

BlackBerry Enterprise Server

BlackBerry Device Software

Version: 5.0

Service Pack: 4



Update Guide

Contents

1	Updating the BlackBerry Device Software	6
2	Permitting users to update the BlackBerry Device Software using the BlackBerry Desktop Software.....	8
	Installing the BlackBerry Desktop Software on computers without requiring action from users.....	8
	Prerequisites: Installing the BlackBerry Desktop Software on computers.....	9
	Properties for installing the BlackBerry Desktop Software on computers.....	9
	Install the BlackBerry Desktop Software on computers using InstallShield.....	10
	Install the BlackBerry Desktop Software on computers using the Windows Installer.....	11
	Configure email settings for the BlackBerry Desktop Software.....	12
	Create the BlackBerry Device Software update instructions for users that use the BlackBerry Desktop Software	13
3	Permitting users to update the BlackBerry Device Software using the BlackBerry Web Desktop Manager.....	14
	Install the BlackBerry Device Software.....	14
	Create a shared network folder to access the BlackBerry Device Software.....	15
	Configure the BlackBerry Administration Service to display BlackBerry Device Software pages.....	16
	Add a shared network folder to the BlackBerry Administration Service	17
	Configure the BlackBerry Administration Service to find the BlackBerry Device Software	17
	Create a BlackBerry Device Software configuration.....	18
	Create a software configuration for the BlackBerry Device Software.....	19
	Assign a software configuration to a group.....	19
	Assign a software configuration to a user account.....	20
	Create the BlackBerry Device Software update instructions for users that use the BlackBerry Web Desktop Manager.....	21
4	Updating the BlackBerry Device Software over the wireless network	22
	Architecture: BlackBerry Infrastructure components.....	23
	Types of BlackBerry Device Software update packages.....	24
	Features of wireless BlackBerry Device Software updates.....	25
	Approximate duration of downloading and installing BlackBerry Device Software updates over the wireless network.....	25
	BlackBerry device memory requirements for BlackBerry Device Software updates over the wireless network.....	26
	Battery power requirements for BlackBerry Device Software updates over the wireless network	27
	IP address and port information.....	27
	Permitting the wireless service provider to update the BlackBerry Device Software over the wireless network.....	28
	Permit wireless service providers to send BlackBerry Device Software update requests to BlackBerry devices.....	28
	Permit BlackBerry device users to cancel BlackBerry Device Software updates from the wireless service provider.....	29
	Permit BlackBerry device users to send BlackBerry Device Software update requests to the wireless service provider.....	29

	Create instructions for how users can request BlackBerry Device Software updates from the wireless service provider.....	30
	Using the BlackBerry Enterprise Server to update the BlackBerry Device Software over the wireless network.....	30
	Configure the BlackBerry Administration Service to display BlackBerry Device Software pages.....	31
	Search for BlackBerry Device Software on the BlackBerry Infrastructure.....	32
	Resolve conflicts that occur if you assign multiple BlackBerry Device Software bundles to groups and user accounts.....	32
	Create a BlackBerry Device Software configuration.....	33
	Create a software configuration for the BlackBerry Device Software.....	34
	Assign a software configuration to a group.....	34
	Assign a software configuration to a user account.....	35
	How a user can respond to a BlackBerry Device Software update request from the BlackBerry Enterprise Server.....	35
	Monitoring BlackBerry Device Software update requests.....	36
	Preventing BlackBerry Device Software updates over the wireless network based on the network connection type.....	36
	Best practice: Preventing possible BlackBerry device issues during the BlackBerry Device Software update process.....	39
	Best practice: Managing traffic over the wireless network during the BlackBerry Device Software update process.....	40
5	Updating the BlackBerry Device Software at a central computer.....	41
	Install the BlackBerry Device Software.....	41
	Create a shared network folder to access the BlackBerry Device Software.....	42
	Configure the BlackBerry Administration Service to display BlackBerry Device Software pages.....	42
	Add a shared network folder to the BlackBerry Administration Service	43
	Configure the BlackBerry Administration Service to find the BlackBerry Device Software	44
	Create a BlackBerry Device Software configuration.....	44
	Create a software configuration for the BlackBerry Device Software.....	45
	Assign a software configuration to a group.....	46
	Assign a software configuration to a user account.....	46
	Update the BlackBerry Device Software at a central computer	47
6	Permitting users to update the BlackBerry Device Software using the application loader tool.....	48
	Send the BlackBerry Device Manager installation file to users' computers.....	48
	Install the BlackBerry Device Software.....	49
	Create a shared network folder to access the BlackBerry Device Software.....	50
	Create the BlackBerry Device Software update instructions for users that use the application loader tool	50
7	Pushing the BlackBerry Device Software and BlackBerry Desktop Software to users' computers.....	52
	Create a shared network folder to access the BlackBerry Device Software.....	52
	Save the BlackBerry Device Software installation file to the network drive.....	53
	Save the BlackBerry Desktop Software installation file to the network drive.....	53
	Send the installation files for the BlackBerry Desktop Software and BlackBerry Device Software to users using a third-party application.....	54
8	Permitting users to update the BlackBerry Device Software using the BlackBerry Device Software update web site.....	55

	Configure IT policy rules to permit users to update the BlackBerry Device Software using the BlackBerry Device Software update web site.....	56
	Create instructions so that users can update the BlackBerry Device Software using the BlackBerry Device Software update web site.....	56
9	Managing the distribution of BlackBerry Device Software.....	58
	Change how to install or update the BlackBerry Device Software.....	58
	Change how a job sends the BlackBerry Device Software to BlackBerry devices.....	59
	Change how the BlackBerry Enterprise Server sends standard application settings to BlackBerry devices.....	61
	Change how a job sends standard application settings to BlackBerry devices.....	62
10	Troubleshooting.....	64
	Verify that the BlackBerry Device Software update process completed.....	64
	A user cannot start the update process using the link to the application loader tool	64
11	Glossary.....	65
12	Provide feedback.....	66
13	Legal notice	67

Updating the BlackBerry Device Software

1

To make the new features of the BlackBerry Enterprise Server available to users in your organization, you can update the BlackBerry Device Software on BlackBerry devices at the same time that you upgrade the BlackBerry Enterprise Server software.

Update option	Description
Permit users to update the BlackBerry Device Software using the BlackBerry Desktop Software.	<p>You can use this option if users installed the BlackBerry Desktop Software on their computers.</p> <p>If you permit users to use the BlackBerry Desktop Software to update the BlackBerry Device Software, they can update the BlackBerry Desktop Software simultaneously.</p>
Permit users to update the BlackBerry Device Software using the BlackBerry Web Desktop Manager.	You can use this option if you want users to update the BlackBerry Device Software themselves, you do not want users to install the BlackBerry Desktop Software, or you prefer that users use a UI to update the BlackBerry Device Software.
Update the BlackBerry Device Software over the wireless network.	You can use this option if you want to update BlackBerry Device Software on BlackBerry devices without requiring that users connect their BlackBerry devices to their computers, and if the wireless network in your organization's environment permits the use of additional bandwidth. Users respond to UI prompts to complete the BlackBerry Device Software update.
Update the BlackBerry Device Software at a central computer.	You can use this option if you want to update the BlackBerry Device Software for users using the BlackBerry Administration Service.
Permit users to update the BlackBerry Device Software using the application loader tool.	You can use this option if you want users to update the BlackBerry Device Software themselves, you do not want users to install the BlackBerry Desktop Software, and do not mind that users use a command prompt window to update the BlackBerry Device Software.
Push the BlackBerry Device Software and BlackBerry Desktop Software to users' computers.	You can use this option if you want to update the BlackBerry Device Software and BlackBerry Desktop Software simultaneously.
Permit users to update the BlackBerry Device Software using the BlackBerry Device Software update web site.	You can use this option if you want users to update the BlackBerry Device Software from a computer that is inside or outside your organization's network.

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

Permitting users to update the BlackBerry Device Software using the BlackBerry Desktop Software

To permit users to update the BlackBerry Device Software using the BlackBerry Desktop Software, you can make the BlackBerry Device Software installation file available and instruct users to use the application loader tool that is installed with the BlackBerry Desktop Software. After the update process completes, the application loader tool connects to the messaging server to provision the BlackBerry device.

This update option applies only if users have installed BlackBerry Desktop Software version 4.1 or later on their computers.

Advantages of this update process include:

- You can automate the BlackBerry Device Software upgrade process so that users do not have to complete update tasks for BlackBerry devices that they connect to their computers using a USB connection.
- You can update BlackBerry devices remotely.

Disadvantages of this update process include:

- Users' computers must have the BlackBerry Desktop Software installed.
- You cannot use software configurations to manage BlackBerry Device Software updates.
- You cannot require that users update the BlackBerry Device Software.
- This update process increases traffic to the computer that hosts the shared network folder.

Installing the BlackBerry Desktop Software on computers without requiring action from users

Prerequisites: Installing the BlackBerry Desktop Software on computers

- Visit www.blackberry.com/support/downloads/ to download the latest version of the BlackBerry Desktop Software installation package.
- If your organization's operating system supports UAC, verify that users have the appropriate permissions to install the BlackBerry Desktop Software.
- If users have a version of BlackBerry Desktop Software earlier than version 6.0 installed on their computers, run the following command to remove all previous components: **InstallerUtils\InstallerUtils.exe /UninstallMediaApplications**.

If you are using the Windows Installer to install the BlackBerry Desktop Software, perform the following actions:

- Verify that Microsoft .NET Framework 3.5 SP1 or later is installed on each user's computer.
- Verify that the latest Microsoft Visual C++ Redistributable Package (vcredist_x86.exe) is installed on each user's computer.

Properties for installing the BlackBerry Desktop Software on computers

The BlackBerry Desktop Software is a software package that you can install on BlackBerry device users' computers without requiring any action from the users. You can install the BlackBerry Desktop Software using InstallShield or the Windows Installer. The following table describes the properties that you can use to specify how to install the BlackBerry Desktop Software on computers. The properties apply to BlackBerry Desktop Software 6.0.1 and later.

Property	Description	Values
SHORTCUT_DESKTOP	Use this property to specify whether you want a shortcut link to the BlackBerry Desktop Software to display on the desktop of each user's computer.	0 - A desktop shortcut is not installed. 1 - A desktop shortcut is installed. The default value is 1.
ALL_USERS	Use this property to specify whether you want the BlackBerry Desktop Software to be used by the current user only or by all users that use the computer.	0 - Install the BlackBerry Desktop Software for the current user only. 1 - Install the BlackBerry Desktop Software for all users that use the computer.

Property	Description	Values
		The default value is 1.
INSTALLDIR	Use this property to specify the full path to the installation directory for the BlackBerry Desktop Software.	<p>The default installation directory is C:\Program Files\Research In Motion\BlackBerry Desktop.</p> <p>If you want to use InstallShield and the file path includes a space, use the following format: INSTALLDIR= \"<file_path>\"</p> <p>If you want to use the Windows Installer and the file path includes a space, use the following format: INSTALLDIR= \"<file_path>\"</p>
TRANSFORMS	Use this property to specify the name of the .mst transform file that you want to apply to the BlackBerry Desktop Software. If you use the Windows Installer, the transform file is used to specify the language of the BlackBerry Desktop Software.	By default, a transform is not applied and the BlackBerry Desktop Software is installed in English.

Install the BlackBerry Desktop Software on computers using InstallShield

You can use the following commands with the software distribution method that your organization uses (for example, a group policy) to install the BlackBerry Desktop Software on computers without requiring any action from users. The commands and properties apply to BlackBerry Desktop Software 6.0.1 and later.

In the software distribution tool that your organization uses, type the following command: **setup.exe /s /I<language_code> /v" /qn <install_properties>".** <language_code> refers to standard Microsoft Help LangId values. <install_properties> refers to the optional install properties that you can specify. For more information about the available properties, see [Properties for installing the BlackBerry Desktop Software on computers](#).

Example: The command for installing the BlackBerry Desktop Software for use by all users on a computer and displaying a shortcut link on the desktop

```
setup.exe /s /I1033 /v" /qn SHORTCUT_DESKTOP=1 ALL_USERS=1 INSTALLDIR=\"C:\BlackBerry Software\""
```

Example: The command for installing the BlackBerry Desktop Software in French for use by the current user only, without displaying a shortcut link on the desktop

```
setup.exe /s /I1036 /v" /qn SHORTCUT_DESKTOP=0 ALL_USERS=0 INSTALLDIR=C:\BlackBerryDesktop"
```

After you finish: Configure email settings for the BlackBerry Desktop Software on each user's computer using registry keys. For more information about configuring the required registry keys, see [Configure email settings for the BlackBerry Desktop Software](#). If you do not configure email settings for users, when each user opens the BlackBerry Desktop Software for the first time, the BlackBerry Desktop Software prompts the user to select configuration options.

Install the BlackBerry Desktop Software on computers using the Windows Installer

You can use the following commands with the software distribution method that your organization uses (for example, a group policy) to install the BlackBerry Desktop Software on computers without requiring any action from users. The commands and properties apply to BlackBerry Desktop Software 6.0.1 and later.

In the software distribution tool that your organization uses, type the following command: **msiexec.exe /I "BlackBerry Desktop Software.msi" /q <install_properties>**. <install_properties> refers to the optional install properties that you can specify. For more information about the available properties, see [Properties for installing the BlackBerry Desktop Software on computers](#).

Example: The command for installing the BlackBerry Desktop Software for use by all users on a computer, and displaying a shortcut link on the desktop

```
msiexec.exe /I "BlackBerry Desktop Software.msi" /q SHORTCUT_DESKTOP=1 ALL_USERS=1 INSTALLDIR="C:\BlackBerry Software\"
```

Example: The command for installing the BlackBerry Desktop Software in French for use by the current user only, without displaying a shortcut link on the desktop

```
msiexec.exe /I "BlackBerry Desktop Software.msi" /q SHORTCUT_DESKTOP=0 ALL_USERS=0 INSTALLDIR="C:\BlackBerry Software\" TRANSFORMS=1036.mst
```

After you finish: Configure email settings for the BlackBerry Desktop Software on each user's computer using registry keys. For more information about configuring the required registry keys, see [Configure email settings for the BlackBerry Desktop Software](#). If you do not configure email settings for users, when each user opens the BlackBerry Desktop Software for the first time, the BlackBerry Desktop Software prompts the user to select configuration options.

Create a custom transform file

If you plan to install the BlackBerry Desktop Software on computers using the Windows Installer, and you do not want to specify the installation properties using the command line, you have the option of creating a custom transform file that you can use to specify the installation properties.

1. Open the Windows Installer .msi file with a tool that supports the .msi file type.
2. In the Properties table, change the parameter properties as required and generate a transform file.
3. Use the following command to apply the transform file to the BlackBerry Desktop Software installation:
msiexec.exe /I "BlackBerry Desktop Software.msi" /q TRANSFORMS= <transform_file_name>.mst. If you want to

apply more than one transform file, separate the transform file names using a semicolon (;), for example, **TRANSFORMS=Custom.mst;1033.mst**.

Configure email settings for the BlackBerry Desktop Software

If you want to configure email settings for the BlackBerry Desktop Software that you installed on each user's computer, you can send the following registry settings to each user's computer. The settings are applied to the first BlackBerry device that a user connects to the BlackBerry Desktop Software.

1. In the Windows Registry Editor, create one or more of the following registry keys, as required:
 - HKEY_LOCAL_MACHINE\Software\Policies\Research In Motion\BlackBerry Desktop\EnterpriseEmail
 - HKEY_CURRENT_USER\Software\Policies\Research In Motion\BlackBerry Desktop\EnterpriseEmail
2. Create a DWORD value named **Type**. If your organization uses Microsoft Exchange, set the value to **0**. If your organization uses IBM Domino, set the value to **1**.
3. If your organization uses the BlackBerry Enterprise Server for Microsoft Exchange, create a STRING value named **Profile**. Set the value to the name of the Microsoft Exchange profile.
4. If your organization uses the BlackBerry Enterprise Server for IBM Domino, create a text file that lists the names of the BlackBerry Enterprise Server instances that are available in your organization's environment. Store the text file in a location that each user's computer can access. The text file must use the following format:

```
<blackberry-server_list>
<BES value="<server_name>" />
<BES value="<server_name>" />
</blackberry-server_list>
```

5. If your organization uses the BlackBerry Enterprise Server for IBM Domino, create a STRING value named **DominoServers**. Set the value to the file path of the text file that you created in step 4.

Create the BlackBerry Device Software update instructions for users that use the BlackBerry Desktop Software

You can create update instructions for users so that they can update the BlackBerry Device Software on their computers using the BlackBerry Desktop Software.

Before you begin:

- Obtain the BlackBerry Device Software installation file from your organization's service provider.
 - Set up a shared network folder that users can access from their computers.
 - Extract the BlackBerry Device Software installation files to the shared network folder.
1. Create an email message that specifies the location of the shared network folder.
 2. Consider providing the following instructions in the email message:
 - Install the BlackBerry Device Software on your computer.
 - Open the BlackBerry Desktop Software.
 - Connect your BlackBerry device to your computer.
 - In the BlackBerry Desktop Software, use the application loader tool to update the BlackBerry Device Software.
 - Do not disconnect your device from your computer until the update process completes.
 - If prompted, type your device password. Click **Next**.
 - If the device uses a serial connection, complete the instructions on the screen.
 - If your organization's environment includes the BlackBerry Enterprise Server for Microsoft Exchange or BlackBerry Enterprise Server for IBM Domino, if prompted, select the **Provision the device during the loading process** option. Select the messaging server that the user account is located on.
 - If your organization's environment includes the BlackBerry Enterprise Server for Novell GroupWise, if prompted, select the **Do not provision the device during the loading process** option. After the update completes, activate the device over the wireless network.
 3. Send the email message.

After you finish: To verify that the update process completed, instruct users to check the version information in the BlackBerry device options on the **About** screen.

Permitting users to update the BlackBerry Device Software using the BlackBerry Web Desktop Manager

To permit users to update the BlackBerry Device Software using the BlackBerry Web Desktop Manager instead of the BlackBerry Desktop Software, you can install the BlackBerry Device Software on a shared network folder, create a software configuration, and instruct users to update the BlackBerry Device Software using the BlackBerry Web Desktop Manager.

Advantages of this update process include:

- You can automate the BlackBerry Device Software update process so that users do not have to complete update tasks for BlackBerry devices that they connect to their computers using a USB connection.
- You can use software configurations and application control policies to control when software updates occur and to specify which users receive the updates.
- You can update devices remotely.
- Users do not require BlackBerry Desktop Software on their computers to use this update option.

Disadvantages of this update process include:

- You cannot require that users update the BlackBerry Device Software.
- This update option increases traffic to the shared network folder.

Install the BlackBerry Device Software

You must install the BlackBerry Device Software on a computer so that you can create a software configuration. You use the software configuration to distribute the BlackBerry Device Software using the BlackBerry Web Desktop Manager, BlackBerry Administration Service, BlackBerry Desktop Software, or over the wireless network.

Before you begin:

- Obtain the latest BlackBerry Device Software version for the BlackBerry devices in your organization's environment from your organization's service provider. The versions must be compatible with the devices and service provider that your organization uses.
 - Verify that users and the BlackBerry Administration Service can access the computer that you want to install the BlackBerry Device Software on.
1. Copy the BlackBerry Device Software installation file to the computer.
 2. Double-click the .exe file.
 3. Complete the instructions on the screen.
 4. When prompted, do not start the application loader tool.

Create a shared network folder to access the BlackBerry Device Software

You can create a shared network folder on the computer where the BlackBerry Device Software is installed so that BlackBerry device users and the BlackBerry Administration Service can access the BlackBerry Device Software. The shared network folder that you create for the BlackBerry Device Software cannot be the same shared network folder that you create for BlackBerry Applications. BlackBerry device users must have read access to the shared network folder.

1. On the computer where the BlackBerry Device Software is installed, navigate to <drive>:\Program Files\Common Files\Research In Motion.
2. Share the folder with write permissions for the account that is running the BlackBerry Administration Service - Application Server service.
3. To decrease bandwidth over your organization's LAN, verify that the shared network folder is located in close proximity to users' computers.

After you finish: Verify that the AppLoader subfolder is writable.

Configure the BlackBerry Administration Service to display BlackBerry Device Software pages

By default, the BlackBerry Administration Service does not display the BlackBerry Device Software pages that permit you to distribute BlackBerry Device Software to BlackBerry devices. If you display the BlackBerry Device Software management pages, the following changes occur in the BlackBerry Administration Service:

- The value of the Allow Non Enterprise Upgrade IT policy rule changes to No. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.

Note: The Allow Wireless Security Updates IT policy rule replaces the functionality of the Allow Non Enterprise Upgrade IT policy rule for specific device models running specific versions of BlackBerry 6. For all other device models and device software versions, the Allow Non Enterprise Upgrade IT policy rule still applies. For more information, visit www.blackberry.com/go/serverdocs to see the *Controlling BlackBerry Device Software updates over the wireless network Technical Note*. The value of this Allow Wireless Security Updates IT policy rule is not affected when you display or hide the BlackBerry Device Software pages in the BlackBerry Administration Service.

- The value of the Disallow Device User Requested Upgrade IT policy rule changes to Yes. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.
- The Disallow Device User Requested Rollback IT policy rule changes to Yes. You can view and change the value of this IT policy rule in the BlackBerry Administration Service. If you change the value of this IT policy rule to No, BlackBerry device users that receive and install optional BlackBerry Device Software updates can revert to the previous version of the BlackBerry Device Software that was installed on their devices.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology** > **BlackBerry Domain** > **Component view** > **BlackBerry Administration Service**.
2. Click **BlackBerry Administration Service**.
3. Click **Edit component**.
4. In the **Software management** section, in the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list, click **Yes**.
5. Click **Save All**.

After you finish: If you change the value of the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, you can view and configure the Allow Non Enterprise Upgrade and Disallow Device User Requested Upgrade IT policy rules in the Wireless Software Upgrades policy group. If you change the value to

No, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules are set to the values listed above.

Add a shared network folder to the BlackBerry Administration Service

You can add a shared network folder to the BlackBerry Administration Service so that the BlackBerry Administration Service can find the BlackBerry Device Software that you installed.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Add shared network drive**.
3. In the **Shared network drive** section, perform the following actions:
 - In the **Name** field, type a name for the shared network folder.
 - In the **Server file path** field, type the path to the shared network folder (for example, \\<server>\<shared_network_folder>, where <server> is the name of the computer that hosts the shared network folder).
4. Click **Save**.

Configure the BlackBerry Administration Service to find the BlackBerry Device Software

To create a BlackBerry Device Software configuration, you must use the BlackBerry Administration Service to scan the shared network folder to find the BlackBerry Device Software that you want users to install.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Manage shared network drives**.
3. Click a shared network folder.
4. Click **Execute shared network drive scan**.

After you finish: To verify that the BlackBerry Administration Service found all the BlackBerry Device Software bundles that you installed in the shared network folder, on the **BlackBerry Device Software bundles** tab, verify that the list of BlackBerry Device Software bundles is complete.

Create a BlackBerry Device Software configuration

To send a BlackBerry Device Software update to BlackBerry devices, you must create a BlackBerry Device Software configuration. You use the BlackBerry Device Software configuration to determine what versions of the BlackBerry Device Software to send to devices, and you can configure whether the updates are required or optional. After you create the BlackBerry Device Software configuration, you add it to a software configuration that you assign to groups or user accounts.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry Device Software**.
2. Click **Create BlackBerry Device Software configuration**.
3. In the **Configuration information** section, type a name and description for the BlackBerry Device Software configuration.
4. Click **Save**.
5. In the **Configuration information** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **BlackBerry Device Software application settings** section, change the settings to meet your organization's requirements.
8. On the **BlackBerry Device Software bundles** tab, click **Add BlackBerry Device Software bundles to BlackBerry Device Software configuration**.
9. Search for the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
10. Select the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
11. If the deployment method for the BlackBerry Device Software bundle that you selected is wireless, in the **Disposition** drop-down list, perform one of the following actions:
 - If you want the update to be required (users are not given an option to decline), click **Required**.
 - If you want to give users the option to decline the update, click **Optional**.
12. Click **Add to BlackBerry Device Software configuration**.
13. If necessary, repeat steps 8 to 12 to add additional BlackBerry Device Software bundles.
14. Click **Save all**.

Create a software configuration for the BlackBerry Device Software

You can create a software configuration for the BlackBerry Device Software so that you can distribute the BlackBerry Device Software to users in your organization and they can install it on their BlackBerry devices.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software**.
2. Click **Create a software configuration**.
3. In the **Configuration data** section, type a name for the software configuration.
4. In the **Disposition for unlisted applications** drop-down list, perform one of the following actions:
 - To permit users to install applications that are not included in the software configuration, click **Optional**.
 - To prevent users from installing applications that are not included in the software configuration, click **Disallowed**.
5. If you set **Disposition for unlisted applications** to **Optional**, in the **Application control policy for unlisted applications** drop-down list, click the application control policy for the applications that you did not include in the software configuration.
6. Click **Save**.
7. In the **Configuration data** section, click the name of the software configuration.
8. Click **Edit software configuration**.
9. In the **BlackBerry Device Software configuration** section, in the **Name** drop-down list, click the BlackBerry Device Software configuration that you want to distribute to devices.
10. Click **Save all**.

After you finish: To make the BlackBerry Device Software available to users, assign the software configuration to the groups or user accounts that require it.

Assign a software configuration to a group

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Group**.
2. Click **Manage groups**.
3. Click a group.

4. Click **Edit group**.
5. On the **Software configuration** tab, in the **Available software configurations** list, click a software configuration.
6. Click **Add**.
7. Repeat steps 5 and 6 for each software configuration that you want to assign.
8. Click **Save all**.

Assign a software configuration to a user account

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **User**.
2. Click **Manage users**.
3. Search for a user account.
4. In the search results, click the display name for the user account.
5. Click **Edit user**.
6. On the **Software configuration** tab, in the **Available software configurations** list, click the appropriate software configuration.
7. Click **Add**.
8. Repeat steps 6 and 7 for each software configuration that you want to assign.
9. Click **Save all**.

When you assign a software configuration to a user account, the BlackBerry Administration Service creates a job to deliver the resulting object to the BlackBerry device.

Create the BlackBerry Device Software update instructions for users that use the BlackBerry Web Desktop Manager

You can create update instructions for BlackBerry device users so that they can update the BlackBerry Device Software when they use the BlackBerry Web Desktop Manager.

Before you begin:

- If you are updating the BlackBerry Device Software on BlackBerry devices to version 5.0 or later, verify that the BlackBerry devices are registered with the wireless service provider's network and that data service is provisioned on the BlackBerry devices.
 - Provide users with their login information for the BlackBerry Web Desktop Manager.
1. Create an email message that specifies the web address for the BlackBerry Web Desktop Manager UI.
 2. Consider providing the following instructions in the email message:
 - Connect your BlackBerry device to your computer.
 - Do not disconnect the BlackBerry device from the computer until the update process completes.
 - If prompted, type your BlackBerry device password. Click **Next**.
 - If the BlackBerry device uses a serial connection, complete the instructions on the screen.
 - If your organization's environment includes the BlackBerry Enterprise Server for Microsoft Exchange or BlackBerry Enterprise Server for IBM Domino, if prompted, select the **Provision the device during the loading process** option. Select the messaging server that the user account is located on.
 - If your organization's environment includes the BlackBerry Enterprise Server for Novell GroupWise, if prompted, select the **Do not provision the device during the loading process** option. After the update process completes, activate the BlackBerry device over the wireless network.
 3. Send the email message.

Updating the BlackBerry Device Software over the wireless network

To update the BlackBerry Device Software on BlackBerry devices over the wireless network, you can use the BlackBerry Administration Service to search for and configure updates that are supported by your organization's devices and wireless service provider, or you can permit your organization's wireless service provider to update the BlackBerry Device Software. By default, when you install the BlackBerry Enterprise Server, users can only request BlackBerry Device Software updates using their devices. If you want to manage BlackBerry Device Software updates, or if you want the wireless service provider to manage the updates, you can turn on these options in the BlackBerry Administration Service.

You can use the BlackBerry Administration Service to search for BlackBerry Device Software on the BlackBerry Infrastructure, create a software configuration, and send a BlackBerry Device Software update to devices. You can configure whether you want the update to be required or optional. When a BlackBerry device users receive a required BlackBerry Device Software update, users can choose to complete the update immediately, or they can defer the update for up to 72 hours. If users receive an optional BlackBerry Device Software update, they can choose to not install the update.

This update option applies only when you update a device that is running BlackBerry Device Software version 4.5 or later.

If you do not want to control BlackBerry Device Software updates using the BlackBerry Administration Service, you can permit your organization's wireless service provider to update the BlackBerry Device Software using the BlackBerry Provisioning System administration web site. The wireless service provider can send optional BlackBerry Device Software updates only. By default, wireless service providers are not permitted to update the BlackBerry Device Software over the wireless network. You can also permit users to request BlackBerry Device Software updates from the wireless service provider.

For more information about the actions that users must perform to complete a BlackBerry Device Software update from the wireless server provider, visit www.blackberry.com/go/docs to read the *BlackBerry Smartphone User Guide* for the device models that are used in your organization's environment.

Advantages of this update process include:

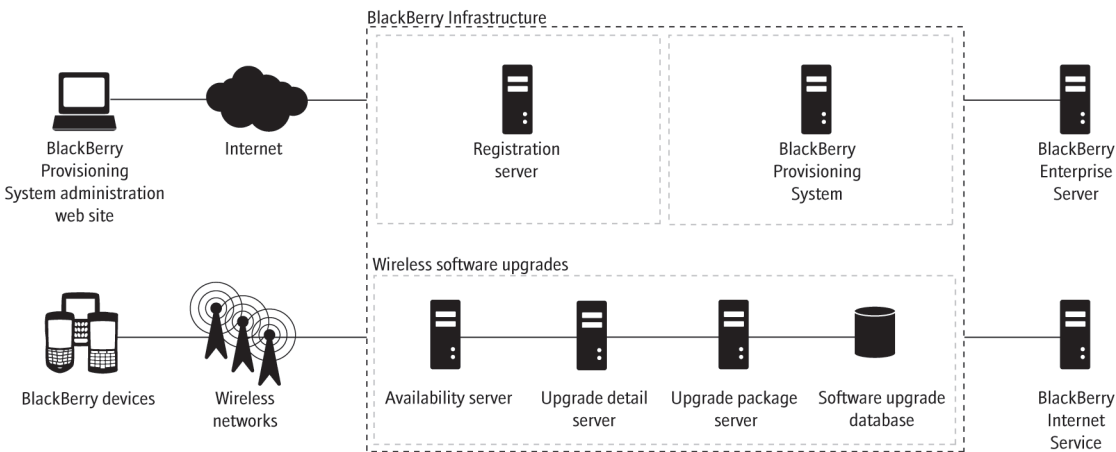
- You can use software configurations and application control policies to control when software updates occur and to specify which users can update the BlackBerry Device Software.
- You or the wireless service provider can update devices remotely.
- Users do not require the BlackBerry Desktop Software on their computers to perform an update.

Disadvantages of this update process include:

- This update option might increase wireless network traffic.

- This update option might take an unexpected amount of time to complete.

Architecture: BlackBerry Infrastructure components



Component	Description
availability server	<p>The availability server is designed to manage and store information about the availability of BlackBerry Device Software update packages.</p> <p>The availability server is designed to provide you with information about the latest approved BlackBerry Device Software update packages and recommended upgrade paths.</p>
upgrade package server	<p>The upgrade package server is designed to store and send BlackBerry Device Software update packages to BlackBerry devices. It controls the rate at which subscribers can download BlackBerry Device Software update packages. Research In Motion administrators upload BlackBerry Device Software update packages to this server after they approve them.</p>
upgrade details server	<p>The upgrade details server is designed to provide the BlackBerry device with a list of the update files that are required for a specific wireless BlackBerry Device Software update.</p>

Component	Description
software upgrade database	The software upgrade database is the primary database that contains the BlackBerry Device Software update information and metadata that the BlackBerry Infrastructure processes.

Types of BlackBerry Device Software update packages

BlackBerry Device Software update packages that Research In Motion makes available on the BlackBerry Infrastructure can introduce new features and address known software issues on BlackBerry devices.

Type	Description
platform update	<ul style="list-style-type: none">• applies to applications on the BlackBerry device other than Java applications (for example, the software for the JVM, native support libraries for the JRE, operating system, and wireless transceiver)• is typically 500 KB or less• typically requires up to 5 minutes to download over the wireless network
partial software update	<ul style="list-style-type: none">• applies to wireless transceiver code• is typically 8 MB or less• typically requires up to 15 minutes to download over the wireless network
complete software update	<ul style="list-style-type: none">• applies to existing BlackBerry Device Software on the BlackBerry device• is typically 15MB or less• typically requires 30 minutes to 2 hours to download over the wireless network

Features of wireless BlackBerry Device Software updates

Feature	Description
approval of software update packages that are available	Research In Motion and wireless service providers approve BlackBerry Device Software update packages before RIM makes the packages available on the BlackBerry Infrastructure.
automatic detection of when new upgrade packages are available	<ul style="list-style-type: none">• The BlackBerry Enterprise Server communicates with the BlackBerry Infrastructure one time each day to check for new BlackBerry Device Software update packages.• The BlackBerry Enterprise Server makes new BlackBerry Device Software update packages available through the BlackBerry Administration Service.
control of BlackBerry Device Software updates	<p>If you have the appropriate administrative role and permissions on the BlackBerry Enterprise Server, you can perform the following actions:</p> <ul style="list-style-type: none">• send required or optional BlackBerry Device Software update requests to supported BlackBerry devices; if the update is required, users must accept the update within 72 hours, or their devices retrieve and install the update packages automatically after 72 hours• control the update process by permitting or restricting upgrade requests to specific sources and network connection types
automatic backup and restore of data on devices	<ul style="list-style-type: none">• The device is designed to back up BlackBerry device user data and applications automatically during the software update process.• The device is designed to restore the backed-up user data and applications after the update process completes.

Approximate duration of downloading and installing BlackBerry Device Software updates over the wireless network

The duration of the BlackBerry Device Software update process depends on the type of update, size of the software update package, wireless network conditions, and network type.

Type of update	Size of update package	Approximate duration of download	Duration of installation for an average amount of BlackBerry device data (approx 12 MB)	Duration of installation for a large amount of BlackBerry device data (approx 25 MB)
platform update	500 KB	5 minutes	<ul style="list-style-type: none">installing the wireless software update – 5 minutes	<ul style="list-style-type: none">installing the wireless software update – 5 minutes
partial software update	8 MB	15 minutes	<ul style="list-style-type: none">backing up the BlackBerry device data – 15 to 30 minutesinstalling the wireless software update – 30 to 45 minutesrestoring the BlackBerry device data – 15 to 30 minutes	<ul style="list-style-type: none">backing up the BlackBerry device data – 45 minutesinstalling the wireless software update – 30 to 45 minutesrestoring the BlackBerry device data – 45 minutes
complete software update	15 MB	30 minutes to 2 hours	<ul style="list-style-type: none">backing up the BlackBerry device data – 15 to 30 minutesinstalling the wireless software upgdate – 30 to 45 minutesrestoring the BlackBerry device data – 15 to 30 minutes	<ul style="list-style-type: none">backing up the BlackBerry device data – 45 minutesinstalling the wireless software update – 30 to 45 minutesrestoring the BlackBerry device data – 45 minutes

BlackBerry device memory requirements for BlackBerry Device Software updates over the wireless network

The BlackBerry device must have 16 MB of RAM and at least 64 MB of flash memory available to start and complete a BlackBerry Device Software update over the wireless network.

If the amount of available flash memory on the BlackBerry device decreases to less than 400 KB, the BlackBerry device runs the LMM automatically to identify and delete unreferenced and cached data associated with BlackBerry device applications such as the message list, organizer data, and data for third-party applications.

If the update process requires more memory, the LMM deletes medium-priority items such as very old email messages and out-of-date calendar entries.

If the minimum amount of memory required is still not available, the BlackBerry device user must delete items manually.

Battery power requirements for BlackBerry Device Software updates over the wireless network

The battery power level on a BlackBerry device must be 50% or greater for the BlackBerry device to retrieve an update package over the wireless network. If the battery power level is below the minimum requirement, the update process suspends. The BlackBerry device prompts the user to recharge the battery and start the BlackBerry Device Software update process again. If the battery power level returns to 50%, the BlackBerry device resumes retrieving the update package from the BlackBerry Infrastructure.

The battery power requirement is designed to protect the BlackBerry device against attacks from a potentially malicious user who might try to take advantage of low battery power during a BlackBerry Device Software update.

IP address and port information

Wireless software update packages are sent on the following IP address range and port number:

Type	Description
IP address range	<ul style="list-style-type: none">206.51.26.240 through 206.51.26.255
Port number	<ul style="list-style-type: none">443

Permitting the wireless service provider to update the BlackBerry Device Software over the wireless network

If you want the wireless service provider to control BlackBerry Device Software updates using the BlackBerry Provisioning System administration web site, you must configure the appropriate IT policy rule. If you permit the wireless service provider to control BlackBerry Device Software updates, you cannot control BlackBerry Device Software updates using the BlackBerry Administration Service. The wireless service provider can send only optional BlackBerry Device Software updates to BlackBerry devices.

Permit wireless service providers to send BlackBerry Device Software update requests to BlackBerry devices

If your environment includes specific BlackBerry device models running specific versions of BlackBerry 6, the Allow Wireless Security Updates IT policy rule replaces the functionality of the Allow Non Enterprise Upgrade IT policy rule that you configure in this task. For more information, visit www.blackberry.com/go/serverdocs to see the *Controlling BlackBerry Device Software updates over the wireless network Technical Note*.

Before you begin: Verify that you did not configure the BlackBerry Administration Service to display the BlackBerry Device Software pages.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, change the value of the Allow Non Enterprise Upgrade IT policy rule to **Yes**.
6. Click **Save all**.

Permit BlackBerry device users to cancel BlackBerry Device Software updates from the wireless service provider

Users can cancel a BlackBerry Device Software update over the wireless network if the BlackBerry device installed the BlackBerry Device Software update, and if you permit the BlackBerry device to accept and complete update cancellation requests. The default period for the user to request the cancellation of a BlackBerry Device Software update is 24 hours after the update process completes.

Before you begin: Verify that you did not configure the BlackBerry Administration Service to display BlackBerry Device Software pages.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, set the Disallow Device User Requested Rollback IT policy rule to **No**.
6. Click **Save all**.

Permit BlackBerry device users to send BlackBerry Device Software update requests to the wireless service provider

Before you begin: Verify that you did not configure the BlackBerry Administration Service to display BlackBerry Device Software pages.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, change the value of the Disallow Device User Requested Upgrade IT policy rule to **No**.
6. Click **Save all**.

Create instructions for how users can request BlackBerry Device Software updates from the wireless service provider

You can create update instructions for BlackBerry device users so that they can request BlackBerry Device Software updates over the wireless network from the wireless service provider.

1. Create an email message that includes the following instructions:
 - On the BlackBerry device, in the **Options** menu, click **Advanced Options**. Click **Wireless Upgrade**. Complete the instructions on the screen.
 - Do not remove the battery from the BlackBerry device until the update process completes.
 - If prompted, type the BlackBerry device password.
2. Send the email message.

Using the BlackBerry Enterprise Server to update the BlackBerry Device Software over the wireless network

If you want to control BlackBerry Device Software updates, you can configure the BlackBerry Administration Service to display the administration pages that you need to configure and manage the updates. If you configure this option, wireless service providers are not permitted to send BlackBerry Device Software updates and BlackBerry device users cannot request BlackBerry Device Software updates from their BlackBerry devices. You can send required or optional BlackBerry Device Software updates using the BlackBerry Administration Service.

By default, only the security administrative role and enterprise administrative role can perform BlackBerry Device Software update tasks and manage the update process using the BlackBerry Administration Service.

Configure the BlackBerry Administration Service to display BlackBerry Device Software pages

By default, the BlackBerry Administration Service does not display the BlackBerry Device Software pages that permit you to distribute BlackBerry Device Software to BlackBerry devices. If you display the BlackBerry Device Software management pages, the following changes occur in the BlackBerry Administration Service:

- The value of the Allow Non Enterprise Upgrade IT policy rule changes to No. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.

Note: The Allow Wireless Security Updates IT policy rule replaces the functionality of the Allow Non Enterprise Upgrade IT policy rule for specific device models running specific versions of BlackBerry 6. For all other device models and device software versions, the Allow Non Enterprise Upgrade IT policy rule still applies. For more information, visit www.blackberry.com/go/serverdocs to see the *Controlling BlackBerry Device Software updates over the wireless network Technical Note*. The value of this Allow Wireless Security Updates IT policy rule is not affected when you display or hide the BlackBerry Device Software pages in the BlackBerry Administration Service.

- The value of the Disallow Device User Requested Upgrade IT policy rule changes to Yes. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.
- The Disallow Device User Requested Rollback IT policy rule changes to Yes. You can view and change the value of this IT policy rule in the BlackBerry Administration Service. If you change the value of this IT policy rule to No, BlackBerry device users that receive and install optional BlackBerry Device Software updates can revert to the previous version of the BlackBerry Device Software that was installed on their devices.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > BlackBerry Administration Service**.
2. Click **BlackBerry Administration Service**.
3. Click **Edit component**.
4. In the **Software management** section, in the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list, click **Yes**.
5. Click **Save All**.

After you finish: If you change the value of the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, you can view and configure the Allow Non Enterprise Upgrade and Disallow Device User Requested Upgrade IT policy rules in the Wireless Software Upgrades policy group. If you change the value to No, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules are set to the values listed above.

Search for BlackBerry Device Software on the BlackBerry Infrastructure

You can search the BlackBerry Infrastructure for the BlackBerry Device Software that is available to download so that you can download the BlackBerry Device Software and configure the BlackBerry Enterprise Server to update the BlackBerry Device Software over the wireless network.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Search for new wireless BlackBerry Device Software bundles**.
3. Search for the BlackBerry Device Software bundle that you want the users in your organization to update on their BlackBerry devices.
4. Click **Edit BlackBerry Device Software supported bundles**.
5. In the **New support type** drop-down list, click **Support** for each BlackBerry Device Software version that you want to support.
6. Click **Save all**.

Resolve conflicts that occur if you assign multiple BlackBerry Device Software bundles to groups and user accounts

When you apply a software configuration that includes a BlackBerry Device Software configuration to groups or user accounts, the BlackBerry Enterprise Server sends the BlackBerry Device Software bundle that is the highest priority on the list to the BlackBerry devices. To resolve conflicts, you can set priorities for the BlackBerry Device Software bundles if more than one BlackBerry Device Software bundle in a BlackBerry Device Software configuration applies to a BlackBerry device.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Manage BlackBerry Device Software bundles**.
3. Search for the BlackBerry Device Software that you want to set the priority for.
4. Click **Set priority of BlackBerry Device Software bundles**.
5. Click the up and down arrows to move the BlackBerry Device Software bundles higher or lower in the list. Place the BlackBerry Device Software bundles that are priorities higher in the list.
6. Click **Save**.

Create a BlackBerry Device Software configuration

To send a BlackBerry Device Software update to BlackBerry devices, you must create a BlackBerry Device Software configuration. You use the BlackBerry Device Software configuration to determine what versions of the BlackBerry Device Software to send to devices, and you can configure whether the updates are required or optional. After you create the BlackBerry Device Software configuration, you add it to a software configuration that you assign to groups or user accounts.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry Device Software**.
2. Click **Create BlackBerry Device Software configuration**.
3. In the **Configuration information** section, type a name and description for the BlackBerry Device Software configuration.
4. Click **Save**.
5. In the **Configuration information** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **BlackBerry Device Software application settings** section, change the settings to meet your organization's requirements.
8. On the **BlackBerry Device Software bundles** tab, click **Add BlackBerry Device Software bundles to BlackBerry Device Software configuration**.
9. Search for the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
10. Select the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
11. If the deployment method for the BlackBerry Device Software bundle that you selected is wireless, in the **Disposition** drop-down list, perform one of the following actions:
 - If you want the update to be required (users are not given an option to decline), click **Required**.
 - If you want to give users the option to decline the update, click **Optional**.
12. Click **Add to BlackBerry Device Software configuration**.
13. If necessary, repeat steps 8 to 12 to add additional BlackBerry Device Software bundles.
14. Click **Save all**.

Create a software configuration for the BlackBerry Device Software

You can create a software configuration for the BlackBerry Device Software so that you can distribute the BlackBerry Device Software to users in your organization and they can install it on their BlackBerry devices.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software**.
2. Click **Create a software configuration**.
3. In the **Configuration data** section, type a name for the software configuration.
4. In the **Disposition for unlisted applications** drop-down list, perform one of the following actions:
 - To permit users to install applications that are not included in the software configuration, click **Optional**.
 - To prevent users from installing applications that are not included in the software configuration, click **Disallowed**.
5. If you set **Disposition for unlisted applications** to **Optional**, in the **Application control policy for unlisted applications** drop-down list, click the application control policy for the applications that you did not include in the software configuration.
6. Click **Save**.
7. In the **Configuration data** section, click the name of the software configuration.
8. Click **Edit software configuration**.
9. In the **BlackBerry Device Software configuration** section, in the **Name** drop-down list, click the BlackBerry Device Software configuration that you want to distribute to devices.
10. Click **Save all**.

After you finish: To make the BlackBerry Device Software available to users, assign the software configuration to the groups or user accounts that require it.

Assign a software configuration to a group

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Group**.
2. Click **Manage groups**.
3. Click a group.
4. Click **Edit group**.
5. On the **Software configuration** tab, in the **Available software configurations** list, click a software configuration.
6. Click **Add**.

- 7. Repeat steps 5 and 6 for each software configuration that you want to assign.
- 8. Click **Save all**.

Assign a software configuration to a user account

- 1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **User**.
- 2. Click **Manage users**.
- 3. Search for a user account.
- 4. In the search results, click the display name for the user account.
- 5. Click **Edit user**.
- 6. On the **Software configuration** tab, in the **Available software configurations** list, click the appropriate software configuration.
- 7. Click **Add**.
- 8. Repeat steps 6 and 7 for each software configuration that you want to assign.
- 9. Click **Save all**.

When you assign a software configuration to a user account, the BlackBerry Administration Service creates a job to deliver the resulting object to the BlackBerry device.

How a user can respond to a BlackBerry Device Software update request from the BlackBerry Enterprise Server

A BlackBerry Device Software update request provides BlackBerry device users with the following information:

- BlackBerry Device Software version
- approximate size of the BlackBerry Device Software update package
- description of the BlackBerry Device Software update package (optional)

When the BlackBerry device receives a BlackBerry Device Software update request from the BlackBerry Enterprise Server, the user can accept or defer the BlackBerry Device Software update. If the update request is optional, the user can choose to not install the update.

Response	Description
accept the update request	<ul style="list-style-type: none">• The device starts the download process.

Response	Description
	<ul style="list-style-type: none"> The user can monitor the progress of the BlackBerry Device Software download on the device and continue to use the device, where this option is permitted by the wireless technology. When the BlackBerry Device Software download process completes, the update application checks conditions on the device (for example, battery life, available memory, and the network connection) to verify that the update can proceed, and prompts the user to install the BlackBerry Device Software update package.
defer the update request	<ul style="list-style-type: none"> A prompt appears on the device every 24 hours to remind the user to install the BlackBerry Device Software update package. After 72 hours, the device downloads and installs the BlackBerry Device Software update package automatically.
decline the update request	<ul style="list-style-type: none"> The user can decline the update request only if they receive an optional update request. After the user declines the update, the user is not prompted again to install the BlackBerry Device Software update package.

Monitoring BlackBerry Device Software update requests

If you send BlackBerry Device Software updates to BlackBerry devices using the BlackBerry Enterprise Server, you can monitor the status and progress of the associated jobs and tasks using the BlackBerry Administration Service. For more information about viewing the status of jobs and tasks and stopping jobs, visit www.blackberry.com/go/serverdocs to read the *BlackBerry Enterprise Server Administration Guide*.

Preventing BlackBerry Device Software updates over the wireless network based on the network connection type

You can prevent BlackBerry devices from starting or completing BlackBerry Device Software updates over specific types of network connections. You might choose to place restrictions for the following reasons:

- conserve network bandwidth
- prevent added cost of network usage

- verify that BlackBerry Device Software updates only occur over network connections that you consider to be efficient and reliable
- increase security

Upgrading BlackBerry Device Software over a serial bypass connection

After the BlackBerry Infrastructure sends the BlackBerry Device Software update package to the BlackBerry Enterprise Server, the BlackBerry Enterprise Server sends an update request to BlackBerry devices over the wireless network.

To perform the wireless BlackBerry Device Software update over a serial bypass connection, users must connect their BlackBerry devices to computers that run the BlackBerry Device Manager.

Upgrading BlackBerry Device Software over a Wi-Fi connection

If your organization's environment includes an enterprise Wi-Fi network and a remote BlackBerry Router in a DMZ, the environment is designed to bypass the BlackBerry Infrastructure. If your organization's environment is designed to bypass the BlackBerry Infrastructure and you have the appropriate administrator role and permissions for the BlackBerry Enterprise Server, you can permit BlackBerry device users to download BlackBerry Device Software update packages over a Wi-Fi connection.

After the BlackBerry Infrastructure sends the BlackBerry Device Software update package to the BlackBerry Enterprise Server, the BlackBerry Enterprise Server sends an update request to BlackBerry devices over the wireless network. The BlackBerry device users can then update the BlackBerry Device Software.

Prevent BlackBerry device users from downloading BlackBerry Device Software update packages over a Wi-Fi connection

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, change the value of the Disallow Patch Download Over WiFi IT policy rule to **Yes**.
6. Click **Save all**.

Prevent BlackBerry device users from downloading BlackBerry Device Software update packages over a WAN connection

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.

5. On the **Wireless Software Upgrades** tab, change the value of the Disallow Patch Download Over WAN IT policy rule to **Yes**.
6. Click **Save all**.

Prevent BlackBerry device users from downloading BlackBerry Device Software update packages over a roaming WAN connection

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, change the value of the Disallow Patch Download Over Roaming WAN IT policy rule to **Yes**.
6. Click **Save all**.

Prevent BlackBerry device users from downloading BlackBerry Device Software update packages over an international roaming WAN connection

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wireless Software Upgrades** tab, change the value of the Disallow Patch Download Over International Roaming WAN IT policy rule to **Yes**.
6. Click **Save all**.

Best practice: Preventing possible BlackBerry device issues during the BlackBerry Device Software update process

Scenario	Best practice
The BlackBerry Device Software update process might not complete if the user turns off the BlackBerry device.	Do not turn off the BlackBerry device after the BlackBerry Device Software update process starts.
The BlackBerry Device Software update process might not complete if the user removes the expandable memory from the BlackBerry device.	Do not remove the expandable memory after the BlackBerry Device Software update process starts.
A user cannot make an emergency call on the BlackBerry device.	Pause or cancel the current BlackBerry Device Software update process to make an emergency call on the BlackBerry device.
A user does not receive incoming calls on the BlackBerry device.	Pause or cancel the current BlackBerry Device Software update process to receive incoming calls on the BlackBerry device.
The BlackBerry device might have slow response times and requires user attention if the content protection feature is turned on.	If the content protection feature is turned on or the BlackBerry device resets after it installs an application, type the password for the BlackBerry device.
The BlackBerry device loses all of its user data if the user starts to update the BlackBerry Desktop Software.	Do not update the BlackBerry Desktop Software until the BlackBerry Device Software update process completes.

Best practice: Managing traffic over the wireless network during the BlackBerry Device Software update process

Best practice	Description
Control how the BlackBerry Administration Service sends BlackBerry Device Software updates to BlackBerry devices over the wireless network.	<p>In the BlackBerry Administration Service, configure the default settings to specify how the BlackBerry Administration Service sends BlackBerry Device Software updates to BlackBerry devices or change how a specific job sends BlackBerry Device Software updates to BlackBerry devices.</p> <ul style="list-style-type: none">• If you want to send a BlackBerry Device Software update over a WAN connection, try to send the update when the amount of traffic that occurs over the wireless network is relatively low.
Control the network connection types that the BlackBerry device can use to update the BlackBerry Device Software.	<p>In the BlackBerry Administration Service, configure IT policy rules to control the network connection types that the BlackBerry device can use to update the BlackBerry Device Software.</p> <ul style="list-style-type: none">• By default, BlackBerry Device Software updates are permitted on all network connection types.• Permit BlackBerry devices to update the BlackBerry Device Software over connections other than WAN connections, for example, over Wi-Fi connections.

Updating the BlackBerry Device Software at a central computer

If you update the BlackBerry Device Software for users or if you want users to update the BlackBerry Device Software, you or the users can update the BlackBerry Device Software at a central computer that can access the BlackBerry Administration Service.

Advantages of this update process include:

- You can monitor the software update process at the central computer.
- You can use software configurations and application control policies to control when the software updates occur and to which users.
- You can update devices for users that do not have the BlackBerry Desktop Software installed on their computers.
- You can share a single software location among multiple central computers.

A disadvantage of this update process is that you cannot require that users update the BlackBerry Device Software.

Install the BlackBerry Device Software

You must install the BlackBerry Device Software on a computer so that you can create a software configuration. You use the software configuration to distribute the BlackBerry Device Software using the BlackBerry Web Desktop Manager, BlackBerry Administration Service, BlackBerry Desktop Software, or over the wireless network.

Before you begin:

- Obtain the latest BlackBerry Device Software version for the BlackBerry devices in your organization's environment from your organization's service provider. The versions must be compatible with the devices and service provider that your organization uses.
 - Verify that users and the BlackBerry Administration Service can access the computer that you want to install the BlackBerry Device Software on.
1. Copy the BlackBerry Device Software installation file to the computer.
 2. Double-click the .exe file.

3. Complete the instructions on the screen.
4. When prompted, do not start the application loader tool.

Create a shared network folder to access the BlackBerry Device Software

You can create a shared network folder on the computer where the BlackBerry Device Software is installed so that BlackBerry device users and the BlackBerry Administration Service can access the BlackBerry Device Software. The shared network folder that you create for the BlackBerry Device Software cannot be the same shared network folder that you create for BlackBerry Applications. BlackBerry device users must have read access to the shared network folder.

1. On the computer where the BlackBerry Device Software is installed, navigate to <drive>:\Program Files\Common Files\Research In Motion.
2. Share the folder with write permissions for the account that is running the BlackBerry Administration Service - Application Server service.
3. To decrease bandwidth over your organization's LAN, verify that the shared network folder is located in close proximity to users' computers.

After you finish: Verify that the AppLoader subfolder is writable.

Configure the BlackBerry Administration Service to display BlackBerry Device Software pages

By default, the BlackBerry Administration Service does not display the BlackBerry Device Software pages that permit you to distribute BlackBerry Device Software to BlackBerry devices. If you display the BlackBerry Device Software management pages, the following changes occur in the BlackBerry Administration Service:

- The value of the Allow Non Enterprise Upgrade IT policy rule changes to No. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.

Note: The Allow Wireless Security Updates IT policy rule replaces the functionality of the Allow Non Enterprise Upgrade IT policy rule for specific device models running specific versions of BlackBerry 6. For all other device models and device software versions, the Allow Non Enterprise Upgrade IT policy rule still applies. For more information, visit

www.blackberry.com/go/serverdocs to see the *Controlling BlackBerry Device Software updates over the wireless network Technical Note*. The value of this Allow Wireless Security Updates IT policy rule is not affected when you display or hide the BlackBerry Device Software pages in the BlackBerry Administration Service.

- The value of the Disallow Device User Requested Upgrade IT policy rule changes to Yes. You cannot view or change the value of this IT policy rule in the BlackBerry Administration Service.
 - The Disallow Device User Requested Rollback IT policy rule changes to Yes. You can view and change the value of this IT policy rule in the BlackBerry Administration Service. If you change the value of this IT policy rule to No, BlackBerry device users that receive and install optional BlackBerry Device Software updates can revert to the previous version of the BlackBerry Device Software that was installed on their devices.
1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > BlackBerry Administration Service**.
 2. Click **BlackBerry Administration Service**.
 3. Click **Edit component**.
 4. In the **Software management** section, in the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list, click **Yes**.
 5. Click **Save All**.

After you finish: If you change the value of the **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, you can view and configure the Allow Non Enterprise Upgrade and Disallow Device User Requested Upgrade IT policy rules in the Wireless Software Upgrades policy group. If you change the value to No, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules are set to the values listed above.

Add a shared network folder to the BlackBerry Administration Service

You can add a shared network folder to the BlackBerry Administration Service so that the BlackBerry Administration Service can find the BlackBerry Device Software that you installed.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Add shared network drive**.
3. In the **Shared network drive** section, perform the following actions:
 - In the **Name** field, type a name for the shared network folder.

- In the **Server file path** field, type the path to the shared network folder (for example, \\<server>\<shared_network_folder>, where <server> is the name of the computer that hosts the shared network folder.

4. Click **Save**.

Configure the BlackBerry Administration Service to find the BlackBerry Device Software

To create a BlackBerry Device Software configuration, you must use the BlackBerry Administration Service to scan the shared network folder to find the BlackBerry Device Software that you want users to install.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry device software**.
2. Click **Manage shared network drives**.
3. Click a shared network folder.
4. Click **Execute shared network drive scan**.

After you finish: To verify that the BlackBerry Administration Service found all the BlackBerry Device Software bundles that you installed in the shared network folder, on the **BlackBerry Device Software bundles** tab, verify that the list of BlackBerry Device Software bundles is complete.

Create a BlackBerry Device Software configuration

To send a BlackBerry Device Software update to BlackBerry devices, you must create a BlackBerry Device Software configuration. You use the BlackBerry Device Software configuration to determine what versions of the BlackBerry Device Software to send to devices, and you can configure whether the updates are required or optional. After you create the BlackBerry Device Software configuration, you add it to a software configuration that you assign to groups or user accounts.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software > BlackBerry Device Software**.

2. Click **Create BlackBerry Device Software configuration**.
3. In the **Configuration information** section, type a name and description for the BlackBerry Device Software configuration.
4. Click **Save**.
5. In the **Configuration information** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **BlackBerry Device Software application settings** section, change the settings to meet your organization's requirements.
8. On the **BlackBerry Device Software bundles** tab, click **Add BlackBerry Device Software bundles to BlackBerry Device Software configuration**.
9. Search for the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
10. Select the BlackBerry Device Software that you want to add to the BlackBerry Device Software configuration.
11. If the deployment method for the BlackBerry Device Software bundle that you selected is wireless, in the **Disposition** drop-down list, perform one of the following actions:
 - If you want the update to be required (users are not given an option to decline), click **Required**.
 - If you want to give users the option to decline the update, click **Optional**.
12. Click **Add to BlackBerry Device Software configuration**.
13. If necessary, repeat steps 8 to 12 to add additional BlackBerry Device Software bundles.
14. Click **Save all**.

Create a software configuration for the BlackBerry Device Software

You can create a software configuration for the BlackBerry Device Software so that you can distribute the BlackBerry Device Software to users in your organization and they can install it on their BlackBerry devices.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Software**.
2. Click **Create a software configuration**.
3. In the **Configuration data** section, type a name for the software configuration.
4. In the **Disposition for unlisted applications** drop-down list, perform one of the following actions:
 - To permit users to install applications that are not included in the software configuration, click **Optional**.
 - To prevent users from installing applications that are not included in the software configuration, click **Disallowed**.

5. If you set **Disposition for unlisted applications** to **Optional**, in the **Application control policy for unlisted applications** drop-down list, click the application control policy for the applications that you did not include in the software configuration.
6. Click **Save**.
7. In the **Configuration data** section, click the name of the software configuration.
8. Click **Edit software configuration**.
9. In the **BlackBerry Device Software configuration** section, in the **Name** drop-down list, click the BlackBerry Device Software configuration that you want to distribute to devices.
10. Click **Save all**.

After you finish: To make the BlackBerry Device Software available to users, assign the software configuration to the groups or user accounts that require it.

Assign a software configuration to a group

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Group**.
2. Click **Manage groups**.
3. Click a group.
4. Click **Edit group**.
5. On the **Software configuration** tab, in the **Available software configurations** list, click a software configuration.
6. Click **Add**.
7. Repeat steps 5 and 6 for each software configuration that you want to assign.
8. Click **Save all**.

Assign a software configuration to a user account

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **User**.
2. Click **Manage users**.
3. Search for a user account.

4. In the search results, click the display name for the user account.
5. Click **Edit user**.
6. On the **Software configuration** tab, in the **Available software configurations** list, click the appropriate software configuration.
7. Click **Add**.
8. Repeat steps 6 and 7 for each software configuration that you want to assign.
9. Click **Save all**.

When you assign a software configuration to a user account, the BlackBerry Administration Service creates a job to deliver the resulting object to the BlackBerry device.

Update the BlackBerry Device Software at a central computer

Before you begin:

- Verify that the central computer can access the BlackBerry Administration Service.
 - To decrease bandwidth over your organization's LAN, verify that the shared network folder is located in close proximity to the central computer.
 - If you are updating the BlackBerry Device Software on BlackBerry devices to version 5.0 or later, verify that the BlackBerry devices are registered with the wireless service provider's network and that data service is provisioned on the BlackBerry devices.
1. Connect a BlackBerry device to the central computer.
 2. In the BlackBerry Administration Service, on the **Devices** menu, expand **Attached devices**.
 3. Click **Device software**.
 4. In the **Application loader** section, click **Automatic installation of applications on the BlackBerry device**.
 5. Complete the instructions on the screen.

Permitting users to update the BlackBerry Device Software using the application loader tool

To permit users to update the BlackBerry Device Software on computers that do not have the BlackBerry Desktop Software installed, you can make the BlackBerry Device Software installation file available to users and instruct them to update the BlackBerry Device Software using the application loader tool.

Advantages of this update process include:

- You can automate the BlackBerry Device Software update process so that users do not have to complete update tasks for BlackBerry devices that they connect to their computers using a USB connection.
- You can update BlackBerry devices remotely.
- Users do not require the BlackBerry Desktop Software on their computers.

Disadvantages of this update process include:

- You cannot manage BlackBerry Device Software updates using software configurations.
- You cannot require that users update the BlackBerry Device Software.
- This update option increases traffic to the network drive.

After users update the BlackBerry Device Software, the application loader tool connects to the messaging server to provision the BlackBerry devices.

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 charge their BlackBerry devices, synchronize organizer items using the BlackBerry Router, and update the BlackBerry Device Software on their computers.

Note: If you send the BlackBerry Device Manager installation file to computers that host the BlackBerry Desktop Software, the installation process of the BlackBerry Device Manager removes the BlackBerry Desktop Software automatically, and users lose the device management options that the BlackBerry Desktop Software provides.

1. Visit www.blackberry.com/go/softwaredownloads.
2. In the drop-down list, select a version of the BlackBerry Desktop Software. Click **Next**.
3. Download the installation file for the BlackBerry Device Manager.
4. Copy the installation file that you downloaded to a shared network folder.
5. Send users an email message that includes the following information:
 - location of the installation file in the shared network folder
 - instructions to double-click the .msi file

Install the BlackBerry Device Software

You must install the BlackBerry Device Software on a computer so that you can create a software configuration. You use the software configuration to distribute the BlackBerry Device Software using the BlackBerry Web Desktop Manager, BlackBerry Administration Service, BlackBerry Desktop Software, or over the wireless network.

Before you begin:

- Obtain the latest BlackBerry Device Software version for the BlackBerry devices in your organization's environment from your organization's service provider. The versions must be compatible with the devices and service provider that your organization uses.
 - Verify that users and the BlackBerry Administration Service can access the computer that you want to install the BlackBerry Device Software on.
1. Copy the BlackBerry Device Software installation file to the computer.
 2. Double-click the .exe file.
 3. Complete the instructions on the screen.
 4. When prompted, do not start the application loader tool.

Create a shared network folder to access the BlackBerry Device Software

You can create a shared network folder on the computer where the BlackBerry Device Software is installed so that BlackBerry device users and the BlackBerry Administration Service can access the BlackBerry Device Software. The shared network folder that you create for the BlackBerry Device Software cannot be the same shared network folder that you create for BlackBerry Applications. BlackBerry device users must have read access to the shared network folder.

1. On the computer where the BlackBerry Device Software is installed, navigate to <drive>:\Program Files\Common Files\Research In Motion.
2. Share the folder with write permissions for the account that is running the BlackBerry Administration Service - Application Server service.
3. To decrease bandwidth over your organization's LAN, verify that the shared network folder is located in close proximity to users' computers.

After you finish: Verify that the AppLoader subfolder is writable.

Create the BlackBerry Device Software update instructions for users that use the application loader tool

You can create update instructions for BlackBerry device users so that they can update the BlackBerry Device Software when they use the BlackBerry Device Manager and application loader tool.

1. Create an email message that specifies the following loading commands based on the type of connection that a BlackBerry device uses:
 - for a USB connection, \\<shared_computer_name>\Research In Motion\Apploader\loader.exe /defaultUSB /forceload
 - for a serial connection, \\<shared_computer_name>\Research In Motion\Apploader\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 update process completes.
 - If prompted, type the BlackBerry device password. Click **Next**.
 - If the BlackBerry device uses a serial connection, complete the instructions on the screen.
 - If your organization's environment includes the BlackBerry Enterprise Server for Microsoft Exchange or BlackBerry Enterprise Server for IBM Domino, if prompted, select the **Provision the device during the loading process** option. Select the messaging server that the user account is located on.
 - If your organization's environment includes the BlackBerry Enterprise Server for Novell GroupWise, if prompted, select the **Do not provision the device during the loading process** option.
 - If your organization's environment includes the BlackBerry Enterprise Server for Novell GroupWise, after the update process completes, activate your BlackBerry device over the wireless network.
3. Send the email message.

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

7

You can use third-party applications to create a single executable file that contains the BlackBerry Desktop Software and BlackBerry Device Software, and send the executable file to the computers of the users in your organization. The executable file uses the application loader tool on the computer to update the BlackBerry Device Software on BlackBerry devices.

You can use this update option if you update from BlackBerry Device Software version 3.5 or earlier.

Advantages of this update process include:

- You can install the BlackBerry Device Software and BlackBerry Desktop Software on computers automatically.
- You can set an IT policy to require that users update the BlackBerry Device Software.

A disadvantage of this update process is that you must distribute large update packages over your organization's LAN.

The executable file installs the BlackBerry Desktop Software and BlackBerry Device Software on the computers of users in your organization. To update the BlackBerry Device Software on BlackBerry devices, users can connect their BlackBerry devices to their computers and start the BlackBerry Desktop Manager.

Create a shared network folder to access the BlackBerry Device Software

You can create a shared network folder on the computer where the BlackBerry Device Software is installed so that BlackBerry device users and the BlackBerry Administration Service can access the BlackBerry Device Software. The shared network folder that you create for the BlackBerry Device Software cannot be the same shared network folder that you create for BlackBerry Applications. BlackBerry device users must have read access to the shared network folder.

1. On the computer where the BlackBerry Device Software is installed, navigate to <drive>:\Program Files\Common Files\Research In Motion.

2. Share the folder with write permissions for the account that is running the BlackBerry Administration Service - Application Server service.
3. To decrease bandwidth over your organization's LAN, verify that the shared network folder is located in close proximity to users' computers.

After you finish: Verify that the AppLoader subfolder is writable.

Save the BlackBerry Device Software installation file to the network drive

Before you begin: Obtain the BlackBerry Device Software installation files from your organization's service provider.

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

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**.

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

You can update the BlackBerry Desktop Software and BlackBerry Device Software by pushing a software package to BlackBerry device users' computers using a third-party application.

1. You can change the settings in the BlackBerry Desktop Software installation files so that you can create a custom software package. For more information about the commands and properties that you can use for custom installation, see [Installing the BlackBerry Desktop Software on computers without requiring action from users](#).
2. Package the custom installation files for the BlackBerry Desktop Software and BlackBerry Device Software using a third-party application for software packaging.
3. Send the installation files to users using a third-party application for software distribution.

After you finish: To make sure that users update the BlackBerry Device Software, set the Force Load Count IT policy rule and the Force Load Message IT policy rule. For more information about setting the IT policy rules, see the *BlackBerry Enterprise Server Policy Reference Guide*.

Permitting users to update the BlackBerry Device Software using the BlackBerry Device Software update web site

To permit BlackBerry device users to update the BlackBerry Device Software using the update web site, on the BlackBerry Enterprise Server, you must configure the IT policy rules that are included in the Wired Software Updates policy group. To permit users to use the update web site you must set the value of the Allow Web-Based Software Loading IT policy rule to yes. To permit devices to automatically activate services following a software update you must set the value of the Cryptographic Services Backup IT policy rule to yes. You must set both IT policy rules to yes to permit users to update the BlackBerry Device Software from the update web site.

Users can access the update web site at www.blackberry.com/update and follow the on-screen instructions to update the BlackBerry Device Software over the Internet. If users did not install the BlackBerry Desktop Software on their computers, they can download the application loader tool from the update web site. After the update process completes, the device automatically activates all BlackBerry Enterprise Server services and BlackBerry Internet Service services.

Users can only use this update option if they update a device that is running BlackBerry Device Software 5.0 or later.

This method has the following advantages:

- Users can update devices from a computer that is not connected to your organization's domain, for example, from a home computer.
- You are not required to distribute large update packages over your organization's LAN.
- Users can complete the software update whether or not they install the BlackBerry Desktop Software on their computers. Users can use BlackBerry Desktop Software 5.0.1 or later, or they can use the application loader tool that is available on the update web site to update the BlackBerry Device Software.
- When users connect their devices to their computers, the BlackBerry Desktop Software checks automatically for BlackBerry Device Software updates that are available on the update web site.

This method has the following disadvantages:

- You cannot require users to update the BlackBerry Device Software.
- You cannot manage BlackBerry Device Software updates using software configurations.

For more information about updating BlackBerry Device Software using the update web site, see the *BlackBerry Enterprise Server Security Technical Overview*. For more information about the IT policy rules that are included in the Wired Software Updates policy group, see the *BlackBerry Enterprise Server Policy Reference Guide*.

Configure IT policy rules to permit users to update the BlackBerry Device Software using the BlackBerry Device Software update web site

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **Policy**.
2. Click **Manage IT policies**.
3. Click an IT policy.
4. Click **Edit IT policy**.
5. On the **Wired Software Updates** tab, perform the following actions:
 - Change the value of Allow Web-Based Software Loading IT policy rule to **Yes**.
 - Change the value of Cryptographic Services Backup IT policy rule to **Yes**.
6. Click **Save all**.

After you finish: For more information about IT policy rules, see the *BlackBerry Enterprise Server Policy Reference Guide*.

Create instructions so that users can update the BlackBerry Device Software using the BlackBerry Device Software update web site

You can create instructions for BlackBerry device users so that they can update the BlackBerry Device Software using a computer that is outside your organization's network.

Before you begin: Configure IT policy rules to permit users to update the BlackBerry Device Software from the update web site.

1. Create an email message that specifies the address for the BlackBerry Device Software update web site. (www.blackberry.com/update)
2. Include the following instructions in the email message:
 - Navigate to the web site.
 - Connect your device to your computer using a USB cable.
 - Click **Check for Updates**.
 - If you receive a prompt, type your device password. Click **OK**.
 - Follow the online instructions. If you did not install the BlackBerry Desktop Software on your computer, you receive a prompt to download the required application loader tool. After you install the application loader tool, you might need to restart your computer before you update the BlackBerry Device Software.
 - Do not disconnect your device from your computer until the software update completes and the device activates all services.
 - To verify that the update process completed, check the BlackBerry Device Software version information on the device in **Options > About**.
3. Send the email message to users.

Managing the distribution of BlackBerry Device Software

If you want to manage traffic over your organization's wireless network, you can control how the BlackBerry Administration Service sends BlackBerry Device Software updates and standard application settings to BlackBerry devices.

Change how to install or update the BlackBerry Device Software

You can change the settings that the BlackBerry Administration Service uses to install or upgrade the BlackBerry Device Software on BlackBerry devices. If you change the default distribution settings for the BlackBerry Device Software, your organization's environment might experience a performance impact.

- 1. In the BlackBerry Administration Service, on the **Devices** menu, expand **Deployment jobs**.
- 2. Click **Specify BlackBerry Device Software distribution settings**.
- 3. Click **Edit distribution settings**.
- 4. Perform any of the following tasks:

Task	Steps
Change the recurrence day for installing, updating, or removing the BlackBerry Device Software.	<div><div>1. Click the Edit icon for the recurrence day.</div><div>2. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, select the recurrence days.</div><div>3. In the Start time drop-down list, click the appropriate option. If necessary, change the start time and end time.</div><div>4. Click the Update icon.</div></div> <p>By default, the recurrence day is Every day and the start time is All day.</p>
Add a recurrence day for installing, updating, or removing the BlackBerry Device Software.	To add more than one recurrence day, the schedules for the separate recurrence days cannot overlap.

Task	Steps
	<ol style="list-style-type: none"> 1. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, select the recurrence days. 2. In the Start time drop-down list, click the appropriate option. If necessary, change the start time and end time. 3. Click the Add icon.
5.	<p>On the System throttling tab, in the Maximum number of simultaneous tasks per BlackBerry Administration Service instance field, type the maximum number of BlackBerry Device Software tasks that you want the BlackBerry Enterprise Server to process at the same time.</p> <p>The default value is 1000.</p>
6.	<p>On the Job throttling tab, to turn on throttling for all BlackBerry Device Software tasks in jobs, select Enabled to reduce load on system.</p>
7.	<p>If necessary, in the Default throttling for all BlackBerry Device Software tasks in each job in a time window section, in the Maximum number of simultaneous tasks per BlackBerry Administration Service instance field, type the maximum number of BlackBerry Device Software tasks that you want the BlackBerry Enterprise Server to process at the same time.</p> <p>The default value is 25.</p>
8.	<p>If necessary, in the Total number of tasks per time window per BlackBerry Administration Service instance field, type the total number of BlackBerry Device Software tasks that you want the BlackBerry Enterprise Server to process during each processing interval.</p> <p>The default value is 150.</p>
9.	<p>Click Save all.</p>

Change how a job sends the BlackBerry Device Software to BlackBerry devices

You can change how the BlackBerry Administration Service installs or updates the BlackBerry Device Software in a specific job on BlackBerry devices. You can change the distribution settings for a job for the BlackBerry Device Software only if the job is not running. If you change the default distribution settings for BlackBerry Device Software, your organization's environment might experience a performance impact.

1. In the BlackBerry Administration Service, on the **Devices** menu, expand **Deployment jobs**.
2. Click **Manage deployment jobs**.

- 3. Search for a job.
- 4. In the search results, click the ID of the appropriate job.
- 5. Click **Edit job**.
- 6. On the **BlackBerry Device Software Distribution** tab, perform any of the following tasks:

Task	Steps
Change the recurrence day for installing, updating, or removing BlackBerry Device Software.	<ul style="list-style-type: none">1. Click the Edit icon for the recurrence day.2. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, click the number of recurrence days.3. In the Start time drop-down list, click the appropriate option. If necessary, change the start time and end time.4. Click the Update icon. <p>By default, the recurrence day is Every day and the start time is All day.</p>
Add a new recurrence day for installing, updating, or removing BlackBerry Device Software.	<p>To add more than one recurrence day, the schedules for the separate recurrence days cannot overlap.</p> <ul style="list-style-type: none">1. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.2. In the Start time drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.3. Click the Add icon.

- 7. To turn on throttling for all BlackBerry Device Software tasks in jobs, in the **Default throttling enablement for all BlackBerry Device Software tasks in each job in a time window** section, click **Enabled to reduce load on system**.
- 8. If necessary, in the **Default throttling for all BlackBerry Device Software tasks in each job in a time window** section, in the **Maximum number of simultaneous tasks per BlackBerry Administration Service instance** field, type the maximum number of BlackBerry Device Software tasks in the job that you want the BlackBerry Enterprise Server to process at the same time.
The default value is 25.
- 9. If necessary, in the **Total number of tasks per time window per BlackBerry Administration Service instance** field, type the total number of BlackBerry Device Software tasks in the job that you want the BlackBerry Enterprise Server to process during each processing interval.
The default value is 150.
- 10. Click **Save all**.

Change how the BlackBerry Enterprise Server sends standard application settings to BlackBerry devices

BlackBerry Device Software configurations include standard application settings that you can use to control calendar, email, and contact list settings on BlackBerry devices. You can change how the BlackBerry Enterprise Server sends the settings to and updates the settings on BlackBerry devices. If you change the default distribution settings for the standard application settings, your organization's environment might experience a performance impact.

- 1. In the BlackBerry Administration Service, on the **Devices** menu, expand **Deployment jobs**.
- 2. Click **Specify BlackBerry Device Software application distribution settings**.
- 3. Click **Edit distribution settings**.
- 4. Perform any of the following tasks:

Task	Steps
Change the recurrence day for sending or updating standard application settings.	<div><div>1. Click the Edit icon for the default recurrence day.</div><div>2. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.</div><div>3. In the Start time drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.</div><div>4. Click the Update icon.</div></div> <div>By default, the recurrence day is Every day and the start time is All day.</div>
Add a recurrence day for sending or updating standard application settings.	<div>To add more than one recurrence day, the schedules for the separate recurrence days cannot overlap.</div> <div><div>1. In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.</div><div>2. In the Start time drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.</div><div>3. Click the Add icon.</div></div>

- 5. On the **System throttling** tab, in the **Maximum number of simultaneous tasks per BlackBerry Administration Service instance** field, type the maximum number of tasks that you want the BlackBerry Enterprise Server to process at the same time.

The default value is 1000.

- 6. On the **Job throttling** tab, to turn on throttling for all tasks for standard application settings in jobs, click **Enabled to reduce load on system**.
- 7. If necessary, in the **Default throttling for all BlackBerry Device Software application settings tasks in each job in a time window** section, in the **Maximum number of simultaneous tasks per BlackBerry Administration Service instance** field, type the maximum number of tasks for standard application settings that you want the BlackBerry Enterprise Server to process at the same time.
The default value is 25.
- 8. If necessary, in the **Total number of tasks per time window per BlackBerry Administration Service instance** field, type the total number of tasks for standard application settings that you want the BlackBerry Enterprise Server to process during each processing interval.
The default value is 150.
- 9. Click **Save all**.

Change how a job sends standard application settings to BlackBerry devices

BlackBerry Device Software configurations include standard application settings that you can use to control calendar, email, and contact list settings on BlackBerry devices. You can change how the BlackBerry Administration Service sends settings and updates in jobs to BlackBerry devices. If you change the default distribution settings for the standard application settings in BlackBerry Device Software configurations, your organization's environment might experience a performance impact.

- 1. In the BlackBerry Administration Service, on the **Devices** menu, expand **Deployment jobs**.
- 2. Click **Manage deployment jobs**.
- 3. Search for a job.
- 4. In the search results, click the ID of the appropriate job.
- 5. Click **Edit job**.
- 6. On the **BlackBerry Device Software Application Settings Distribution** tab, perform any of the following tasks:

Task	Steps
Change the recurrence day for sending or updating standard application settings.	1. Click the Edit icon for the recurrence day.

Task	Steps
Add a recurrence day for sending or updating standard application settings.	<ol style="list-style-type: none"> In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, select the number of recurrence days. In the Start time drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time. Click the Update icon. <p>By default, the recurrence day is Every day and the start time is All day.</p>
	<p>To add more than one recurrence day, the schedules for the separate recurrence days cannot overlap.</p> <ol style="list-style-type: none"> In the Scheduled deployment day(s) drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days. In the Start time drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time. Click the Add icon.

- To turn on throttling for all tasks for standard application settings in the job, in the **Default throttling enablement for all BlackBerry Device Software application tasks in each job in a time window** section, click **Enabled to reduce load on system**.
- If necessary, in the **Default throttling for all BlackBerry Device Software Application Settings tasks in each job in a time window** section, in the **Maximum number of simultaneous tasks per BlackBerry Administration Service instance** field, type the maximum number of tasks for standard application settings in the job that you want the BlackBerry Enterprise Server to process at the same time.
The default value is 25.
- If necessary, in the **Total number of tasks per time window per BlackBerry Administration Service instance** field, type the total number of tasks for standard application settings in the job that you want the BlackBerry Enterprise Server to process during each processing interval.
The default value is 150.
- Click **Save all**.

Troubleshooting

10

Verify that the BlackBerry Device Software update process completed

You can verify that users updated the BlackBerry Device Software.

1. In the BlackBerry Administration Service, on the **BlackBerry solution management** menu, expand **User**.
2. Click **Manage users**.
3. Search for a user account.
4. In the search results, click the PIN for the user account.
5. On the **Device information** page, in the **Software** section, verify that the version information in the **Version** field is correct.

A user cannot start the update process using the link to the application loader tool

Possible cause

The permissions for the application loader tool might not be set to shared.

Possible solution

1. Connect the user's BlackBerry device to a computer that hosts the BlackBerry Administration Service.
2. At the command prompt, type `\\<shared_network_drive>\Research In Motion\Apploader\loader.exe`.

If the application loader tool starts, the permissions for the application loader tool are shared successfully.

Glossary

11

.alx file	A .alx file is the application descriptor that provides information about a BlackBerry Java Application and the location of the application's .cod files to a BlackBerry device.
.cod file	A .cod file contains compiled and packaged application code that a BlackBerry device uses to run a BlackBerry Java® Application.
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.
LAN	A local area network (LAN) is a computer network shared by a group of computers in a small area, such as an office building. Any computer in this network can communicate with another computer that is part of the same network.
LMM	The Low Memory Manager (LMM) is an application on the BlackBerry device that deletes medium-priority items, such as old email messages and out-of-date calendar entries, when the amount of available flash memory on the BlackBerry device is less than 400 KB.
messaging server	A messaging server sends and processes messages and provides collaboration services, such as updating and communicating calendar and address book information.
S/MIME	Secure Multipurpose Internet Mail Extensions
UAC	User Account Control
WAN	wide area network

Provide feedback

12

To provide feedback on this content, visit www.blackberry.com/docsfeedback.

Legal notice

13

©2014 BlackBerry. All rights reserved. BlackBerry® and related trademarks, names, and logos are the property of BlackBerry Limited and are registered and/or used in the U.S. and countries around the world.

IBM, Domino, and Lotus are trademarks of International Business Machines Corporation. Microsoft and Windows are trademarks of Microsoft Corporation. InstallShield is a trademark of Flexera Software. Novell and GroupWise are trademarks of Novell, Inc. All other trademarks are the property of their respective owners.

This documentation including all documentation incorporated by reference herein such as documentation provided or made available at www.blackberry.com/go/docs is provided or made accessible "AS IS" and "AS AVAILABLE" and without condition, endorsement, guarantee, representation, or warranty of any kind by BlackBerry Limited and its affiliated companies ("BlackBerry") and BlackBerry assumes no responsibility for any typographical, technical, or other inaccuracies, errors, or omissions in this documentation. In order to protect BlackBerry proprietary and confidential information and/or trade secrets, this documentation may describe some aspects of BlackBerry technology in generalized terms. BlackBerry reserves the right to periodically change information that is contained in this documentation; however, BlackBerry makes no commitment to provide any such changes, updates, enhancements, or other additions to this documentation to you in a timely manner or at all.

This documentation might contain references to third-party sources of information, hardware or software, products or services including components and content such as content protected by copyright and/or third-party websites (collectively the "Third Party Products and Services"). BlackBerry does not control, and is not responsible for, any Third Party Products and Services including, without limitation the content, accuracy, copyright compliance, compatibility, performance, trustworthiness, legality, decency, links, or any other aspect of Third Party Products and Services. The inclusion of a reference to Third Party Products and Services in this documentation does not imply endorsement by BlackBerry of the Third Party Products and Services or the third party in any way.

EXCEPT TO THE EXTENT SPECIFICALLY PROHIBITED BY APPLICABLE LAW IN YOUR JURISDICTION, ALL CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS, OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS OR WARRANTIES OF DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, MERCHANTABLE QUALITY, NON-INFRINGEMENT, SATISFACTORY QUALITY, OR TITLE, OR ARISING FROM A STATUTE OR CUSTOM OR A COURSE OF DEALING OR USAGE OF TRADE, OR RELATED TO THE DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN, ARE HEREBY EXCLUDED. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY STATE OR PROVINCE. SOME JURISDICTIONS MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES AND CONDITIONS. TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES OR CONDITIONS RELATING TO THE DOCUMENTATION TO THE EXTENT THEY CANNOT BE EXCLUDED AS SET OUT ABOVE, BUT CAN BE LIMITED, ARE HEREBY LIMITED TO NINETY (90) DAYS FROM THE DATE YOU FIRST ACQUIRED THE DOCUMENTATION OR THE ITEM THAT IS THE SUBJECT OF THE CLAIM.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, IN NO EVENT SHALL BLACKBERRY BE LIABLE FOR ANY TYPE OF DAMAGES RELATED TO THIS DOCUMENTATION OR ITS USE, OR

PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN INCLUDING WITHOUT LIMITATION ANY OF THE FOLLOWING DAMAGES: DIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR AGGRAVATED DAMAGES, DAMAGES FOR LOSS OF PROFITS OR REVENUES, FAILURE TO REALIZE ANY EXPECTED SAVINGS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, LOSS OF BUSINESS OPPORTUNITY, OR CORRUPTION OR LOSS OF DATA, FAILURES TO TRANSMIT OR RECEIVE ANY DATA, PROBLEMS ASSOCIATED WITH ANY APPLICATIONS USED IN CONJUNCTION WITH BLACKBERRY PRODUCTS OR SERVICES, DOWNTIME COSTS, LOSS OF THE USE OF BLACKBERRY PRODUCTS OR SERVICES OR ANY PORTION THEREOF OR OF ANY AIRTIME SERVICES, COST OF SUBSTITUTE GOODS, COSTS OF COVER, FACILITIES OR SERVICES, COST OF CAPITAL, OR OTHER SIMILAR PECUNIARY LOSSES, WHETHER OR NOT SUCH DAMAGES WERE FORESEEN OR UNFORESEEN, AND EVEN IF BLACKBERRY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, BLACKBERRY SHALL HAVE NO OTHER OBLIGATION, DUTY, OR LIABILITY WHATSOEVER IN CONTRACT, TORT, OR OTHERWISE TO YOU INCLUDING ANY LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY.

THE LIMITATIONS, EXCLUSIONS, AND DISCLAIMERS HEREIN SHALL APPLY: (A) IRRESPECTIVE OF THE NATURE OF THE CAUSE OF ACTION, DEMAND, OR ACTION BY YOU INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR ANY OTHER LEGAL THEORY AND SHALL SURVIVE A FUNDAMENTAL BREACH OR BREACHES OR THE FAILURE OF THE ESSENTIAL PURPOSE OF THIS AGREEMENT OR OF ANY REMEDY CONTAINED HEREIN; AND (B) TO BLACKBERRY AND ITS AFFILIATED COMPANIES, THEIR SUCCESSORS, ASSIGNS, AGENTS, SUPPLIERS (INCLUDING AIRTIME SERVICE PROVIDERS), AUTHORIZED BLACKBERRY DISTRIBUTORS (ALSO INCLUDING AIRTIME SERVICE PROVIDERS) AND THEIR RESPECTIVE DIRECTORS, EMPLOYEES, AND INDEPENDENT CONTRACTORS.

IN ADDITION TO THE LIMITATIONS AND EXCLUSIONS SET OUT ABOVE, IN NO EVENT SHALL ANY DIRECTOR, EMPLOYEE, AGENT, DISTRIBUTOR, SUPPLIER, INDEPENDENT CONTRACTOR OF BLACKBERRY OR ANY AFFILIATES OF BLACKBERRY HAVE ANY LIABILITY ARISING FROM OR RELATED TO THE DOCUMENTATION.

Prior to subscribing for, installing, or using any Third Party Products and Services, it is your responsibility to ensure that your airtime service provider has agreed to support all of their features. Some airtime service providers might not offer Internet browsing functionality with a subscription to the BlackBerry® Internet Service. Check with your service provider for availability, roaming arrangements, service plans and features. Installation or use of Third Party Products and Services with BlackBerry's products and services may require one or more patent, trademark, copyright, or other licenses in order to avoid infringement or violation of third party rights. You are solely responsible for determining whether to use Third Party Products and Services and if any third party licenses are required to do so. If required you are responsible for acquiring them. You should not install or use Third Party Products and Services until all necessary licenses have been acquired. Any Third Party Products and Services that are provided with BlackBerry's products and services are provided as a convenience to you and are provided "AS IS" with no express or implied conditions, endorsements, guarantees, representations, or warranties of any kind by BlackBerry and BlackBerry assumes no liability whatsoever, in relation thereto. Your use of Third Party Products and Services shall be governed by and subject to you agreeing to the terms of separate licenses and other agreements applicable thereto with third parties, except to the extent expressly covered by a license or other agreement with BlackBerry.

Certain features outlined in this documentation require a minimum version of BlackBerry Enterprise Server, BlackBerry Desktop Software, and/or BlackBerry Device Software.

The terms of use of any BlackBerry product or service are set out in a separate license or other agreement with BlackBerry applicable thereto. NOTHING IN THIS DOCUMENTATION IS INTENDED TO SUPERSEDE ANY EXPRESS WRITTEN AGREEMENTS OR WARRANTIES PROVIDED BY BLACKBERRY FOR PORTIONS OF ANY BLACKBERRY PRODUCT OR SERVICE OTHER THAN THIS DOCUMENTATION.

Certain features outlined in this documentation might require additional development or Third Party Products and Services for access to corporate applications.

BlackBerry Limited
2200 University Avenue East
Waterloo, Ontario
Canada N2K 0A7

BlackBerry UK Limited
200 Bath Road
Slough, Berkshire SL1 3XE
United Kingdom

Published in Canada