

# BlackBerry Device Software

Version: 5.0

## Update Guide



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# 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.	You can use this option if users installed the BlackBerry Desktop Software on their computers.  If you permit users to use the BlackBerry Desktop Software to update the BlackBerry Device Software, they can update the BlackBerry Desktop Software simultaneously.
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.

For more information about the BlackBerry Device Software and BlackBerry Desktop Software, visit [www.blackberry.com/support](http://www.blackberry.com/support).

## Permitting users to update the BlackBerry Device Software using the BlackBerry Desktop Software 2

To permit users to update the BlackBerry® Device Software at computers that host the BlackBerry® Desktop Software, you can make the BlackBerry Device Software installation file available and instruct users to update the BlackBerry Device Software using 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 devices.

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.

## Send the BlackBerry Desktop Software installation file to users

You can send the BlackBerry® Desktop Software installation file to users so that they can install the BlackBerry Desktop Software and use it to synchronize organizer data items and manage message forwarding on their computers.

If users require the S/MIME Support Package for BlackBerry® devices to synchronize certificates and private keys, you can send them the BlackBerry Desktop Software so that they can install the certificate synchronization tool.

1. If your organization's environment includes the BlackBerry® Enterprise Server for Microsoft® Exchange, send users an email message that specifies the location of the installation file in the shared network folder and one of the following installation types:
  - for the BlackBerry® Desktop Manager only: `\\<shared_network_folder>\setup.exe /s`
  - for the BlackBerry Desktop Manager and certificate synchronization tool of the BlackBerry Desktop Manager: `\\<shared_network_folder>\setup.exe /s /v "INSTALLLEVEL=125"`
2. If your organization's environment includes the BlackBerry® Enterprise Server for IBM® Lotus® Domino® or BlackBerry® Enterprise Server for Novell® GroupWise®, send users an email message that specifies the location of the installation file in the shared network folder and the installation type: `\\<shared_network_folder>\setup.exe /s`

The software installs automatically.

## 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 Manager.

### 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 Manager.
    - Connect your BlackBerry device to your computer.
    - In the BlackBerry Desktop Manager, use the application loader tool to update the BlackBerry Device Software.
    - Do not disconnect your BlackBerry device from your 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® Lotus® 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 BlackBerry 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 3

To permit users to update the BlackBerry® Device Software using the BlackBerry® Web Desktop Manager instead of the BlackBerry® Desktop Manager, 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 BlackBerry devices remotely.
- Users do not require BlackBerry® Desktop Software on their computers to perform 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 Manager, 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 BlackBerry 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® Java® 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 create the BlackBerry Device Software configuration. If you display the BlackBerry Device Software pages in the BlackBerry Administration Service, the values for the following IT policy rules in the Wireless Software Upgrades policy group change to the following values, and you cannot view or change the IT policy rules:

- The Allow Non Enterprise Upgrade IT policy rule changes to No.
  - The Disallow Device User Requested Upgrade IT policy rule changes to Yes.
  - The Disallow Device User Requested Rollback IT policy rule changes to Yes.
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 **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules display in the Wireless Software Upgrades policy group and are set to values mentioned 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

You create a BlackBerry® Device Software configuration so that you can create a software configuration that includes the BlackBerry Device Software, and distribute the BlackBerry Device Software to users.

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 data** section, type a name and description for the BlackBerry Device Software configuration.

4. Click **Save**.
5. In the **Configuration data** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **Native 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. Click **Add to BlackBerry Device Software configuration**.
12. 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 BlackBerry Device 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.
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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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® Lotus® 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

## 4

To update the BlackBerry® Device Software over the wireless network, you can use the BlackBerry Administration Service to search for and configure updates that match the BlackBerry device 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 BlackBerry devices. If you want to manage BlackBerry Device Software updates, or if you want the wireless service provider to manage BlackBerry Device Software 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 required BlackBerry Device Software update to BlackBerry devices. When BlackBerry devices download the BlackBerry Device Software update from the BlackBerry Infrastructure, users can choose to complete the BlackBerry Device Software update immediately, or users can defer the BlackBerry Device Software update for up to 72 hours.

This update option applies only when you update a BlackBerry 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 the user is required to complete to perform a BlackBerry Device Software update that the wireless server provider sends to them, visit [www.blackberry.com/go/docs](http://www.blackberry.com/go/docs) to read the *BlackBerry Smartphone User Guide* for the BlackBerry device models that are used in your organization's environment.

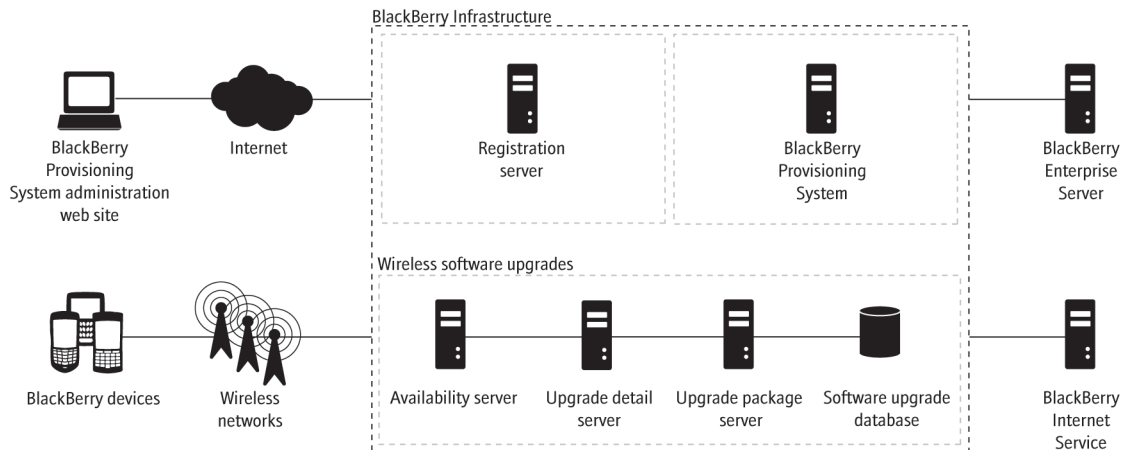
Advantages of this update process include:

- 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 BlackBerry devices remotely.
- Users do not require the BlackBerry® Desktop Software on their computers to perform the update option.

Disadvantages of this update process include:

- This update option increases wireless network traffic.
- This update option might take an unexpected amount of time to complete.

## Architecture: 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>
software upgrade database	<p>The software upgrade database is the primary database that contains the BlackBerry Device Software update information and metadata that the BlackBerry® Infrastructure processes.</p>

## 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"> <li>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)</li> <li>is typically 500 KB or less</li> <li>typically requires up to 5 minutes to download over the wireless network</li> </ul>
partial software update	<ul style="list-style-type: none"> <li>applies to wireless transceiver code</li> <li>is typically 8 MB or less</li> <li>typically requires up to 15 minutes to download over the wireless network</li> </ul>
complete software update	<ul style="list-style-type: none"> <li>applies to existing BlackBerry® Device Software on the BlackBerry device</li> <li>is typically 15MB or less</li> <li>typically requires 30 minutes to 2 hours to download over the wireless network</li> </ul>

## 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"> <li>The BlackBerry® Enterprise Server communicates with the BlackBerry Infrastructure once daily to check for new BlackBerry Device Software update packages.</li> <li>The BlackBerry Enterprise Server makes new BlackBerry Device Software update packages available through the BlackBerry Administration Service.</li> </ul>
control of BlackBerry Device Software updates	If you have the appropriate administrative role and permissions on the BlackBerry Enterprise Server, you can perform the following actions:

Feature	Description
	<ul style="list-style-type: none"> <li>send BlackBerry Device Software update requests to supported BlackBerry devices; users must accept the update within 72 hours, after which their BlackBerry devices retrieve and install the update packages automatically</li> <li>control the update process by permitting or restricting upgrade requests to specific sources and network connection types</li> </ul>
automatic backup and restore of data on BlackBerry devices	<ul style="list-style-type: none"> <li>The BlackBerry device is designed to back up user data and applications automatically during the software update process.</li> <li>The BlackBerry device is designed to restore the backed-up user data and applications after the update process completes.</li> </ul>

## 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"> <li>installing the wireless software update – 5 minutes</li> </ul>	<ul style="list-style-type: none"> <li>installing the wireless software update – 5 minutes</li> </ul>
partial software update	8 MB	15 minutes	<ul style="list-style-type: none"> <li>backing up the BlackBerry device data – 15 to 30 minutes</li> <li>installing the wireless software update – 30 to 45 minutes</li> <li>restoring the BlackBerry device data – 15 to 30 minutes</li> </ul>	<ul style="list-style-type: none"> <li>backing up the BlackBerry device data – 45 minutes</li> <li>installing the wireless software update – 30 to 45 minutes</li> <li>restoring the BlackBerry device data – 45 minutes</li> </ul>

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)
complete software update	15 MB	30 minutes to 2 hours	<ul style="list-style-type: none"> <li>backing up the BlackBerry device data – 15 to 30 minutes</li> <li>installing the wireless software update – 30 to 45 minutes</li> <li>restoring the BlackBerry device data – 15 to 30 minutes</li> </ul>	<ul style="list-style-type: none"> <li>backing up the BlackBerry device data – 45 minutes</li> <li>installing the wireless software update – 30 to 45 minutes</li> <li>restoring the BlackBerry device data – 45 minutes</li> </ul>

## 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"><li>206.51.26.240 through 206.51.26.255</li></ul>
Port number	<ul style="list-style-type: none"><li>443</li></ul>

## 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

**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 required administration pages. If you configure this option, wireless service providers are not permitted to send BlackBerry Device Software updates and users cannot request BlackBerry Device Software updates from their BlackBerry devices. You can send only required BlackBerry Device Software updates using the BlackBerry Administration Service.

By default, only the security and enterprise administrative roles 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 create the BlackBerry Device Software configuration. If you display the BlackBerry Device Software pages in the BlackBerry Administration Service, the values for the following IT policy rules in the Wireless Software Upgrades policy group change to the following values, and you cannot view or change the IT policy rules:

- The Allow Non Enterprise Upgrade IT policy rule changes to No.
  - The Disallow Device User Requested Upgrade IT policy rule changes to Yes.
  - The Disallow Device User Requested Rollback IT policy rule changes to Yes.
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 **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules display in the Wireless Software Upgrades policy group and are set to values mentioned 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

You create a BlackBerry® Device Software configuration so that you can create a software configuration that includes the BlackBerry Device Software, and distribute the BlackBerry Device Software to users.

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 data** section, type a name and description for the BlackBerry Device Software configuration.
4. Click **Save**.
5. In the **Configuration data** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **Native 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. Click **Add to BlackBerry Device Software configuration**.
12. 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 BlackBerry Device 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.
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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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.

Response	Description
accept the update request	<ul style="list-style-type: none"> <li>• The BlackBerry device starts the download process.</li> <li>• The user can monitor the progress of the BlackBerry Device Software download on the BlackBerry device and continue to use the BlackBerry device, where this option is permitted by the wireless technology.</li> <li>• When the BlackBerry Device Software download process completes, the update application checks conditions on the BlackBerry device (for example, battery life, available memory, network connection) to verify that the update can proceed, and prompts the user to install the BlackBerry Device Software update package.</li> </ul>
defer the update request	<ul style="list-style-type: none"> <li>• A prompt appears on the BlackBerry device every 24 hours to remind the user to install the BlackBerry Device Software update package.</li> <li>• After 72 hours, the BlackBerry device downloads and installs the BlackBerry Device Software update package automatically.</li> </ul>

## 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](http://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.

### 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.

Scenario	Best practice
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.

# Updating the BlackBerry Device Software at a central computer

5

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 multiple BlackBerry devices simultaneously.
- You can update BlackBerry devices for users that do not have BlackBerry® Desktop Manager 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 Manager, 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 BlackBerry 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® Java® 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 create the BlackBerry Device Software configuration. If you display the BlackBerry Device Software pages in the BlackBerry Administration Service, the values for the following IT policy rules in the Wireless Software Upgrades policy group change to the following values, and you cannot view or change the IT policy rules:

- The Allow Non Enterprise Upgrade IT policy rule changes to No.
  - The Disallow Device User Requested Upgrade IT policy rule changes to Yes.
  - The Disallow Device User Requested Rollback IT policy rule changes to Yes.
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 **BlackBerry Device Software deployment managed by BlackBerry Administration Service** drop-down list to **No**, the Allow Non Enterprise Upgrade, Disallow Device User Requested Upgrade, and Disallow Device User Requested Rollback IT policy rules display in the Wireless Software Upgrades policy group and are set to values mentioned 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

You create a BlackBerry® Device Software configuration so that you can create a software configuration that includes the BlackBerry Device Software, and distribute the BlackBerry Device Software to users.

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 data** section, type a name and description for the BlackBerry Device Software configuration.

4. Click **Save**.
5. In the **Configuration data** section, click the BlackBerry Device Software configuration that you created.
6. Click **Edit BlackBerry Device Software configuration**.
7. In the **Native 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. Click **Add to BlackBerry Device Software configuration**.
12. 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 BlackBerry Device 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.
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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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**.

### Related topics

[Managing the distribution of BlackBerry Device Software, 39](#)

## 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

6

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 Manager, the installation process of the BlackBerry Device Manager removes the BlackBerry Desktop Manager automatically and users lose the BlackBerry device management options that the BlackBerry Desktop Manager provides.

1. Visit [www.blackberry.com/support/downloads](http://www.blackberry.com/support/downloads) to download the installation file for the BlackBerry Device Manager.
2. Copy the installation file that you downloaded to a shared network folder.
3. 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 Manager, 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 BlackBerry 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® Java® 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\Apploder\loader.exe /defaultUSB /forceload
  - for a serial connection, \\<shared\_computer\_name>\Research In Motion\Apploder\loader.exe
2. Consider providing the following instructions in the email message:
  - Connect your BlackBerry device to your computer.
  - Do not disconnect your BlackBerry device from your computer until the 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® Lotus® 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® Java® 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](http://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® Desktop Manager by pushing the software to users' computers using a third-party application.

1. If your organization's environment includes BlackBerry® Enterprise Server for Microsoft® Exchange, to record the customized settings in the BlackBerry Desktop Software installation files so that you can create a custom software package, at a command prompt, type one of the following commands:
  - For BlackBerry Desktop Manager users, type `\\<shared computer name>\setup.exe /s`
  - For BlackBerry Desktop Manager users who also use the certificate synchronization tool, type `\\<shared computer name>\setup.exe /s /v "INSTALLLEVEL=125"`
2. If your organization's environment includes BlackBerry® Enterprise Server for IBM® Lotus® Domino® or BlackBerry® Enterprise Server for Novell® GroupWise®, to record the customized settings in the BlackBerry Desktop Software installation files so that you can create a custom software package, at a command prompt, type `\\<shared computer name>\setup.exe /s`.
3. Package the customized installation files for the BlackBerry Desktop Software and BlackBerry® Device Software using a third-party application for software packaging.
4. Send the installation files 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, see the *BlackBerry Enterprise Server Policy Reference Guide*.

# Managing the distribution of BlackBerry Device Software 8

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, update, or remove 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 or remove the BlackBerry Device Software from 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.	<ol style="list-style-type: none"> <li>a. Click the <b>Edit</b> icon for the recurrence day.</li> <li>b. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, select the recurrence days.</li> <li>c. In the <b>Start time</b> drop-down list, click the appropriate option. If necessary, change the start time and end time.</li> <li>d. Click the <b>Update</b> icon.</li> </ol> <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.	<p>To add more than one recurrence day, the schedules for the separate recurrence days cannot overlap.</p> <ol style="list-style-type: none"> <li>a. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, select the recurrence days.</li> <li>b. In the <b>Start time</b> drop-down list, click the appropriate option. If necessary, change the start time and end time.</li> <li>c. Click the <b>Add</b> icon.</li> </ol>

5. 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.  
The default value is 1000.
6. To turn on throttling for all BlackBerry Device Software tasks in jobs, on the **Job throttling** tab, click **Enabled to reduce load on system**.
7. 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.  
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 BlackBerry Device Software tasks that you want the BlackBerry Enterprise Server to process during each processing interval.  
The default value is 150.
9. 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.	<ol style="list-style-type: none"> <li>a. Click the <b>Edit</b> icon for the default recurrence day.</li> <li>b. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.</li> <li>c. In the <b>Start time</b> drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.</li> </ol>

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

5. On the **System throttling** tab, in the **System throttling across all jobs** section, 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. To turn on throttling for all tasks for standard application settings in jobs, on the **Job throttling** tab, 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 the BlackBerry Device Software to BlackBerry devices

You can change how the BlackBerry® Administration Service installs, updates, or removes 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.	<ol style="list-style-type: none"> <li>a. Click the <b>Edit</b> icon for the recurrence day.</li> <li>b. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, click the number of recurrence days.</li> <li>c. In the <b>Start time</b> drop-down list, click the appropriate option. If necessary, change the start time and end time.</li> <li>d. Click the <b>Update</b> icon.</li> </ol> <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> <ol style="list-style-type: none"> <li>a. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.</li> <li>b. In the <b>Start time</b> drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.</li> <li>c. Click the <b>Add</b> icon.</li> </ol>

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

Task	Steps
	<ol style="list-style-type: none"> <li>a. In the <b>Scheduled deployment day(s)</b> drop-down list, click the appropriate recurrence option. If necessary, click the recurrence days.</li> <li>b. In the <b>Start time</b> drop-down list, click the appropriate recurrence option. If necessary, change the start time and end time.</li> <li>c. Click the <b>Add</b> icon.</li> </ol>

7. 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**.
8. 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.
9. 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.
10. Click **Save all**.

# Troubleshooting

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### 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\Apploder\loader.exe`.

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

# Glossary

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**.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.

**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

# Provide feedback

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