

BlackBerry Enterprise Server for IBM Lotus Domino

Version: 4.1 | Service Pack: 7

Upgrade Guide

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Choosing a BlackBerry Enterprise Server upgrade option

Upgrading the BlackBerry Enterprise Server software by overwriting the existing version

The in-place upgrade process upgrades the BlackBerry® Enterprise Server software by replacing the existing version of the software.

Advantages	Disadvantages
<ul style="list-style-type: none">• You do not require additional computers to perform this upgrade.• When the upgrade process completes, user accounts are active, and no additional administrative action is required.	<ul style="list-style-type: none">• You cannot remove the BlackBerry Enterprise Server and return to the earlier version of the software automatically.• You must turn off the BlackBerry Enterprise Server during the upgrade process, so the interruption to services for BlackBerry devices lasts as long as it takes the upgrade process to complete.

If you are upgrading from BlackBerry Enterprise Server Version 2.2 or Version 4.0 SP3 or later, use this upgrade process.

When you use the in-place upgrade process, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.

Upgrading the BlackBerry Enterprise Server by using a new computer

The cutover upgrade process installs the BlackBerry® Enterprise Server on a new computer and moves user accounts and server information from the old BlackBerry Enterprise Server to the new one.

If you are upgrading from BlackBerry Enterprise Server Version 2.2, use this upgrade process.

Advantages	Disadvantages
<ul style="list-style-type: none">• You can move user accounts back to the old BlackBerry Enterprise Server if you encounter any problems with the new one.	<ul style="list-style-type: none">• You require one extra computer.

Advantages	Disadvantages
<ul style="list-style-type: none">You can use new server hardware and start with a clean environment.Users experience minimal service interruptions because user accounts remain active on the old BlackBerry Enterprise Server until you start the new one.	<ul style="list-style-type: none">If you upgrade from a version earlier than BlackBerry Enterprise Server Version 4.0, the BlackBerry Enterprise Server takes longer to start than it did previously because it sends new service books to all of the BlackBerry devices that are capable of wireless data synchronization.

This upgrade process uses the same SRP credentials on both the old and the new BlackBerry Enterprise Server instances.

When you use the cutover process, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.

Upgrading the BlackBerry Enterprise Server software in phases

The phased upgrade process maintains earlier versions of the BlackBerry® Enterprise Server software so that you can gradually create new BlackBerry Enterprise Server instances and move user accounts to them.

Advantages	Disadvantages
<ul style="list-style-type: none">You can move user accounts to the new BlackBerry Enterprise Server instances gradually, for example, 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 Enterprise Server environment during the upgrade process by changing user distribution patterns.	<ul style="list-style-type: none">You require additional computers.You require additional SRP credentials.If you move user accounts from one BlackBerry Configuration Database to another, you lose the BlackBerry device options that you backed up in the BlackBerry Configuration Database.You cannot use some new features (for example, one-to-many relationships between a BlackBerry MDS Connection Service or a BlackBerry Collaboration Service and multiple BlackBerry Enterprise Server instances) in the BlackBerry Enterprise Server software until all BlackBerry Enterprise Server components are at the same version.

When you upgrade the BlackBerry Enterprise Server software in phases, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.
- When moving user accounts, the BlackBerry Messaging Agent copies user state databases to the new BlackBerry Enterprise Server.

Verify the BlackBerry Enterprise Server version from which you are upgrading

Perform this task to verify the version that you are upgrading from so that you can choose a supported upgrade process.

1. On the taskbar, click **Start > Settings > Control Panel**.
2. Double-click **Add/Remove Programs**.
3. Click **BlackBerry Enterprise Server**.
4. Click **Support Information**.

System requirements

For information about calculating hardware requirements, visit www.blackberry.com/go/serverdocs to see the *BlackBerry Enterprise Server Capacity Calculator* and *BlackBerry Enterprise Server Performance Benchmarking Guide*.

System requirements: BlackBerry Enterprise Server

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none">Windows® 2000 SP4 Server or Advanced ServerWindows Server® 2003 or laterWindows Server 2003 or later (64-bit)Windows Server 2003 R2 SP2Windows Server 2003 R2 SP2 (64-bit)
messaging server	Any of the following messaging servers installed physically close to where you want to install the BlackBerry® Enterprise Server: <ul style="list-style-type: none">IBM® Lotus® Domino® version 5.0.12IBM Lotus Domino version 6.0.4 or laterIBM Lotus Domino version 6.5.1 or laterIBM Lotus Domino version 7.0 or later (version 7.0.2 or later required to support email messages that contain HTML and rich content on BlackBerry devices)IBM Lotus Domino version 8.0 and 8.0.1IBM Lotus Domino Express version 7.0IBM Lotus Domino Express version 8.0
notes.ini file	A notes.ini file with the following conditions: <ul style="list-style-type: none">read/write permissionsSERVERKEYFILENAME value set to the server.id name
messaging server application	Any of the following applications installed on the computer that hosts the BlackBerry Enterprise Server: <ul style="list-style-type: none">IBM Lotus Domino version 5.0.12 or laterIBM Lotus Domino version 6.0.1 Critical Fixpack 2 or later with a primary Domain Directory

Item	Requirement
	<ul style="list-style-type: none"> • IBM Lotus Domino version 6.5.4 or later with a primary Domain Directory • IBM Lotus Domino version 7.0 with a primary Domino Directory; IBM Lotus Domino version 7.0.2 or later is required for Windows Server 2003 (64-bit) • IBM Lotus Domino version 8.0 with a primary Domino Directory • IBM Lotus Domino Express version 7.0 • IBM Lotus Domino Express version 8.0
partitioning of the messaging client	a nonpartitioned messaging client
permissions for the messaging server application	<p>A messaging server application with the following permissions:</p> <ul style="list-style-type: none"> • membership in the LocalDomainServers group • manager-level access to the mail files for BlackBerry device user accounts
email application	<p>Any of the following email applications for your organization's users:</p> <ul style="list-style-type: none"> • IBM® Lotus Notes® version 5.0.12 or later • IBM Lotus Notes version 6.0 or later • IBM Lotus Notes version 6.5 or later • IBM Lotus Notes version 7.0 (to support encrypted message display when the user.id file is stored in BlackBerry® Desktop Manager version 4.1) • IBM Lotus Notes version 8.0
database management system	<p>Any of the following database management systems:</p> <ul style="list-style-type: none"> • MSDE 2000 SP3 • Microsoft® SQL Server® 2000 SP4 • Microsoft SQL Server 2005 SP3 • Microsoft SQL Server 2005 Express SP3 • Microsoft SQL Server 2005 SP3 (64-bit) <p>For all versions of the Microsoft SQL Server that are earlier than Microsoft SQL Server 2005 SP3, visit http://technet.microsoft.com to read KB960082 and Microsoft Security Bulletin MS09-004.</p>
collation setting	<p>To support Microsoft SQL Server, the following conditions on the database server:</p> <ul style="list-style-type: none"> • collation setting is default case-insensitive • BlackBerry Configuration Database collation setting is default case-insensitive
remote database conditions	named pipes and TCP/IP network protocols turned on

Item	Requirement
data access components	Any of the following data access components on the computers that host the BlackBerry Enterprise Server or the BlackBerry Configuration Database: <ul style="list-style-type: none"> • MDAC version 2.8 with Security Patch MS04-003 (version 2000.85.1025.00) • MDAC version 2.8.2 (version 2000.86.1830.00), included with Windows Server 2003 SP1
database conditions for the BlackBerry MDS Integration Service	A database server with the following conditions: <ul style="list-style-type: none"> • host for the BlackBerry Configuration Database • support for mixed-mode authentication
Microsoft® .NET Framework	to support languages other than English, localized version of Microsoft .NET Framework version 1.1 SP1
instant messaging server	Any of the following instant messaging servers: <ul style="list-style-type: none"> • IBM® Lotus® Sametime® version 6.5.1 Community Server (version 6.5.1 or later required to support dormant mode) • IBM Lotus Sametime version 7.0 Community Server • IBM Lotus Sametime version 7.5 Community Server • IBM Lotus Sametime version 8.0 Community Server • Microsoft® Office Live Communications Server 2005 (SP1 required to support Microsoft® Office Communicator and dormant mode) • Microsoft® Office Communications Server 2007 Standard or Enterprise • Novell® GroupWise® Messenger version 2.0.1 or later
browser	Windows® Internet Explorer® with the following settings: <ul style="list-style-type: none"> • Java® or JavaScript® turned on • language preferences configured to display encoded web pages
media player	to support audio attachments, Windows Media® Player version 9 or later
network proximity	high-speed, switched connection between the BlackBerry Enterprise Server and the messaging servers
firewall	A firewall or proxy firewall with the following conditions: <ul style="list-style-type: none"> • support for the BlackBerry Enterprise Server to initiate an outgoing, two-way TCP/IP connection to an external server on port 3101 • support for the resolution of Internet addresses using DNS • transparency of the proxy server for proxy firewalls

System requirements: BlackBerry Attachment Service

The following system requirements apply when installing the BlackBerry® Attachment Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none">• Microsoft® Windows® 2000 SP4 (Server edition or Advanced Server edition)• Microsoft® Windows Server® 2003 SP1• Microsoft® Windows® XP Professional SP2
media player	To support audio attachments, Windows Media® Player Version 9 or later
web browser	Microsoft® Internet Explorer® with the following settings: <ul style="list-style-type: none">• Java® or JavaScript® turned on• language preferences configured to display encoded web pages

System requirements: BlackBerry Manager

The following system requirements apply when installing the BlackBerry® Manager on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none">• Windows® 2000 SP4 (Server, Advanced Server, or Professional)• Windows Server® 2003 or later• Windows Server 2003 or later (64-bit)• Windows Server 2003 R2 SP2• Windows Server 2003 R2 SP2 (64-bit)• Windows® XP Professional SP2
notes.ini file	A notes.ini file with the following conditions: <ul style="list-style-type: none">• read/write permissions• the SERVERKEYFILENAME value set to the server.id name
messaging server application	Any of the following applications:

Item	Requirement
	<ul style="list-style-type: none"> • IBM® Lotus® Domino® version 5.0.12 or later • IBM Lotus Domino version 6.0.1 Critical Fixpack 2 or later with the primary Domino Directory • IBM Lotus Domino version 6.5.4 or later with the primary Domino Directory • IBM Lotus Domino version 7.0 with the primary Domino Directory (version 7.0.2 or later required for Windows Server 2003 (64-bit)) • IBM Lotus Domino version 8.0 with a primary Domain Directory • IBM Lotus Domino Express version 7.0 • IBM Lotus Domino Express version 8.0 • IBM® Lotus Notes® version 5.0.12 or later • IBM Lotus Notes version 6.0 or later • IBM Lotus Notes version 6.5 or later • IBM Lotus Notes version 7.0 (required to support encrypted message display when the user.id file is stored in BlackBerry® Desktop Manager version 4.1)
partitioning of the messaging server application	a nonpartitioned messaging server application
permissions for the messaging server	<p>A messaging server with the following permissions:</p> <ul style="list-style-type: none"> • membership in the LocalDomainServers group • permissions to run the agent • manager-level access to the mail files for BlackBerry device user accounts
Microsoft® .NET Framework	To support languages other than English, localized version of Microsoft .NET Framework version 1.1 SP1
browser	<p>Microsoft® Internet Explorer® with the following settings:</p> <ul style="list-style-type: none"> • Java® or JavaScript® turned on • language preferences set to display encoded web pages
data access components	<p>Any of the following data access components:</p> <ul style="list-style-type: none"> • MDAC version 2.8 with Security Patch MS04-003 (version 2000.85.1025.00) • MDAC version 2.8 SP2 (version 2000.86.1830.00)
printer and file sharing	To support BlackBerry device implementation, printer and file sharing turned on
USB hub	To support BlackBerry device implementation that uses a hub, a USB driver that supports USB 1.1-compliant hubs

System requirements: BlackBerry MDS Connection Service

The following system requirements apply when installing the BlackBerry® MDS Connection Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none">• Microsoft® Windows® 2000 SP4 (Server edition, Advanced Server edition, or Professional edition)• Microsoft® Windows Server® 2003 SP1• Microsoft® Windows® XP Professional SP2
RSA® Authentication Agent	To support enhanced network authentication, RSA Authentication Agent Version 5.0 for Microsoft Windows

System requirements: BlackBerry MDS Integration Service

The following system requirements apply when installing the BlackBerry® MDS Integration Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none">• Windows® 2000 SP4 (Server or Advanced Server)• Windows Server® 2003 or later• Windows Server 2003 or later (64-bit)• Windows Server 2003 R2 SP2• Windows Server 2003 R2 SP2 (64-bit)
database conditions	A database server that is the host for the BlackBerry Configuration Database.

System requirements: BlackBerry Router

The following system requirements apply when installing the BlackBerry® Router on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Microsoft® Windows® 2000 SP4 (Server edition or Advanced Server edition) Microsoft® Windows Server® 2003 SP1 Microsoft® Windows® XP Professional SP2
firewall	A firewall or proxy firewall with the following conditions: <ul style="list-style-type: none"> support for the BlackBerry Router to initiate an outgoing, two-way TCP/IP connection to an external server on port 3101 support for the resolution of Internet addresses using DNS transparency of the proxy server for proxy firewalls

System requirements for optional environments and features

Item	Description
virtual environment	The BlackBerry® Enterprise Server and the BlackBerry Enterprise Server components support the following virtual environments: <ul style="list-style-type: none"> VMware® ESX Server version 2.5.2 or later VMware ESX Server version 3.0.1 VMware ESX Server version 3.5
remote BlackBerry Manager	Install the remote BlackBerry Manager using an administrator account that belongs to the Administrators group on the host BlackBerry Enterprise Server.
Windows® Messenger	The BlackBerry Collaboration Service supports Windows Messenger if MSMQ version 3.0 is installed. If you installed the BlackBerry Collaboration Service on a computer that is separate from the computer that hosts Windows Server® 2003, you must clear the default Microsoft® Active Directory® Integration and Triggers subcomponents and select the Common subcomponent only.
Windows Messenger with TLS	The BlackBerry Collaboration Service supports Windows Messenger with TLS if one of the following certificates is installed on the computer that hosts the BlackBerry Collaboration Service: <ul style="list-style-type: none"> if your organization's instant messaging server is Microsoft® Office Live Communications Server 2005, an MTLS certificate

Item	Description
	<ul style="list-style-type: none"> if your organization's instant messaging server is Microsoft Office Live Communications Server 2005 SP1, a server authentication certificate for the computer account
IBM® Lotus® Sametime®	The BlackBerry Collaboration Service supports IBM Lotus Sametime when you add the IP address of the computer that hosts the BlackBerry Collaboration Service to the CommunityConnectivity document on the IBM Lotus Sametime server.
Novell® GroupWise® Messenger	The BlackBerry Collaboration Service supports Novell GroupWise Messenger when SSL authentication is turned on for the Novell GroupWise Messenger agents on the Novell GroupWise Messenger server.
Microsoft® Office Communicator Web Access server with TLS	<p>The BlackBerry Collaboration Service supports the Microsoft Office Communicator Web Access server with TLS if one of the following certificates is installed on the computer that hosts the BlackBerry Collaboration Service:</p> <ul style="list-style-type: none"> if your organization's instant messaging server is Microsoft Office Live Communications Server 2005 or Microsoft Office Communications Server 2007, an MTLS certificate if your organization's instant messaging server is Microsoft Office Live Communications Server 2005 SP1, a server authentication certificate for the computer account
Microsoft Office Communicator Web Access 2007 and AJAX Service	<p>The BlackBerry Collaboration Service supports the Microsoft Office Communicator Web Access 2007 server and AJAX Service if you installed a virtual server on your organization's Microsoft Office Communicator Web Access server with the following conditions:</p> <ul style="list-style-type: none"> all IP addresses must be unassigned optionally, support for an HTTPS browser connection internal access only
Microsoft Office Communicator Web Access 2005 server and AJAX Service	<p>The BlackBerry Collaboration Service supports the Microsoft Office Communicator Web Access 2005 server and AJAX Service with the following conditions:</p> <ul style="list-style-type: none"> the following Microsoft hotfixes from http://support.microsoft.com installed: <ul style="list-style-type: none"> 911996 on your organization's Microsoft Office Live Communications Server 915066 on your organization's Microsoft Office Communicator Web Access server

Item	Description
	<ul style="list-style-type: none"> a virtual server installed on your organization's Microsoft Office Communicator Web Access server with the following conditions: <ul style="list-style-type: none"> all IP addresses must be unassigned forms-based authentication only optionally, support for an HTTPS browser connection an ISAPI filter for the cwaauth.dll file and the ajax.dll file internal access only
enhanced network authentication	The BlackBerry Enterprise Server and its components support RSA® Authentication Agent version 5.0 for Windows®.
multiple IBM® Lotus® Domino® domains	<p>The BlackBerry Messaging Agent supports multiple IBM Lotus Domino domains with the following conditions:</p> <ul style="list-style-type: none"> IBM Lotus Domino server installed on the computer that hosts the BlackBerry Enterprise Server with the following conditions: <ul style="list-style-type: none"> connection documents from the IBM Lotus Domino servers in the domains that the server replicates from membership in the LocalDomainServers group in all the domains in your organization's environment cross-certification established between the messaging servers and directory servers in other domains
IBM® Lotus Notes® encryption	The BlackBerry Enterprise Server supports Lotus Notes encryption with IBM Lotus Domino server version 8.0.1.
remote searching for email messages	The BlackBerry Enterprise Server supports remote searching for email messages when the mail files are full-text indexed. For more information, visit www.blackberry.com/support to read article KB15161.
searching for free and busy times in calendar	The BlackBerry Enterprise Server supports searching for free and busy times in the calendar when you install the Calendar Connector service (ncalconn.exe) on the computer.
SNMP monitoring	The BlackBerry Enterprise Server and its components support the SNMP service.
remote access	<p>The BlackBerry Enterprise Server and its components support remote access using any of the following applications:</p> <ul style="list-style-type: none"> Terminal Services for use with Windows Server 2000, installed using Remote Administration mode

Item	Description
	<ul style="list-style-type: none">Microsoft® Remote Desktop Connection for use with Windows Server 2003

Unsupported environments

Item	Description
DMZ	The BlackBerry® Enterprise Server and the BlackBerry Enterprise Server components, with the exception of the BlackBerry Router, do not support installation in a DMZ.
email application	The BlackBerry Enterprise Server and its components do not support the installation of email applications on the computer that hosts the BlackBerry Enterprise Server.
IBM® DB2® UDB	The BlackBerry Enterprise Server and its components do not support IBM DB2 UDB.
Microsoft® SQL Server® 2005 Express database	The BlackBerry MDS Integration Service databases do not support the Microsoft SQL Server 2005 Express database.

Preparing to upgrade from BlackBerry Enterprise Server Version 4.0

3

Back up the BlackBerry Enterprise Server registry settings

Perform this task to maintain a record of the registry entries.

1. On the computer that hosts the BlackBerry® Enterprise Server software, open the Registry Editor.
2. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion.
3. Right-click **Research In Motion**. Click **Export**.
4. Save the file.

Back up the BlackBerry Enterprise Server log files

Perform this task to maintain a record of existing logs, and so that you can troubleshoot the upgrade process if it does not complete successfully.

1. On the computer on which you plan to upgrade the BlackBerry® Enterprise Server, navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs.
2. Copy the log files to a backup location.

Back up the BlackBerry Configuration Database

Back up the BlackBerry® Configuration Database so that you can restore it if the upgrade process does not complete successfully.

If your database environment is Microsoft® SQL Server®, use the backup and restore tools that Microsoft Corporation provides.

If your database environment is MSDE 2000, you can use the BlackBerry Configuration Database Backup Tool that is included with the BlackBerry® Enterprise Server installation media. By default, the backup file is named *<database name> <YYYYMMDDHHMMSS>.bak*.

1. On the computer that hosts the BlackBerry Configuration Database, at the command prompt, change to the **Tools** folder on the BlackBerry Enterprise Server installation media.
2. Run **BlackBerryDbBackup.exe**.

Example

To back up a BlackBerry Configuration Database named "BESMgmt" to a folder named "DB_backup_folder" when you use the database credentials "sqlusername" and "sqlpassword", type

```
BlackBerryDBBackup.exe -d BESMgmt -f C:\DB_backup_folder -U sqlusername -P sqlpassword
```

BlackBerry Configuration Database Backup Tool parameters

The parameters listed in brackets are optional.

Parameter	Description
-d <dbname>	This parameter specifies the name of the BlackBerry® Configuration Database. For example, BESMgmt.
[-f] <foldername>	This parameter specifies the folder that you want to save the backup file in. If you specify a different location, the folder must already exist. The default folder is the current location.
[-S] <database server>	This parameter specifies the name of the server that hosts the database.
[-E]	This parameter specifies whether you want to use Microsoft® Windows® authentication to connect to the database instead of database authentication. Your login account must have database owner permission. The default is false.
[-U] <username>	This parameter specifies the user name for database authentication. If you want to use a different login account, the account must have database owner permission. The default is sa.
[-P] <password>	This parameter specifies the password for database authentication.
[-p] <percentage>	This parameter specifies the interval, in percentages, that you want the BlackBerry Configuration Database Backup Tool to report progress at. The default is 10.
[-?]	This parameter specifies information about the tool. No other parameters are required when you use this parameter.

Preparing to upgrade from BlackBerry Enterprise Server Version 2.2

4

Compact IBM Lotus Domino databases

Perform this task to clean up the IBM® Lotus® Domino® databases. For more information about compacting IBM Lotus Domino databases, visit www.ibm.com/support to read article 7006573.

Before you begin: You must have removed inactive user accounts, including old state databases, from the BlackBerry® Enterprise Server.

Run the IBM Lotus Domino Compact tool with the following command or parameter:

- To recover unused space and reduce on-disk file size, run the **Compact –B** command.
- To compact all databases in the Lotus/Domino/Data/BES directory, use the **BES** parameter.

After you finish: If the IBM Lotus Domino server uses transaction logging, back up the server soon after you run the Compact –B command.

Document your current IT policy settings

The default wireless IT policy in BlackBerry® Enterprise Server Version 4.0 or later replaces the serial IT policies in BlackBerry Enterprise Server Version 2.2. You must re-create the IT policies after the upgrade process completes.

1. Write down your current IT policy settings.
2. Save a copy of the **policy.inf** file.

Back up IBM Lotus Domino databases and database templates

Perform this task to maintain a record of existing data. When you upgrade from BlackBerry® Enterprise Server Version 2.2, you move configuration information for the BlackBerry Enterprise Server and users from the IBM® Lotus® Domino® databases into a relational database. Before you move user accounts to the BlackBerry Configuration Database, clean and back up data.

Before you begin: Verify that you have a backup tool that supports the backup and recovery API for IBM Lotus Domino or a supported third-party application for open file management.

1. Using the backup tool, navigate to Lotus\Domino\Data\BES.
2. Back up the following files:
 - **BBProfiles.ntf**
 - **BBSD.ntf**
 - **BlackBerryProfiles.nsf**

3. Stop the services for the BlackBerry Enterprise Server and the IBM Lotus Domino server.
4. Using the backup tool, navigate to Lotus\Domino\Data\BES\State.
5. Back up all state databases.
6. If you stopped the services for the BlackBerry Enterprise Server and the IBM Lotus Domino server, restart them.

Back up IBM Lotus Domino server information

Back up the IBM® Lotus® Domino® server information to maintain a record of the information.

1. Navigate to Lotus\Domino\Data.
2. Back up the following files:
 - **server.ID**
 - **notes.ini**

Back up the BlackBerry Enterprise Server registry settings

Perform this task to maintain a record of the registry entries.

1. On the computer that hosts the BlackBerry® Enterprise Server software, open the Registry Editor.
2. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion.
3. Right-click **Research In Motion**. Click **Export**.
4. Save the file.

Back up the BlackBerry Enterprise Server log files

Perform this task to maintain a record of existing logs, and so that you can troubleshoot the upgrade process if it does not complete successfully.

1. On the computer on which you plan to upgrade the BlackBerry® Enterprise Server, navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs.
2. Copy the log files to a backup location.

Consolidate user license keys

Before you upgrade multiple BlackBerry® Enterprise Server instances, you must consolidate all of the user license keys on the first BlackBerry Enterprise Server that you want to upgrade.

1. In the BlackBerry Server Management console, on the **Tools** menu, click **License Manager**.

2. In the **User Licences** field, type all of the user license keys.
3. Click **OK**.
4. To update the license information, click **Yes**.
5. Click **OK**.

Testing the transfer of user information during the upgrade process

You can test the transfer of user information during the upgrade process by running the NBESMigration tool in preview mode on a copy of the BlackBerry® Configuration Database.

Create a preview BlackBerry Configuration Database

Perform this task to ensure that the upgrade of the BlackBerry® Configuration Database will complete successfully.

1. Copy the installation media for the new version of BlackBerry® Enterprise Server software to the database server that will host the preview BlackBerry Configuration Database.
2. Extract the contents of the installation media to a folder on the computer.
3. Navigate to the **Database** folder.
4. In a text editor, open **BESMgmt.cfg**.
5. Specify the following settings:
 - **DATABASE_NAME**
 - **USERID**
 - **PASSWORD**
 - **SCRIPT_ROOT**
 - **LOG_DIR**
 - **DBMS**
 - **DB_FILE_DIR**
 - **BACKUP_DIR**
6. Save the file and close it.
7. In a command prompt, change to the **Database** folder.
8. Type **CreateDB.exe <path>BESMgmt.cfg**.

By default, the Database Creation Tool writes the details of the database creation process in the DBInstallV<YYMMDDHHMMSS> log file, where <YYMMDDHHMMSS> specifies the date and time that the Database Creation Tool created the database.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
USERID	If you use database authentication, this property specifies the user name of a database account that has server administrator permission and database creator permission.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is located in the same root folder as createdb.exe.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is located in the same root folder as createdb.exe.
DBMS	This property specifies the database management system that you want to use.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is located in the same root folder as the createdb.exe file.
BACKUP_DIR	This property specifies an existing folder that you want to save the database backup in. By default, this folder is located in the same root folder as the createdb.exe file.

Test the transfer of user information to the preview BlackBerry Configuration Database

After you create the preview BlackBerry® Configuration Database, you can test the transfer of user information to estimate how long it might take to move user accounts to a new BlackBerry® Enterprise Server when you upgrade the BlackBerry Enterprise Server software.

1. On the computer that hosts the preview BlackBerry Configuration Database, at a command prompt, switch to the **Tools** folder in the BlackBerry Enterprise Server installation file.
2. Type **nbesmigration.exe** with the required parameters.

If you could not transfer user information, check the log file for error messages.

Example

To preview the transfer of user information to a database server that is named dbserver1 and to a BlackBerry Configuration Database that is named besmgmt and to write the migrate.log file and status.tmp file to the root directory, type

```
nbesmigration.exe -d "server1" "besmgmt" -l migrate.log -t status.tmp -w -p
```

NBESMigration Tool parameters

Parameter	Description
-d <DB_server_name> <DB_name>	This parameter specifies the computer name and the database name of the BlackBerry Configuration Database.
-l <log_file>	This parameter specifies the name of the log file and the path to it.
-t <status_file>	This parameter specifies the name of the status file and the path to it. The tool uses the status file to track the progress of the transfer of user information. On subsequent transfer attempts, the tool reads this file to determine which user records are already located in the BlackBerry Configuration Database.
-w	This parameter writes status and progress information to the registry.
-u <username> <password>	If you use database authentication, this parameter specifies the user name and password for the database.
-p	This parameter runs the tool in preview mode without making any changes to the BlackBerry Configuration Database.

Configure wireless data synchronization for BlackBerry devices

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service must send service books to those BlackBerry devices that can synchronize data over the wireless network.

If you do not perform the following task for BlackBerry devices that can synchronize data over the wireless network, the BlackBerry Enterprise Server cannot update the service books automatically after the upgrade process completes, and the BlackBerry devices cannot send or receive email messages.

If you want wireless data synchronization to occur automatically after the BlackBerry Enterprise Server upgrade process completes, perform one of the following actions:

- Before you upgrade the BlackBerry Enterprise Server, instruct users with BlackBerry® Device Software Version 4.0 or later to connect their BlackBerry devices to BlackBerry® Desktop Manager Version 3.6 SP3 or later.
- If you do not support the BlackBerry Desktop Manager in your environment to turn on wireless data synchronization, you must activate the BlackBerry devices over the wireless network.

Setting up the database connection

5

The BlackBerry® Enterprise Server can connect to the BlackBerry Configuration Database on the Microsoft® SQL Server® using Microsoft® Windows® authentication or database authentication. If you use Microsoft Windows authentication, the BlackBerry Manager logs in to the BlackBerry Configuration Database using the Microsoft Windows account that you used to complete the installation process.

If you use database authentication with Microsoft SQL Server, the BlackBerry Manager authenticates to the database using the database credentials that the administrator provides.

Specifying permissions when connecting to the BlackBerry Configuration Database using Microsoft Windows authentication

During the BlackBerry® Enterprise Server installation process, if you choose to connect to the BlackBerry Configuration Database using Microsoft® Windows® authentication, the Microsoft Windows account that you use must have permissions on the database server. The type of permissions depends on the BlackBerry Enterprise Server setup option that you choose, and on whether you create the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server or on another database server.

Specifying MSDE 2000 permissions for the Microsoft Windows account

If you install MSDE 2000 during the BlackBerry® Enterprise Server installation process, you do not need to specify additional permissions. When you select Microsoft® Windows® authentication during the BlackBerry Enterprise Server installation process, the setup application automatically assigns the required permissions to the Microsoft Windows account that you are using to complete the installation.

Assign Microsoft SQL Server permissions to the Windows account

Perform one of the following actions:

- If you create the BlackBerry® Configuration Database on the same computer as the BlackBerry® Enterprise Server, or if you install the BlackBerry MDS Integration Service, assign the system administrator permission to the Windows® account that you are using to complete the installation.
- If you create the BlackBerry Configuration Database on another computer, assign server administrator and database creator permissions to the Windows account that you are using to complete the installation process. If you are using Microsoft® SQL Server® 2005, assign the system administrator permission to each of the following roles: SQLAgentUserRole, SQLAgentReaderRole, and SQLAgentOperatorRole.

Configuring authentication to the BlackBerry MDS Integration Service database

If you install the BlackBerry® MDS Integration Service on a Microsoft® SQL Server®, the setup application uses the same authentication method and account that you specified for the BlackBerry Configuration Database. The account requires the same permissions for the BlackBerry MDS Integration Service database as it requires for the BlackBerry Configuration Database.

Configuring the local system account

Configure the local system account for Microsoft Windows authentication

Perform this task if you want to use a local system account to access the BlackBerry® Enterprise Server, install the BlackBerry Configuration Database on a separate computer, and use Microsoft® Windows® authentication to connect to the BlackBerry Configuration Database.

In the Microsoft® SQL Server® Enterprise Manager or the Microsoft SQL Server Management Studio, create a new user with the following properties:

- user name set to the name of the BlackBerry Enterprise Server computer, using the format *<Domain>\<computer_name>*
- authentication configured to Microsoft Windows authentication
- roles assigned that are necessary to change the BlackBerry Configuration Database

Configuring the local system account for database authentication

If you want to use a local system account for the BlackBerry® Enterprise Server, you can install the BlackBerry Configuration Database on a computer that is separate from computer that hosts the BlackBerry Enterprise Server. Use database authentication to connect to the BlackBerry Configuration Database. Add the user name and password for the database account to the Windows® registry.

Configure the local system account for database authentication by changing the registry

1. On the computer on which you plan to install the BlackBerry® Enterprise Server software, open the Registry Editor.
2. In HKEY_USERS\DEFAULT\Software\Research In Motion\BlackBerry Enterprise Server\Database, create the following string values for a database account that has the required permissions:
 - **Login**
 - **Password**

Upgrading the BlackBerry Enterprise Server software by overwriting the existing version

The in-place upgrade process upgrades the BlackBerry® Enterprise Server software by replacing the existing version of the software.

Advantages	Disadvantages
<ul style="list-style-type: none">You do not require additional computers to perform this upgrade.When the upgrade process completes, user accounts are active, and no additional administrative action is required.	<ul style="list-style-type: none">You cannot remove the BlackBerry Enterprise Server and return to the earlier version of the software automatically.You must turn off the BlackBerry Enterprise Server during the upgrade process, so the interruption to services for BlackBerry devices lasts as long as it takes the upgrade process to complete.

If you are upgrading from BlackBerry Enterprise Server Version 2.2 or Version 4.0 SP3 or later, use this upgrade process.

When you use the in-place upgrade process, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.

Prerequisites: Upgrading the BlackBerry Enterprise Server software

Item	Requirement
inactive user accounts	Delete inactive user accounts, including their old state databases, from the BlackBerry® Enterprise Server.
credentials from the BlackBerry Enterprise Server installation media	<ul style="list-style-type: none">CAL keySRP identifierSRP keySRP host

Item	Requirement
installation credentials from your environment	<ul style="list-style-type: none"> computer name and port number of the instant messaging server (use the virtual server name and port number where the AJAX Service is installed, if applicable) computer name and port number of the proxy server (optional)
license model	<p>If you are upgrading from the BlackBerry Enterprise Server Small Business Edition to a BlackBerry Enterprise Server, obtain a new CAL key.</p> <p>For more information, visit www.blackberry.com/support to read article KB03535.</p>
proxy settings	Back up the proxy settings for BlackBerry MDS Services version 4.1 or version 4.1 SP1.
BlackBerry Manager instances	Close all BlackBerry Manager instances.
supported BlackBerry Enterprise Server versions	If you are upgrading from BlackBerry Enterprise Server version 4.0, 4.0 SP1, or 4.0 SP2, upgrade all BlackBerry Enterprise Server instances to version 4.0 SP3 or later.
database replication	Turn off database replication for the BlackBerry Configuration Database.

Upgrade the BlackBerry Enterprise Server software

The upgrade process includes a restart of the computer.

Before you begin: If you are running BlackBerry® Enterprise Server Version 2.1, upgrade to Version 2.2 SP3a before upgrading to the new version of the BlackBerry Enterprise Server.

1. Log into the computer using an administrative account with the appropriate database permissions.
2. In the Microsoft® Windows® services panel, stop the IBM® Lotus® Domino® server and change the startup type to manual.
3. Double-click **setup.exe**.
4. Complete the instructions on the screen.
5. When prompted to restart the computer, click **Yes**.
6. Log in to the computer using the same account that you used in step 1 to start the setup application.
7. Complete the instructions on the screen.
8. In the Microsoft Windows Services, start the IBM Lotus Domino server and the BlackBerry® Enterprise Server services.
9. In the BlackBerry Manager, specify the proxy settings for the BlackBerry MDS Connection Service instances that you upgraded from Version 4.1 or Version 4.1 SP1.

Improve the startup performance of the BlackBerry Enterprise Server

After an upgrade, the BlackBerry® Enterprise Server might send new service books to every BlackBerry device. If it sends all the new service books at the same time, the BlackBerry Enterprise Server startup time might be affected. You can improve the startup performance of the BlackBerry Enterprise Server by configuring how many service books the BlackBerry Enterprise Server sends each hour.

1. On the computer that hosts an upgraded BlackBerry Policy Service, open the Registry Editor.
2. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\IT Admin Server.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\IT Admin Server.
3. Create the following DWORD values:
 - **SBThrottlingEnabled**: Set to **1**.
 - **SBThrottleLimit**: Set, in decimal format, the maximum number of service books that you want the BlackBerry Enterprise Server to send each hour. The default number is **.60**, which means the BlackBerry Enterprise Server sends 60 new service books each hour.

Upgrading the BlackBerry Enterprise Server by using a new computer 7

The cutover upgrade process installs the BlackBerry® Enterprise Server on a new computer and moves user accounts and server information from the old BlackBerry Enterprise Server to the new one.

If you are upgrading from BlackBerry Enterprise Server Version 2.2, use this upgrade process.

Advantages	Disadvantages
<ul style="list-style-type: none">You can move user accounts back to the old BlackBerry Enterprise Server if you encounter any problems with the new one.You can use new server hardware and start with a clean environment.Users experience minimal service interruptions because user accounts remain active on the old BlackBerry Enterprise Server until you start the new one.	<ul style="list-style-type: none">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 to start than it did previously because it sends new service books to all of the BlackBerry devices that are capable of wireless data synchronization.

This upgrade process uses the same SRP credentials on both the old and the new BlackBerry Enterprise Server instances.

When you use the cutover process, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.

Prerequisites: Upgrading the BlackBerry Enterprise Server software

Item	Requirement
inactive user accounts	Delete inactive user accounts, including their old state databases, from the BlackBerry® Enterprise Server.
credentials from the BlackBerry Enterprise Server installation media	<ul style="list-style-type: none">CAL keySRP identifierSRP keySRP host

Item	Requirement
installation credentials from your environment	<ul style="list-style-type: none"> computer name and port number of the instant messaging server (use the virtual server name and port number where the AJAX Service is installed, if applicable) computer name and port number of the proxy server (optional)
license model	<p>If you are upgrading from the BlackBerry Enterprise Server Small Business Edition to a BlackBerry Enterprise Server, obtain a new CAL key.</p> <p>For more information, visit www.blackberry.com/support to read article KB03535.</p>
proxy settings	Back up the proxy settings for BlackBerry MDS Services version 4.1 or version 4.1 SP1.
BlackBerry Manager instances	Close all BlackBerry Manager instances.
supported BlackBerry Enterprise Server versions	If you are upgrading from BlackBerry Enterprise Server version 4.0, 4.0 SP1, or 4.0 SP2, upgrade all BlackBerry Enterprise Server instances to version 4.0 SP3 or later.
database replication	Turn off database replication for the BlackBerry Configuration Database.

Install and configure BlackBerry Enterprise Server Version 2.2 on the new computer

Before you can upgrade to the new version of the BlackBerry® Enterprise Server, you need to install and configure BlackBerry Enterprise Server Version 2.2 on the new computer.

1. Install BlackBerry Enterprise Server Version 2.2 SP3a or later on the new computer using the same name and SRP credentials as one of the BlackBerry Enterprise Server instances that you want to replace.
2. When prompted to restart the computer, click **No**.
3. Open **notes.ini**.
4. In the **ServerTasks** entry, delete **BES**.
5. Save and close the file.
6. Change the startup type for the IBM® Lotus® Domino® server to manual.

Upgrade to BlackBerry Enterprise Server Version 4.1 SP5 on the new computer

Before you begin: Verify that you have the following credentials from BlackBerry® Enterprise Server Version 2.2:

- SRP credentials
- .ID file that the BlackBerry Mobile Data Service uses to connect to the IBM® Lotus® Domino® databases

1. Log in to the new computer using an administrative account with the appropriate database permissions. The setup application adds this account automatically to the security administrator role in the BlackBerry Configuration Database.
2. Stop the IBM Lotus Domino server.
3. If you are upgrading the BlackBerry Enterprise Server using Terminal Services, stop all BlackBerry Enterprise Server services and close the Services panel and the Computer Management panel.
4. Double-click **setup.exe**.
5. Complete the instructions on the screen.
6. When prompted to restart the computer, click **Yes**.
7. Log in using the same account that you used for the setup application in step 1.
8. Complete the instructions on the screen.
9. When prompted to move user accounts, click **No**.
10. Before you complete the setup application, clear the **Start Service(s)** option.

After you finish: Inform users of the new IBM Lotus Domino server name so that they can update the settings in their BlackBerry® Desktop Manager.

Move user accounts to the new BlackBerry Enterprise Server

1. On the computer that hosts the new BlackBerry® Enterprise Server, start the IBM® Lotus® Domino® server.
2. On the BlackBerry® Enterprise Server that the user accounts are located on, open a command prompt.
3. Switch to the **Tools** folder on the BlackBerry Enterprise Server installation media.
4. Type **nbesmigration.exe** with the required parameters.

If the transfer of user accounts was unsuccessful, check the log file for error messages.

Example

To transfer user information to a database server that is named "sqlserver1" and a BlackBerry Configuration Database that is named "besmgmt", and to write the migrate.log file and status.tmp file to the root directory, type

```
nbesmigration.exe -d "sqlserver1" "besmgmt" -l migrate.log -t status.tmp -w
```

NBESMigration Tool parameters

Parameter	Description
-d <DB_server_name> <DB_name>	This parameter specifies the computer name and the database name of the BlackBerry Configuration Database.
-l <log_file>	This parameter specifies the name of the log file and the path to it.
-t <status_file>	This parameter specifies the name of the status file and the path to it. The tool uses the status file to track the progress of the transfer of user information. On subsequent transfer attempts, the tool reads this file to determine which user records are already located in the BlackBerry Configuration Database.
-w	This parameter writes status and progress information to the registry.
-u <username> <password>	If you use database authentication, this parameter specifies the user name and password for the database.
-p	This parameter runs the tool in preview mode without making any changes to the BlackBerry Configuration Database.

Prevent the old BlackBerry Enterprise Server from connecting to the BlackBerry Infrastructure

If you try to connect two BlackBerry® Enterprise Server instances to the BlackBerry® Infrastructure using the same SRP credentials, the BlackBerry Infrastructure deactivates the credentials and wireless traffic cannot occur.

1. On the computer that hosts the old BlackBerry Enterprise Server, in the **notes.ini** file, in the ServerTasks entry, delete **BES**.
2. Save and close the file.
3. In the Microsoft® Windows® Services, stop all BlackBerry Enterprise Server services.
4. Change the startup type for all BlackBerry Enterprise Server services to **Disabled**.

Improve the startup performance of the BlackBerry Enterprise Server

After an upgrade, the BlackBerry® Enterprise Server might send new service books to every BlackBerry device. If it sends all the new service books at the same time, the BlackBerry Enterprise Server startup time might be affected. You can improve the startup performance of the BlackBerry Enterprise Server by configuring how many service books the BlackBerry Enterprise Server sends each hour.

1. On the computer that hosts an upgraded BlackBerry Policy Service, open the Registry Editor.

2. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\IT Admin Server.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\IT Admin Server.
3. Create the following DWORD values:
 - **SBThrottlingEnabled**: Set to **1**.
 - **SBThrottleLimit**: Set, in decimal format, the maximum number of service books that you want the BlackBerry Enterprise Server to send each hour. The default number is .60, which means the BlackBerry Enterprise Server sends 60 new service books each hour.

Start the new BlackBerry Enterprise Server

1. In the Windows® Services, start the services for the BlackBerry® Enterprise Server components 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 Enterprise Server services.

After you finish: After you complete the upgrade process, if you moved user accounts to a new BlackBerry Domain, users must reactivate the BlackBerry devices. Instruct users to connect the BlackBerry devices to the BlackBerry® Desktop Manager to receive the new SRP routing and service name information. Inform users about the new IBM® Lotus® Domino® server name so that they can update the settings in the BlackBerry Desktop Manager.

Upgrading the BlackBerry Enterprise Server software in phases

The phased upgrade process maintains earlier versions of the BlackBerry® Enterprise Server software so that you can gradually create new BlackBerry Enterprise Server instances and move user accounts to them.

Advantages	Disadvantages
<ul style="list-style-type: none">• You can move user accounts to the new BlackBerry Enterprise Server instances gradually, for example, 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 Enterprise Server environment during the upgrade process by changing user distribution patterns.	<ul style="list-style-type: none">• You require additional computers.• You require additional SRP credentials.• If you move user accounts from one BlackBerry Configuration Database to another, you lose the BlackBerry device options that you backed up in the BlackBerry Configuration Database.• You cannot use some new features (for example, one-to-many relationships between a BlackBerry MDS Connection Service or a BlackBerry Collaboration Service and multiple BlackBerry Enterprise Server instances) in the BlackBerry Enterprise Server software until all BlackBerry Enterprise Server components are at the same version.

When you upgrade the BlackBerry Enterprise Server software in phases, the following events occur:

- BlackBerry devices that are running BlackBerry® Device Software Version 4.0 or later receive new service books, and wireless data synchronization occurs.
- All BlackBerry devices receive new IT policies.
- When moving user accounts, the BlackBerry Messaging Agent copies user state databases to the new BlackBerry Enterprise Server.

Managing a mixed-version environment

After you upgrade the BlackBerry® Configuration Database to Version 4.1 or later, you must use BlackBerry Manager Version 4.1 to administer all BlackBerry® Enterprise Server instances that use the BlackBerry Configuration Database.

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 use. In a mixed-version environment, the BlackBerry Manager version must not be later than the BlackBerry Configuration Database version.

Upgrade the BlackBerry Enterprise Server Version 4.0 SP3 in phases

For more information about installing the BlackBerry® Enterprise Server software, see the *BlackBerry Enterprise Server Installation Guide*.

For more information about moving users, see the *BlackBerry Enterprise Server System Administration Guide*.

1. Install the new version of the BlackBerry Enterprise Server software on a new computer.
When prompted to provide information for the BlackBerry Configuration Database, specify the existing BlackBerry Configuration Database so that you upgrade the BlackBerry Configuration Database.
2. Upgrade instances of the BlackBerry Manager to the new version.
3. Move user accounts to the upgraded BlackBerry Enterprise Server.
4. Upgrade instances of the central push server for the BlackBerry MDS Connection Service to the new version.
5. Upgrade the empty BlackBerry Enterprise Server to the new version using an in-place upgrade process.

This BlackBerry Enterprise Server becomes the destination for user accounts moving from earlier versions of the BlackBerry Enterprise Server.

6. Continue to move user accounts to the upgraded BlackBerry Enterprise Server instances, and upgrade the BlackBerry Enterprise Server instances until all BlackBerry Enterprise Server instances are running the new version of the software.

Upgrade BlackBerry Enterprise Server Version 4.0 and earlier versions in phases and create a new BlackBerry Configuration Database

Replacing the existing BlackBerry® Configuration Database results in more administrative tasks; however, you might choose to do this as part of a change to your overall BlackBerry® Enterprise Server environment (for example, a change in hardware).

For more information about installing the BlackBerry Enterprise Server, see the *BlackBerry Enterprise Server Installation Guide*. For more information about moving users, see the *BlackBerry Enterprise Server System Administration Guide*.

Before you begin: Users must have backed up their BlackBerry devices. 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. Install the new version of the BlackBerry Enterprise Server software on a new computer.
The setup application prompts you to specify a BlackBerry Configuration Database. You must specify a new BlackBerry Configuration Database.
2. Delete user accounts from BlackBerry Enterprise Server Version 4.0 or earlier versions.

3. Add user accounts to the upgraded BlackBerry Enterprise Server.
4. Activate the BlackBerry devices over the wireless network.
5. Upgrade instances of the central push server for the BlackBerry MDS Connection Service to the new version.
6. Upgrade the empty BlackBerry Enterprise Server to the new version using an in-place upgrade process, specifying the new BlackBerry Configuration Database.
7. Repeat this task until all BlackBerry Enterprise Server instances are running the new version of the software.

Upgrading BlackBerry Enterprise Server Version 4.0 and earlier versions in phases

Upgrade BlackBerry Enterprise Server Version 4.0 and earlier versions in phases and create a new BlackBerry Configuration Database

Replacing the existing BlackBerry® Configuration Database results in more administrative tasks; however, you might choose to do this as part of a change to your overall BlackBerry® Enterprise Server environment (for example, a change in hardware).

For more information about installing the BlackBerry Enterprise Server, see the *BlackBerry Enterprise Server Installation Guide*. For more information about moving users, see the *BlackBerry Enterprise Server System Administration Guide*.

Before you begin: Users must have backed up their BlackBerry devices. 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. Install the new version of the BlackBerry Enterprise Server software on a new computer.
The setup application prompts you to specify a BlackBerry Configuration Database. You must specify a new BlackBerry Configuration Database.
2. Delete user accounts from BlackBerry Enterprise Server Version 4.0 or earlier versions.
3. Add user accounts to the upgraded BlackBerry Enterprise Server.
4. Activate the BlackBerry devices over the wireless network.
5. Upgrade instances of the central push server for the BlackBerry MDS Connection Service to the new version.
6. Upgrade the empty BlackBerry Enterprise Server to the new version using an in-place upgrade process, specifying the new BlackBerry Configuration Database.
7. Repeat this task until all BlackBerry Enterprise Server instances are running the new version of the software.

Upgrade BlackBerry Enterprise Server Version 4.0 and earlier versions in phases and upgrade the existing BlackBerry Configuration Database

For more information about installing the BlackBerry® Enterprise Server, see the *BlackBerry Enterprise Server Installation Guide*. For more information about moving users, see the *BlackBerry Enterprise Server System Administration Guide*.

1. Install the new version of the BlackBerry Enterprise Server software on a new computer.
The setup application prompts you to specify a BlackBerry Configuration Database. You must specify the existing BlackBerry Configuration Database.
2. Upgrade instances of the BlackBerry Manager to the new version.
3. Move user accounts to the upgraded BlackBerry Enterprise Server.
4. Upgrade instances of the central push server for BlackBerry MDS Connection Service to the new version.
5. Upgrade the empty BlackBerry Enterprise Server to the new version using an in-place upgrade process.
6. Repeat this task until all BlackBerry Enterprise Server instances are running the new version of the software.

Upgrade BlackBerry Enterprise Server Version 2.2 in phases

For more information about installing the BlackBerry® Enterprise Server, see the *BlackBerry Enterprise Server Installation Guide*. For more information about moving users, see the *BlackBerry Enterprise Server System Administration Guide*.

1. Install the new BlackBerry Enterprise Server software on a new computer and move user accounts to it.
2. Upgrade the empty BlackBerry Enterprise Server by replacing the existing version with the new one.
When prompted to provide information for the BlackBerry Configuration Database, specify the new BlackBerry Configuration Database.
3. In the new BlackBerry Manager, in the left pane, click a BlackBerry Enterprise Server.
4. On the **Server Configuration** tab, click **Account**.
5. Click **Import Users from Legacy Server**.
6. Complete the instructions on the screen.
When you import user accounts from BlackBerry Enterprise Server Version 2.2, the BlackBerry Messaging Agent copies state databases to the new BlackBerry Enterprise Server.
7. Activate users' BlackBerry devices over the wireless network.
8. Repeat this task until all BlackBerry Enterprise Server instances are running the new version of the software.

Troubleshooting the BlackBerry Enterprise Server upgrade process 9

A third-party tool did not install and the BlackBerry Enterprise Server setup application closed

Possible solution

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the setup application file for the tool that you want to install.
3. Complete the instructions on the screen.
4. Restart the BlackBerry Enterprise Server setup application.

Previous version detected but no database available

This message appears when you start the setup application and the setup application stops responding.

Possible solution

The registry keys that identify your BlackBerry® Configuration Database must exist in the Microsoft® Windows® Registry.

1. On the computer on which you plan to upgrade the BlackBerry® Enterprise Server, open the Registry Editor.
2. In the left pane, navigate to HKEY_LOCAL_MACHINE\Research In Motion\BlackBerry Enterprise Server\Database.
3. Create the following case-sensitive 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.
4. Restart the setup application.

The BlackBerry Collaboration Service does not connect to Microsoft Office Live Communications Server 2005

Possible solution

If the instant messaging in your organization's environment supports Windows® Messenger with TLS, you must configure authentication.

1. Download the trial edition of Microsoft® Office Communicator 2005 from www.microsoft.com/downloads.

2. Install Microsoft Office Communicator 2005 on the computer that hosts the BlackBerry® Collaboration Service.
3. Connect to Microsoft® Office Live Communications Server 2005 using Microsoft Office Communicator 2005.
4. If a connection does not open, verify that you installed or imported the certificates that are required for authentication.

You cannot resolve errors that occur when you move users

Possible solution

1. Delete the user accounts from the BlackBerry® Enterprise Server before you start the upgrade process.
2. Add the user accounts to the BlackBerry Enterprise Server when the upgrade process completes.
3. Activate users' BlackBerry devices over the wireless network.

You encounter errors when you try to upgrade the BlackBerry Configuration Database

Possible solution

1. Navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Installer or to the location of the log files that you specified in the setup application.
2. Open **DB_InstallV<YYMMDDHHMMSS>.log**, where <YYMMDDHHMMSS> specifies the date and time, in 24 hour clock format, that you upgraded the BlackBerry® Configuration Database.
3. Check the log file for error messages.

The setup application prompts you for access to the installation media for Microsoft .NET Framework version 1.1

When the BlackBerry® Enterprise Server setup application installs Microsoft® .NET Framework version 1.1 SP1 on a computer that hosts a previously installed version of Microsoft .NET Framework version 1.1, it prompts you for access to the installation media for Microsoft .NET Framework version 1.1.

Possible solution

You can access the netfx.msi file that is included with the BlackBerry Enterprise Server installation media.

1. On the BlackBerry Enterprise Server installation media, open the **Tools** folder.
2. Double-click the **netfx.msi** file.
3. Complete the instructions on the screen.

Restore a BlackBerry Configuration Database

If you created a copy of the BlackBerry® Configuration Database using the CreateDB tool, you can restore the copy if you determine that the upgrade process did not complete successfully.

1. In the Windows® Services, stop the BlackBerry® Enterprise Server services.
2. On the server that hosts the BlackBerry Configuration Database, open a command prompt window.
3. Change to *<extractedfolder>\Tools*.
4. Type **BlackBerryDBRestore.exe**.
5. Type the same parameters that you used when you backed up the BlackBerry Configuration Database.
6. Press ENTER.

Upgrading the BlackBerry Device Software

If you want to make the new features of the BlackBerry® Enterprise Server available to your users, you can upgrade the BlackBerry® Device Software when you upgrade the BlackBerry Enterprise Server.

If you want to upgrade the BlackBerry Device Software, you can also choose to upgrade the BlackBerry® Desktop Software.

For more information about BlackBerry Device Software and BlackBerry Desktop Software, visit www.blackberry.com/support.

Permitting users to upgrade the BlackBerry Device Software at their computers

If you want users to upgrade the BlackBerry® Device Software at their computers, you can install the BlackBerry Device Software and the application loader tool on a network drive.

Advantages	Disadvantages
<ul style="list-style-type: none">You can automate the process for upgrading the BlackBerry Device Software so that users do not have to complete any upgrade tasks for BlackBerry devices that use a USB connection.You can upgrade BlackBerry devices remotely.	<ul style="list-style-type: none">You cannot manage BlackBerry Device Software upgrades using software configurations.You cannot make users upgrade the BlackBerry Device Software.This upgrade process increases network traffic to the network drive.

This upgrade process only applies if users have one of the following desktop software versions:

- BlackBerry® Desktop Software Version 3.6 or later
- BlackBerry® Handheld Manager Version 3.6 or later

After the upgrade process completes, the application loader tool connects to the messaging server to provision the BlackBerry devices.

Upgrading the BlackBerry Device Software at a central computer

If you want to upgrade the BlackBerry® Device Software for users, or if you want users to upgrade their BlackBerry devices at a central computer, you can upgrade the BlackBerry Device Software at the central computer.

Advantages	Disadvantages
<ul style="list-style-type: none">You can monitor the software upgrade process at the central computer.You can use software configurations to help control the 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® Desktop Manager installed on their computers.You can share a single software location among multiple central computers.	<ul style="list-style-type: none">You cannot make users upgrade the BlackBerry Device Software.

Pushing the BlackBerry Device Software and the BlackBerry Desktop Software to users' computers

You can use third-party applications to create a single upgrade file that contains the BlackBerry® Desktop Software and the BlackBerry® Device Software, and send the upgrade file to the computers of your BlackBerry device users. The application loader tool on the computers upgrades the BlackBerry Device Software on the BlackBerry device.

Advantages	Disadvantages
<ul style="list-style-type: none">You can install the BlackBerry Device Software and the BlackBerry Desktop Software on computers automatically.You can set an IT policy to make users upgrade the BlackBerry Device Software.	<ul style="list-style-type: none">You must distribute large upgrade packages over your organization's LAN.

The upgrade file installs the BlackBerry Desktop Software and the BlackBerry Device Software on the computers of your BlackBerry device users. To upgrade the BlackBerry Device Software on their BlackBerry devices, users can connect their BlackBerry devices to their computers and start the BlackBerry® Desktop Manager.

This upgrade process applies when you upgrade from BlackBerry Device Software Version 3.5 or earlier.

Permitting users to upgrade the BlackBerry Device Software at their computers

If you want users to upgrade the BlackBerry® Device Software at their computers, you can install the BlackBerry Device Software and the application loader tool on a network drive.

Advantages	Disadvantages
<ul style="list-style-type: none">You can automate the process for upgrading the BlackBerry Device Software so that users do not have to complete any upgrade tasks for BlackBerry devices that use a USB connection.You can upgrade BlackBerry devices remotely.	<ul style="list-style-type: none">You cannot manage BlackBerry Device Software upgrades using software configurations.You cannot make users upgrade the BlackBerry Device Software.This upgrade process increases network traffic to the network drive.

This upgrade process only applies if users have one of the following desktop software versions:

- BlackBerry® Desktop Software Version 3.6 or later
- BlackBerry® Handheld Manager Version 3.6 or later

After the upgrade process completes, the application loader tool connects to the messaging server to provision the BlackBerry devices.

Configure a network drive

- Share <drive>\Program Files\Common Files\Research In Motion with read-only permissions.
- Verify that the computers of BlackBerry® device users in your organization can access the network drive.
- To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Install the BlackBerry Device Software on the network drive

If you want to automate the BlackBerry® Device Software upgrade process and the provisioning process, you can install the application loader tool. The application loader tool installs as a component of both BlackBerry Device Software Version 4.1 and BlackBerry® Desktop Software Version 4.1.

Before you begin: Your service provider can provide you with the BlackBerry Device Software installation media.

- Save the BlackBerry Device Software installation file to the network drive.
- On the network drive, double-click the .exe file.

3. Complete the installation process.
4. Verify that the files are located at `<drive>:\Program Files\Common Files\Research In Motion\Shared\Loader Files`.
5. Save the BlackBerry Device Software installation file to other regional network drives and install it, if applicable, in your environment.

After you finish: To download BlackBerry Desktop Software Version 4.1, visit www.blackberry.com/support/downloads.

Verify the version of the application loader tool

Perform this task to ensure that the application loader tool supports the new version of BlackBerry® Device Software.

1. On the network drive, navigate to `<drive>:\Program Files\Common Files\Research In Motion\AppLoader`.
2. Right-click **loader.exe**.
3. Click **Properties**.
4. On the **Version** tab, verify that **loader.exe** is Version 4.1 or later.
If the version number for **loader.exe** is earlier than Version 4.1, visit www.blackberry.com/support/downloads to download BlackBerry® Desktop Software Version 4.1 or later.

Sending the BlackBerry Desktop Software or BlackBerry Device Manager installation files to users' computers

If BlackBerry® device users do not have the BlackBerry® Desktop Software installed on their computers, you can send the installation files for the BlackBerry Desktop Software or the BlackBerry® Device Manager to their computers.

You can distribute the installation files in one of the following ways:

- send the .msi file for the BlackBerry Device Manager to users' computers
- configure and send the BlackBerry Desktop Software installation file to users' computers, which installs the software and settings on users' computers automatically

Send the BlackBerry Device Manager installation file to users' computers

You can send the BlackBerry® Device Manager to users so that they can perform actions such as charging their BlackBerry devices, synchronizing organizer items through the BlackBerry Router, and upgrading the BlackBerry® Device Software at their computers.

Note: If you send the BlackBerry Device Manager installation file to computers on which the BlackBerry® Desktop Manager is installed, the BlackBerry Device Manager installation process removes the BlackBerry Desktop Manager automatically.

1. Download the installation file for the BlackBerry Device Manager from www.blackberry.com/support/downloads.
2. Copy the installation file that you downloaded to the shared network drive.

3. Send users an email message that includes the following information:
 - location of the installation file on the network drive
 - instructions to double-click blackberry device manager v4.1.msi

Send the BlackBerry Desktop Software installation file to users' computers

You can send users the BlackBerry® Desktop Software so that they can synchronize organizer data items and manage message forwarding at their computers.

Send users an email message that includes the location of the installation file on the network drive and specifies the following installation type: `\\<shared network drive>\setup.exe /s`

The software installs automatically.

Synchronizing wireless data automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends service books to the BlackBerry devices that can synchronize data over the wireless network. For more information about which BlackBerry® Device Software versions cause wireless data synchronization to occur automatically, visit www.blackberry.com/support to read article KB04295.

Create the BlackBerry Device Software upgrade instructions for BlackBerry device users

Perform this task so that your users can upgrade the BlackBerry® Device Software.

1. Create an email message that includes the location of the application loader tool and specifies the following loading commands based on the type of connection that the BlackBerry device uses:
 - USB: `\\<shared computer name>\Research In Motion\Apploder\loader.exe /defaultUSB /forceload`
 - Serial: `\\<shared computer name>\Research In Motion\Apploder\loader.exe`
2. Consider providing the following instructions in the email message:
 - Connect your BlackBerry device to your computer.
 - Do not disconnect your BlackBerry device from your computer until the upgrade process completes.
 - If prompted, type your BlackBerry device password. Click **Next**.
 - If your BlackBerry device 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 your user account is located.

Confirming that the BlackBerry Device Software upgrade process completed successfully

Verify that the upgrade from BlackBerry Device Software Version 4.0 or later completed successfully

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, verify the BlackBerry® Device Software version.

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. You might have to wait for a short period of time while 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.

Verify that the upgrade from BlackBerry Device Software Version 2.2 or earlier completed successfully

Instruct users to perform the following actions:

- On the BlackBerry® device, in the device options, click **About**.
- Confirm the version.

Save the BlackBerry Device Software installation files to the network drive

Before you begin: Your service provider can provide you with the BlackBerry® Device Software installation media.

1. On the network drive, in the installation directory, create a folder that is named **Device**.
2. Save the required BlackBerry Device Software files to the folder.

Upgrading the BlackBerry Device Software at a central computer

If you want to upgrade the BlackBerry® Device Software for users, or if you want users to upgrade their BlackBerry devices at a central computer, you can upgrade the BlackBerry Device Software at the central computer.

Advantages	Disadvantages
<ul style="list-style-type: none">• You can monitor the software upgrade process at the central computer.• You can use software configurations to help control the 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® Desktop Manager installed on their computers.• You can share a single software location among multiple central computers.	<ul style="list-style-type: none">• You cannot make users upgrade the BlackBerry Device Software.

Configure a network drive

1. Share <drive>\Program Files\Common Files\Research In Motion with read-only permissions.
2. Verify that the computers of BlackBerry® device users in your organization can access the network drive.
3. To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Install the BlackBerry Device Software on the network drive

If you want to automate the BlackBerry® Device Software upgrade process and the provisioning process, you can install the application loader tool. The application loader tool installs as a component of both BlackBerry Device Software Version 4.1 and BlackBerry® Desktop Software Version 4.1.

Before you begin: Your service provider can provide you with the BlackBerry Device Software installation media.

1. Save the BlackBerry Device Software installation file to the network drive.
2. On the network drive, double-click the .exe file.

3. Complete the installation process.
4. Verify that the files are located at <drive>:\Program Files\Common Files\Research In Motion\Shared\Loader Files.
5. Save the BlackBerry Device Software installation file to other regional network drives and install it, if applicable, in your environment.

After you finish: To download BlackBerry Desktop Software Version 4.1, visit www.blackberry.com/support/downloads.

Create a software configuration for the BlackBerry Device Software

Perform this task to help control the software upgrade process for each BlackBerry® device at a central computer.

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 software configuration.
4. In the **Device Software Location** field, click the **Change** button.
5. Navigate to the network location where you installed the BlackBerry® Device Software.
6. In the **Application Name** list, select the check box for the BlackBerry device series that you want to upgrade the BlackBerry Device Software for.
7. Expand the application tree.
8. Select the check boxes for additional components or applications that you want to install.
9. Click **OK**.

Assign the software configuration to a user

To monitor whether a user upgrades to BlackBerry® Device Software Version 4.0 or later, assign the user to the software configuration for the BlackBerry Device Software.

1. In the BlackBerry Manager, in the left pane, click a BlackBerry® Enterprise Server.
2. In the **Users** list, click the user account that you want 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 at a central computer

Before you begin:

- Verify that the central computer can access the network drive.

- To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to the central computer.
 - Verify that BlackBerry® Manager is installed on the central computer.
1. Connect the BlackBerry device to the central computer that hosts the BlackBerry Manager.
 2. In the BlackBerry Manager, in the left pane, click **Ports**.
 3. On the **Ports** tab, click the BlackBerry device that you want to upgrade the BlackBerry® Device Software for.
 4. Perform one of the following actions:
 - To upgrade the BlackBerry Device Software automatically, click **Load Handheld**.
 - To upgrade the BlackBerry Device Software using the application loader tool, click **Load Handheld (Interactive)**.
 5. Click a software configuration.
 6. Click **OK**.
 7. If you are using the application loader tool, complete the instructions on the screen.

Verify that the BlackBerry Device Software upgrade at a central computer completed successfully

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 for one of the following status messages:
 - **Upgrade Required:** the BlackBerry device has not yet been upgraded to the BlackBerry® Device Software specified in the assigned software configuration
 - **Up to date:** the BlackBerry device has been upgraded to the BlackBerry Device Software specified in the software configuration

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. You might have to wait for a short period of time while 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.

Pushing the BlackBerry Device Software and the BlackBerry Desktop Software to users' computers

You can use third-party applications to create a single upgrade file that contains the BlackBerry® Desktop Software and the BlackBerry® Device Software, and send the upgrade file to the computers of your BlackBerry device users. The application loader tool on the computers upgrades the BlackBerry Device Software on the BlackBerry device.

Advantages	Disadvantages
<ul style="list-style-type: none">You can install the BlackBerry Device Software and the BlackBerry Desktop Software on computers automatically.You can set an IT policy to make users upgrade the BlackBerry Device Software.	<ul style="list-style-type: none">You must distribute large upgrade packages over your organization's LAN.

The upgrade file installs the BlackBerry Desktop Software and the BlackBerry Device Software on the computers of your BlackBerry device users. To upgrade the BlackBerry Device Software on their BlackBerry devices, users can connect their BlackBerry devices to their computers and start the BlackBerry® Desktop Manager.

This upgrade process applies when you upgrade from BlackBerry Device Software Version 3.5 or earlier.

Configure a network drive

1. Share <drive>:\Program Files\Common Files\Research In Motion with read-only permissions.
2. Verify that the computers of BlackBerry® device users in your organization can access the network drive.
3. To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Save the BlackBerry Desktop Software installation file to the network drive

1. Download the BlackBerry® Desktop Software installation file from www.blackberry.com/support/downloads.
2. Save the installation file that you downloaded to the network drive.
3. If necessary, extract the installation files from the .exe file to the network drive.
4. On the network drive, open **setup.ini**.
5. At the bottom of **setup.ini**, type **[INSTALL_OPTIONS]**.
6. To add the installation settings, use **install.txt**, which is included with the BlackBerry Desktop Software installation files.

7. Save **setup.ini**.

Install the BlackBerry Device Software on the network drive

If you want to automate the BlackBerry® Device Software upgrade process and the provisioning process, you can install the application loader tool. The application loader tool installs as a component of both BlackBerry Device Software Version 4.1 and BlackBerry® Desktop Software Version 4.1.

Before you begin: Your service provider can provide you with the BlackBerry Device Software installation media.

1. Save the BlackBerry Device Software installation file to the network drive.
2. On the network drive, double-click the **.exe** file.
3. Complete the installation process.
4. Verify that the files are located at `<drive>\Program Files\Common Files\Research In Motion\Shared\Loader Files`.
5. Save the BlackBerry Device Software installation file to other regional network drives and install it, if applicable, in your environment.

After you finish: To download BlackBerry Desktop Software Version 4.1, visit www.blackberry.com/support/downloads.

Synchronizing wireless data automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends service books to the BlackBerry devices that can synchronize data over the wireless network. For more information about which BlackBerry® Device Software versions cause wireless data synchronization to occur automatically, visit www.blackberry.com/support to read article KB04295.

Send the installation files for the BlackBerry Desktop Software and the BlackBerry Device Software to users using a third-party application

Perform this task so that you can upgrade the BlackBerry® Desktop Software and BlackBerry® Desktop Manager by pushing the software to user computers using a third-party application.

1. To record the customized settings in the BlackBerry Desktop Software installation files so that you can create a custom software package, at a command prompt, type: `\\<shared computer name>\setup.exe /s`
2. Package the customized BlackBerry Desktop Software and the BlackBerry® Device Software installation files using a third-party application for software packaging.
3. Send the installation files using a third-party application for software distribution.

After you finish: If you want to make sure that users upgrade the BlackBerry Device Software, set the Force Load Count IT policy rule and the Force Load Message IT policy rule. For more information, see the *BlackBerry Enterprise Server Policy Reference Guide*.

Confirming that the BlackBerry Device Software upgrade process completed successfully

Verify that the upgrade from BlackBerry Device Software Version 4.0 or later completed successfully

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, verify the BlackBerry® Device Software version.

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. You might have to wait for a short period of time while 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.

Verify that the upgrade from BlackBerry Device Software Version 2.2 or earlier completed successfully

Instruct users to perform the following actions:

- On the BlackBerry® device, in the device options, click **About**.
- Confirm the version.

Troubleshooting

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When users click the link to the application loader tool in the upgrade instructions, the upgrade process does not start

Possible cause

The application loader might not be shared.

Possible solution

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\Apploder\loader.exe`
3. If the application loader tool starts, the tool is shared successfully.

Glossary

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AJAX

Asynchronous JavaScript® and XML

BlackBerry Domain

A BlackBerry Domain consists of the BlackBerry Configuration Database with its users and any BlackBerry® Enterprise Server instances that connect to it.

BlackBerry MDS

BlackBerry® Mobile Data System

BlackBerry Mobile Data Service

After you upgrade to BlackBerry® Enterprise Server Version 4.1 or later, the BlackBerry® Mobile Data Service name changes to the BlackBerry MDS Connection Service.

BlackBerry CAL

A BlackBerry® Client Access License (BlackBerry CAL) limits how many users you can add to a BlackBerry® Enterprise Server.

DMZ

A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.

DNS

Domain Name System

HTTPS

Hypertext Transfer Protocol over Secure Sockets Layer

ISAPI

Internet Server Application Programming Interface

LAN

local area network

MDAC

Microsoft® Data Access Components

messaging server

A messaging server sends and processes messages and provides collaboration services, such as updating and communicating calendar and address book information.

MSDE

Microsoft® SQL Server® Desktop Engine

MSMQ

Microsoft® Message Queuing

MTLS

Mutual Transport Layer Security

ODBC

Open Database Connectivity

S/MIME

Secure Multipurpose Internet Mail Extensions

SNMP

Simple Network Management Protocol

SQL

Structured Query Language

SRP

Server Routing Protocol

SSL

Secure Sockets Layer

TLS

Transport Layer Security

XML

Extensible Markup Language

USB

Universal Serial Bus

Legal notice

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