Deploying BlackBerry Desktop and Handheld Software

Research In Motion

Contents

Introduction

This document is intended for system administrators who install, manage, and support BlackBerry™ desktop and handheld software.

This document discusses the software deployment enhancements in BlackBerry Desktop Manager version 3.5 and BlackBerry Desktop Manager version 3.6. It also recommends how to use BlackBerry Desktop Manager version 3.6 to take advantage of these enhancements for mixed handheld deployments.

The key to deploying and upgrading software effectively is to use a distributed implementation with centralized control. With BlackBerry Desktop Manager version 3.5, you can use existing software distribution systems to remotely push the BlackBerry Desktop Software to computers in an organization. You can deploy an installer that includes preconfigured default user settings for new users, but preserves the settings for users who are upgrading existing software. These options result in lower BlackBerry deployment costs.

You can also use BlackBerry's IT policy mechanism to enforce handheld software upgrades, and specify how many times users can connect their handheld to their computer before they are forced to upgrade to new software. You can use the IT policy system to create a custom message that users see with the upgrade prompt. This message can inform users of the new features that the upgrade provides, how long the upgrade will take, and so on.

BlackBerry Desktop Manager version 3.6 extends the new functionality to support large deployments of multiple handheld platforms from multiple service providers, which enables a single deployment strategy.

Simplifying deployment

Simplified software deployment reduces installation and upgrade costs, which means a lower total cost of ownership (TCO) for the BlackBerry solution.

BlackBerry Desktop Manager version 3.5

Silent install

The silent install enables you to perform the following tasks:

- use existing software distribution systems to push the BlackBerry software to multiple computers within an organization remotely
- configure default desktop software settings (for example, automatic backup settings, default Intellisync settings, and default filters) for new installations
- preserve all existing user settings

Forced handheld upgrade

Note: The forced handheld upgrade feature requires BlackBerry Enterprise Server version 3.5 for Microsoft® Exchange or BlackBerry Enterprise Server version 2.2 for Lotus® Domino™.

Using BlackBerry's IT policy system, you can force a handheld upgrade after users start the desktop software and connect their handheld to their computer. You can define both the number of restarts that users are allowed before they are forced to upgrade and the warning text that appears.

With the forced handheld application upgrade feature, you can perform the following tasks:

- make sure that users are running the correct handheld applications, which simplifies supporting the handhelds (especially in environments with multiple handheld models and networks)
- configure an upgrade warning message that notifies users that their handheld software must be upgraded, and that tells users when the upgrade will be forced

- define how many times users can start the desktop software and connect their handheld to their computer without choosing to upgrade; after the user exceeds this number, the user cannot cancel the message, and is forced to upgrade the handheld software

Simplified Application Loader

The Application Loader application automatically backs up and restores user data during an upgrade.

BlackBerry Desktop Manager version 3.6

In addition to the features provided in BlackBerry Desktop Manager version 3.5, the BlackBerry Desktop Manager version 3.6 provides the features described below.

Modular installer design

In the BlackBerry Desktop Manager version 3.6, the desktop and handheld software are contained in separate installers: a single installer for desktop software, and individual handheld software sub-installers for all BlackBerry Wireless Handhelds™.

Modular packaging design offers the following benefits:

Mixed handheld deployments support: You can use the silent install feature to deploy a single software package. This single package contains the desktop software and the appropriate handheld software sub-installers for the multiple handheld platforms and service providers that are supported by an organization (for example, BlackBerry 6710 Wireless Handheld™ from Service Provider A, BlackBerry 6710 Wireless Handheld™ from Service Provider B, BlackBerry 5820 Wireless Handheld™ from Service Provider C, and so on).

The Application Loader loads the appropriate handheld software on each user's handheld, as authorized by the service provider.

Enhanced software upgrade control: You can select which software components to install or upgrade, as in the following examples:

- For new users with handhelds that are preloaded with the latest handheld software, they can install only the desktop software.

- When a desktop software upgrade is not required, they can deploy a handheld software sub-installer to upgrade only the handheld software.

Installation information

Package components

The package consists of a single BlackBerry Desktop Manager installer and, possibly, multiple handheld software sub-installers.

BlackBerry Desktop Software installer

- All handhelds use a standard BlackBerry Desktop Software installer.

- You can obtain the desktop software installation media on CD, from the service provider, or from `www.blackberry.com`.

Handheld software sub-installers

- Handheld software sub-installers are provided separately, so that you can obtain and package only those that apply to your environment.

- You can download handheld sub-installers through the service provider.

- The handheld software-specific user guide is provided on the product CD and on the service provider's web site. The relevant handheld user guide is installed with the handheld software. Users can view the handheld user guide after the handheld software sub-installer is installed by, in the desktop software, on the menu bar, clicking **Help** > **Handheld User's Guide**.

End-user permission requirements

The user that is signed on when the installers run must have permissions to do the following:

- write to the installation folder (for example, `c:\Program Files\Research In Motion\BlackBerry`)
- register COM components
- write to the following registry keys in `HKEY_LOCAL_MACHINE\Software`:
  - `\Microsoft\Windows\Current Version\App Paths`
  - `\Research In Motion\BlackBerry`
  - `\Microsoft\Windows\Current Version\Uninstall`

Deploying software

To deploy desktop and handheld software using the modular installer design, complete the following steps:

1. Obtain the installers.
2. Create the package.
3. Deploy the package.
4. Force handheld software upgrades.

1. Obtain the installers

- Obtain the desktop software CD, or download the desktop software installer from your service provider or the BlackBerry web site (`www.blackberry.com`).
- Download the relevant handheld sub-installers from your service provider or from the BlackBerry web site (`www.blackberry.com`).

2. Create the package

The silent install feature enables you to define custom installer and desktop software behavior. When you initially deploy BlackBerry, you can use this feature to make sure that users have a consistent installation and desktop software configuration. The desktop software settings are applied when there is no existing version of the desktop software; if the installer detects an existing version, the user's desktop software settings are preserved.

Note: The software deployment examples use `N:\BlackBerry_Install` as the network path and directory in which the installation files are located.

Supporting Documentation: Refer to the *BlackBerry Desktop Software Silent Install* technical advisory in the Technical Knowledge Center located at `www.blackberry.com` for more information.

Step 1: Extract the installer files

Note: If you have a CD image with unzipped files, copy the files to `N:\BlackBerry_Install`.

1. Create an installation directory (for example, `C:\Temp`) to which you can extract the installer files.
2. Run the desktop software installer, and extract the installer files to the directory that you created.
3. When you are prompted to install the BlackBerry Desktop Software, click **Cancel**.

4. Copy the install files to `N:\BlackBerry_Install`.

Step 2: Add the handheld sub-installers (optional)

In the installation directory, create a `Device` directory (for example, `N:\BlackBerry_Install\Device`), and add all required handheld sub-installers to it. The desktop software installer automatically calls these sub-installers as part of a single installation process.

Step 3: Record the installation

The silent install feature for the BlackBerry Desktop Software enables you to run a prototype installation in record mode, which generates a response file. To use the response file when running `setup.exe` for end users, specify the `/s` option. When the BlackBerry Desktop Software installer runs with a response file, it runs in silent mode (with no user interface), and all installation options automatically match the options that you made during the recorded prototype installation.

To record the installation, at the command prompt, run the BlackBerry Desktop Software installer using the following syntax:

`Setup.exe /r /f1"N:\BlackBerry_Install\setup.iss"`

Note: There is **no** space between `/f1` and `"N:\BlackBerry_Install\setup.iss"`.

The installer selections are saved to the following response file: `N:\BlackBerry_Install\setup.iss`.

Step 4: Record the default BlackBerry Desktop Manager settings (optional)

You can also run the BlackBerry Desktop Manager application in record mode. This enables you to define desktop software settings and export them to text (.txt) files, which you can deploy with the BlackBerry Desktop Manager installer. The desktop software configuration settings that you define are applied when the desktop software is installed on a computer on which there is no existing BlackBerry Desktop Manager installation.

Note: The generated text files must be in the installation directory (for example, `N:\BlackBerry_Install`) for the desktop software installer to execute them.

1. At the command prompt, change to the directory in which the BlackBerry Desktop Manager is installed (for example, `N:\BlackBerry_Install`).

2. Run the BlackBerry Desktop Manager using the following syntax:

    `DesktopMgr.exe /r N:\BlackBerry_Install`

3. In BlackBerry Desktop Manager, configure the default settings that you want to apply to the users' desktop software.

4. After you define the desired settings, close the BlackBerry Desktop Manager. The settings are written to the following .xml files, which are created in the location that you specified:

File name	Related tool	Settings
`DefaultsDesktop.xml`	Desktop Manager	**View:** Show Status Bar, Large icons, Small icons **Options:** Hide When Minimized, Connection Settings (excluding Serial Port settings) **Backup and Restore > Options:** all configurable settings **Intellisync:** Reconcile email, Synchronize PIM, Update handheld's date and time, Configure email, Auto start
`DefaultsRedirectorSettings.xml`	Redirector Settings	**General tab:** All configurable settings **Filters tab:** All configurable settings

		Security tab: All configurable settings
		Advanced tab: Don't save a copy to the Sent Items folder
`DefaultsIntellisync.xml`	Intellisync	**Configure PIM > Choose:** Handheld application, operation (Import, Export, or Synchronize)
		Configure PIM > Advanced: Confirmation, Conflict Resolution, and Date Range (Calendar only) settings

The following files should appear in `N:\BlackBerry_Install\`:

- the BlackBerry installation files that you copied from the CD or extracted in Step 1

- `Setup.iss`: the response file that you created in Step 3

- The following desktop software default settings that you created in Step 4 (optional):

  - `DefaultsIntellisync.xml`: Intellisync default settings

  - `DefaultsDesktop.xml`: BlackBerry Desktop Manager default settings

  - `DefaultsRedirectorSettings.xml`: Redirector Settings default settings

Step 5: Define required applications (optional)

You can optionally define required handheld applications that users are required to install or upgrade.

1. In Windows Explorer, locate the `C:\Program Files\Common Files\Research In Motion\Shared\Loader Files` directory.

2. Open the directory of the handheld software sub-installer that you want to update.

3. In a text editor, open the desired application's .alx file (for example, `Phone.alx`).

4. Below the line, `<copyright>Copyright 1998-2002 Research In Motion</copyright>`, add the following line:

   `<required>true</required>`

When users run the Application Loader, the applications that have the .alx file name extension with this flag set are no longer optional. These components are selected by default and are grayed-out in the Application Loader Wizard.

3. Deploy the package

1. Use your preferred software distribution program to push the installer package to users' computers.

2. If you run the installer from the `N:\BlackBerry_Install` directory that you defined above, run the installer using the following syntax:

   `setup.exe /s /f1"setup.iss" /f2"%TEMP%\bbinstall.log"`

   If you do **not** run the installer from the network directory that you defined above, run the installer using the following syntax:

   `N:\BlackBerry_Install\setup.exe /s /f1"N:\BlackBerry_Install\setup.iss" /f2"%TEMP%\bbinstall.log"`

   Note: The `/s` switch runs the installer in silent mode.

   Note: The `/f2` switch enables you to specify the installer's log file (`Setup.log`) location. In the steps above, the log file is generated on the local computer. If this switch is not present, the log file is generated in the directory in which the response file is located.

3. If you defined required handheld applications, deploy the updated .alx files (created in Step 5 above) immediately after you deploy the software package.

Desktop and handheld software installer behavior

When the desktop software installer runs, it opens any handheld software sub-installer .exe files in the `Device` subdirectory. End users see a progress screen, but they do not interact with the installer.

Application Loader behavior

To install handheld software, end users must connect their handheld to their computer and run the Application Loader. If you defined required applications, the applications are selected by default on the Application Loader's Handheld Application Selection screen. The user cannot clear the option to choose not to upgrade applications that are required. Required applications are also automatically installed or updated during a forced handheld upgrade.

If users run the Application Loader, and no handheld software is installed for their handheld, the Application Loader Wizard informs them that no actions are required, and they can click **Finish** to exit the application.

4. Force handheld software upgrades

After you deploy the custom installer, you can force users to upgrade their handheld software by defining the Force Handheld Upgrade IT policy. This IT policy defines the number of times that users can restart the BlackBerry Desktop Manager before they are forced to run the Application Loader and upgrade the handheld applications.

The Force Handheld Upgrade IT policy

The BlackBerry Enterprise Server Software enables you to configure IT policies that control desktop software behavior.

Define the forced handheld upgrade using wireless IT policy

The wireless IT policy feature is provided with the BlackBerry Enterprise Server version 3.5 or later for Microsoft Exchange.

1. In the BlackBerry Server Management console, define the following IT policy settings:

   ◆ **ForceLoadCount:** Define the number of times that users are prompted to upgrade their handheld software before they are forced to upgrade. The users are prompted each time that they start the desktop software and connect the handheld to the computer.

   ◆ **ForceLoadMessage:** Define the message that appears when users are prompted to upgrade their handheld software. (For example, **New handheld applications are available. Please use the Application Loader to upgrade your handheld applications. The third time you receive this upgrade reminder, you will be forced to upgrade your handheld software.**)

2. Deploy the policies to the users whose handhelds you want to upgrade.

Supporting Documentation: Refer to the *BlackBerry Enterprise Server for Microsoft Exchange Administration Guide* for information about defining and deploying IT policies and the *Wireless IT Policy and IT Administration* white paper. Both documents are available in the Technical Knowledge Center at `www.blackberry.com`.

Define the forced handheld upgrade using ITPolicy.exe

The IT policy tool (`ITPolicy.exe`) is provided with the BlackBerry Enterprise Server for Lotus Domino and the BlackBerry Enterprise Server for Microsoft Exchange. You can find the IT policy program and related resources in the `Tools` directory on the BlackBerry Enterprise Server CD.

1. In the IT policy application, define the following IT policy settings:

- ◆ **ForceLoadCount:** Define the number of times that users are prompted to upgrade their handheld software before they are forced to upgrade. The users are prompted each time that they start the desktop software and connect the handheld to the computer.

- ◆ **ForceHandheldUpdateMessage:** Define the message that appears when the user is prompted to upgrade. (For example, **New handheld applications are available. Please use the Application Loader to upgrade your handheld applications. The third time you receive this upgrade reminder, you will be forced to upgrade your handheld software.**)

2. Deploy the `policy.bin` file, either locally or on a network drive, to the users whose applications you want to upgrade.

Supporting Documentation: Refer to the *IT Policy Getting Started Guide* for information about defining and deploying IT policies and the *IT Policy Manager* white paper. Both documents are available in the Technical Knowledge Center at `www.blackberry.com`.

Tracking handheld software versions

You can verify that the handheld software was upgraded successfully.

1. On the user's computer, go to the following directory:

   ```
   C:\Documents and Settings\<userid>\Application Data\Research In
   Motion\BlackBerry\Loader History
   ```

2. In a text editor, open the following files:

   - ◆ `<handheld_PIN>.xml`: shows the handheld's current operating system and module version numbers

   - ◆ `<handheld_PIN>-prev.xml`: shows the handheld's previous operating system and module version numbers

3. Verify that the handheld software upgrade occurred.

Tip: If you are running the BlackBerry Enterprise Server version 3.5 or later for Microsoft Exchange, you can also use the wireless IT policy feature to verify that a user's handheld software was upgraded successfully. Send an IT Policy update to the user for whom you want to verify the software version. If the user has not upgraded to BlackBerry Handheld Software version 2.5 or later or version 3.6 or later (both of which support wireless IT policy), in the BlackBerry Server Management, the Policy Status remains **Received**. If the user has upgraded to a version that supports wireless IT policy, the Policy Status is **Applied Successfully**. (If the status differs from the two that are listed above, refer to the BlackBerry Enterprise Server for Microsoft Exchange Administration Guide for information about the Policy Status values.)

Removing software

When desktop software is installed with handheld sub-installers, an entry is added to Add/Remove Programs for both the desktop software and each handheld software version that was installed with the desktop software. When end users use Add/Remove Programs to remove the desktop software, all associated handheld sub-installers are also removed.

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