a shared network drive. When a BlackBerry device user clicks the link, the BlackBerry Application Loader searches the network drive for the BlackBerry Device Software to install on the BlackBerry device. After the upgrade completes, the BlackBerry Application Loader connects to the messaging and collaboration server to provision the BlackBerry device.

Although it is not required, to automate the BlackBerry Device Software upgrade (for BlackBerry devices that use a USB connection only) and provisioning process, RIM recommends that you install the BlackBerry Application Loader Version 4.1. The BlackBerry Application Loader Version 4.1 installs as a component of both the BlackBerry Device Software Version 4.1 and the BlackBerry Desktop Software Version 4.1. Visit www.blackberry.com/support/downloads/ to download the BlackBerry Desktop Software Version 4.1.

Checklist: Confirm the upgrade requirements

Considerations	
Verify that the computers of BlackBerry device users in your organization can access the network drive.	☐
Verify that the computers of BlackBerry device users are running either the BlackBerry Handheld Manager, or the BlackBerry Desktop Manager Version 3.6 or later.	☐
See "Sending the BlackBerry Device Software upgrade to user computers" on page 66 for more information.	
Note: In the BlackBerry Desktop Software Version 4.1, the BlackBerry Handheld Manager has been renamed to the BlackBerry Device Manager.	
Verify that the network drive is in close proximity to users to decrease bandwidth over your corporate LAN.	☐
Copy the BlackBerry Device Software to other regional network drives, if applicable in your environment.	☐
Verify that the *<drive:>*\Program Files\Common Files\Research In Motion folder is shared with read-only permissions.	☐

Add the BlackBerry Device Software to the network drive

1. Obtain the BlackBerry Device Software installation file from your service provider.
2. Copy the BlackBerry Device Software file to the network drive.

3. On the network drive, double-click the **.exe** file.

4. Complete the installation.

5. Verify that the files are in *<drive:>*\Program Files\Common Files\Research In Motion\Shared\Loader Files\.

Confirm that the BlackBerry Application Loader Version 4.1 appears in the network drive (recommended)

1. On the network drive, browse to *<drive:>*\Program Files\Common Files\Research In Motion\AppLoader.

2. Right-click **loader.exe**. Click **Properties**.

3. On the **Version** tab, verify that the version number of the loader.exe file is 4.1 or later.

4. If the loader.exe file version number is earlier than 4.1, visit www.blackberry.com/support/downloads/ to obtain the Version 4.1 software.

Distribute the BlackBerry Desktop Software installation files (if required)

If BlackBerry device users do not have the BlackBerry Desktop Software Version 3.6 or later installed on their computers, send the BlackBerry Desktop Software to their computers.

You can customize and distribute the BlackBerry Desktop Software installation file to force settings and install the software automatically on users' computers or you can install the BlackBerry Device Manager on user computers using standard .msi installation parameters.

Option 1: Send the BlackBerry Device Manager installation file to user computers

Send users the BlackBerry Device Manager to enable them to perform actions such as charging their BlackBerry devices, synchronizing organizer items through the BlackBerry Router, and upgrading BlackBerry Device Software without you having to distribute large BlackBerry Desktop Software installation files over the corporate LAN.

If users have the BlackBerry Desktop Manager installed on their computers and you distribute the BlackBerry Device Manager to their computers, the BlackBerry Desktop Manager is removed automatically.

1. Visit www.blackberry.com/support/downloads/ to obtain the BlackBerry Device Manager Version 4.1 installation file.

2. Copy the BlackBerry Device Manager installation file to the network drive.

3. In an email message, add the path to the BlackBerry Device Manager installation file on the network drive. Instruct users to click the **blackberry device manager v4.1.msi** file.

Option 2: Send the BlackBerry Desktop Software installation file to user computers

Send users the full BlackBerry Desktop Software to enable them to synchronize organizer items and manage message redirection. If users have installed the S/MIME Support Package on their BlackBerry devices, send them the BlackBerry Desktop Software. They require the certificate synchronization tool of the BlackBerry Desktop Software to synchronize certificates and private keys.

1. Visit www.blackberry.com/support/downloads/ to obtain the BlackBerry Desktop Software installation files.

2. Copy the BlackBerry Desktop Software installation files to a network drive.

3. If applicable, extract the BlackBerry Desktop Software files from the **.exe** file to the network drive.

4. On the network drive, open the **setup.ini** file.

5. At the bottom of the **setup.ini** file, type **[INSTALL_OPTIONS]**.

6. Use the **install.txt** file, which is included with the BlackBerry Desktop Software, as a reference to configure the installation settings.

7. Save the **setup.ini** file.

8. In an email message, add the path to the BlackBerry Desktop Software installation file on the network drive. Specify the installation type based on the BlackBerry Desktop Software components that users require to automate the BlackBerry Desktop Software installation process.

   - BlackBerry Desktop Manager: \\<*shared computer name*>\setup.exe /s

   - BlackBerry Desktop Manager and BlackBerry Certificate Synchronization Manager: \\<*shared computer name*>\setup.exe /s /v"INSTALLLEVEL=125

Create and send a wireless enterprise activation password

> Generate and send a wireless enterprise activation password to users. See the *BlackBerry Enterprise Server System Administration Guide* for more information.

Send the upgrade instructions to BlackBerry device users

1. In an email message, add the path to the BlackBerry Application Loader. Specify the loading commands based on the type of connection (USB or serial) that the BlackBerry device uses.

   - USB: \\<*shared computer name*>\Research In Motion\Apploader\loader.exe /defaultUSB /forceload

   - Serial: \\<*shared computer name*>\Research In Motion\Apploader\loader.exe

2. Provide instructions to BlackBerry device users on how to complete the upgrade process. Consider providing the following instructions:

   - connect your BlackBerry device to your computer

   - do *not* disconnect your BlackBerry device from your computer until the upgrade is complete

   - if prompted, type your BlackBerry device password, and then click **Next**

   - if you have a BlackBerry device that uses a serial connection, complete the instructions on the screen

   - if prompted, select the **Provision the device during the loading process** option and select the messaging server on which you reside

Confirm that the BlackBerry Device Software upgrade is successful

> Perform one of the following actions:

Action	Procedure
Confirm the upgrade for users who are running the BlackBerry Device Software Version 3.6.	> Instruct users to confirm the BlackBerry Device Software version installed on the BlackBerry device. • In the BlackBerry device options, click **About**. • Confirm the wireless handheld version.
Confirm the upgrade for users who are running the BlackBerry Device Software Version 4.0 or later.	1. In the BlackBerry Manager, in the left pane, click a BlackBerry Enterprise Server. 2. In the **Users** list, click a user. 3. In the lower pane, confirm the BlackBerry Device Software version.

Upgrading the BlackBerry Device Software at a central computer or kiosk

Use this upgrade method to define a software configuration for BlackBerry devices in your organization. In the software configuration, point to the shared network location of the BlackBerry Device Software that you want to install on a specific BlackBerry device model.

Checklist: Confirm the upgrade requirements

Considerations	
Verify that the central computer or kiosk can access the network drive.	☐
Verify that the network drive is in close proximity to the central computer or kiosk to decrease bandwidth over your corporate LAN.	☐
Copy the software to other regional network drives, if applicable in your environment.	☐
Verify that the *<drive:>*\Program Files\Common Files\Research In Motion folder is shared with read-only permissions.	☐

Add the BlackBerry Device Software to the network drive

1. Obtain the BlackBerry Device Software installation file from your service provider.
2. Copy the BlackBerry Device Software installation file to the network drive.
3. On the network drive, double-click the **.exe** file.
4. Complete the installation.
5. Verify that the files are in *<drive:>*\Program Files\Common Files\Research In Motion\Shared\Loader Files\.

Create a software configuration

1. In the BlackBerry Manager, in the left pane, click **BlackBerry Domain**.
2. On the **Software Configurations** tab, click **Add New Configuration**.
3. In the **Configuration Name** field, type a name for the configuration.

4. In the **Device Software Location** field, click the **Change** button.

5. Browse to the network location in which you installed the BlackBerry Device Software.

6. In the **Application Name** list, select the check box beside the BlackBerry device series for which to upgrade the BlackBerry Device Software.

7. Expand the application tree.

8. Select the check box beside additional components or programs that you want to install.

9. Click **OK**.

Assign a software configuration to a user (optional)

If you want to monitor whether a user upgrades to the BlackBerry Device Software Version 4.0 or later, assign the user to that software configuration.

1. In the BlackBerry Manager, in the left pane, click **a** BlackBerry Enterprise Server.

2. In the **Users** list, click the user account to assign the software configuration to.

3. In the lower pane, click **Device Management**.

4. Click **Assign Software Configuration**.

5. Click a software configuration.

6. Click **OK**.

Upgrade the BlackBerry Device Software

1. Connect the BlackBerry device to the administration computer on which the BlackBerry Manager is installed.

2. In the BlackBerry Manager, in the left pane, click **Ports**.

3. On the **Ports** tab, click the BlackBerry device on which to load the BlackBerry Device Software.

4. Perform one of the following actions:

Action	Procedure
Install the BlackBerry Device Software automatically.	1. Click **Load Handheld**. 2. Click a software configuration. 3. Click **OK**.
Install the BlackBerry Device Software interactively using the BlackBerry Application Loader wizard.	1. Click **Load Handheld (Interactive)**. 2. Click a software configuration. 3. Click **OK**. 4. Follow the instructions on the screen.

Confirm that the upgrade is successful

> Perform one of the following actions:

Action	Procedure
Confirm the upgrade for users who are running the BlackBerry Device Software Version 3.6.	> Instruct users to confirm the BlackBerry Device Software version installed on the BlackBerry device. • In the BlackBerry device options, click **About**. • Confirm the wireless handheld version.
Confirm the upgrade for users who are running the BlackBerry Device Software Version 4.0 or later.	1. In the BlackBerry Manager, in the left pane, click a BlackBerry Enterprise Server. 2. In the **Users** list, click a user. 3. In the lower pane, confirm the BlackBerry Device Software version.
Confirm the upgrade for users who are running the BlackBerry Device Software Version 4.0 or later and are assigned a software configuration.	1. In the BlackBerry Manager, in the left pane, click a BlackBerry Enterprise Server. 2. In the **Users** list, click a user. 3. In the lower pane, check the user's system status message. • **Upgrade Required**: the user has not yet upgraded the BlackBerry Device Software using the assigned software configuration • **Up to date**: the user has upgraded the BlackBerry Device Software using the assigned software configuration

Note: When you upgrade the BlackBerry Device Software, the version of the BlackBerry Device Software on the BlackBerry device does not update immediately in the BlackBerry Manager. It might take several minutes before the BlackBerry Configuration Database synchronizes the version of the BlackBerry Device Software that displays in the BlackBerry Manager with the version of the BlackBerry Device Software that is installed on the BlackBerry device.

Sending the BlackBerry Device Software upgrade to user computers

Use this upgrade option to push the BlackBerry Desktop Software and the BlackBerry Device Software installation package to the computers of BlackBerry device users and install the software on their computers automatically using third-party software packaging and distribution programs.

This upgrade option uses the BlackBerry Application Loader that is installed on users' computers to load the BlackBerry Device Software onto the BlackBerry device.

You can force users to upgrade their BlackBerry Device Software through IT policies. The IT policies define the number of times that users can restart the BlackBerry Desktop Manager before they are forced to upgrade their BlackBerry Device Software.

Add the BlackBerry Desktop Software installation files to the network drive

1. Visit www.blackberry.com/support/downloads/ to obtain the BlackBerry Desktop Software.
2. On the network drive, copy the BlackBerry Desktop Software installation files to a network drive.
3. If applicable, extract the installation files from the **.exe** file to the network drive.
4. On the network drive, open the **setup.ini** file.

5. At the bottom of the **setup.ini** file, type [**INSTALL_OPTIONS**].

6. Use the **install.txt** file, which is included with the BlackBerry Desktop Software, as a reference to configure the installation settings.

7. Save the **setup.ini** file.

Add the BlackBerry Device Software installation files to the network drive

1. Obtain the BlackBerry Device Software installation file from your service provider.

2. On the network drive, in the installation directory, create a **Device** folder.

3. In the **Device** folder, add the required BlackBerry Device Software files.

Create and send a wireless enterprise activation password

> Generate and send a wireless enterprise activation password to users. See the *BlackBerry Enterprise Server System Administration Guide* for more information.

Push the installation files to user computers

Use third-party software to package and distribute the BlackBerry Device Software and BlackBerry Desktop Software installation files to the computers of BlackBerry device users.

> 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.

1. At a command prompt, type one of the following commands to record the customized settings in the BlackBerry Desktop Software installation files:

   • BlackBerry Desktop Manager: **cd** *<drive:>\<installation directory>***setup.exe /s**

   • BlackBerry Desktop Manager and Certificate Synchronization Manager: **cd** *<drive:>\<installation directory>***setup.exe /s /v"INSTALLLEVEL=125**

2. Repackage the customized BlackBerry Desktop Software and the BlackBerry Device Software installation files using a third-party software packaging program.

3. Send out the installation files using a third-party software distribution program.

Force the BlackBerry Device Software upgrade

> If you want to force users to upgrade the BlackBerry Device Software, set the Force Load Count and Force Load Message IT policy rules. See the *BlackBerry Enterprise Server System Administration Guide* and the *BlackBerry Enterprise Server Policy Reference Guide* for more information.

Confirm that BlackBerry Device Software upgrade was successful

> Perform one of the following actions:

Action	Procedure
Confirm the upgrade for users who are running the BlackBerry Device Software Version 3.6.	> Instruct users to confirm the BlackBerry Device Software version installed on the BlackBerry device. • In the BlackBerry device options, click **About**. • Confirm the wireless handheld version.
Confirm the upgrade for users who are running the BlackBerry Device Software Version 4.0 or later.	1. In the BlackBerry Manager, in the left pane, click a BlackBerry Enterprise Server. 2. In the **Users** list, click a user. 3. In the lower pane, confirm the BlackBerry Device Software version.

Troubleshooting the BlackBerry device upgrade

Resolving issues during the upgrade

Symptom	Possible solution
When users click the link to the BlackBerry Application Loader in the upgrade instructions, the upgrade does not start.	1. Connect a BlackBerry device to a computer on which the BlackBerry Manager is installed. 2. At the command prompt, type \\<*shared network drive* >\Research In Motion\Apploader\loader.exe. 3. If the BlackBerry Application Loader starts, the tool is shared successfully.

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