



# Device Management for *Windows Mobile*

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Installation Guide

**Version 7.2**

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# Contents

<b>Part One</b> .....	1
<b>Introduction</b> .....	1
Background.....	1
System Requirements .....	1
Windows Mobile Device Support .....	1
<b>Part Two</b> .....	3
<b>Installation &amp; Setup</b> .....	3
Overview .....	3
Creating the CAB Files .....	3
Deploying the CAB Files .....	7
Using ActiveSync.....	7
Hosting the CAB File .....	7
Verifying the Installation.....	8
From the Console .....	8
From the Phone.....	8
Upgrading Clients.....	9
<b>Part Three</b> .....	10
<b>Creating Custom Sites</b> .....	10
Overview .....	10
Creating a Custom Site.....	11
Copying Content.....	13
Copying Single Items.....	13
Copying by Batch .....	15
Customizing Content.....	16
Subscribing Devices to Your Custom Site .....	18
Subscribing Specific Devices .....	18
Subscribing by Properties.....	19
<b>Part Four</b> .....	21
<b>Resources</b> .....	21
Troubleshooting .....	21
Global Support.....	24
Index .....	25

# Introduction

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## Background

**Device Management for Windows Mobile** ensures that your mobile applications are as secure and reliable as the computers that are tethered to the corporate data center. The BigFix Windows Mobile Client extends the functionality of typical BigFix Clients with Inspectors for GPS, power modes, battery information, connection management, Configuration Service Provider (CSP) features, and more.

This *Installation and Configuration Guide* is addressed to IT Managers and System Administrators who wish to install and configure the BigFix Windows Mobile Client throughout their enterprise. It starts with step-by-step instructions to push the client software to mobile devices. It then outlines how to configure the content to align with internal corporate policies using Fixlet and Task settings referred to as a "benchmark."

To create your own Fixlet messages and Actions to implement the hundreds of Inspectors designed for the Windows OS and Mobile devices in particular, please refer to the *Windows Mobile User's Guide*.

## System Requirements

**Device Management for Windows Mobile** requires BigFix Version 7.2 or better.

## Windows Mobile Device Support

**Windows Mobile** refers to the general family of compact operating systems used on mobile devices such as Pocket PCs, Smartphones, and Point of Sale devices. The BigFix Windows Mobile client is designed to run on most versions of the Windows Mobile platforms. The following devices are currently supported:

### **Windows CE 4.2:**

- Windows Mobile 2003 for Smartphone
- Windows Mobile 2003 for Pocket PC Professional Edition
- Windows Mobile 2003 for Pocket PC Phone Edition
- Windows Mobile 2003 for Pocket PC Premium Edition
- Windows Mobile 2003 SE

### **Windows CE 5.0:**

- Windows Mobile 5.0 Pocket PC
- Windows Mobile 5.0 Smartphone

### **Windows CE 6.0:**

- Windows Mobile 6.0 Standard
- Windows Mobile 6.0 Classic

## *Device Management for Windows Mobile*

- Windows Mobile 6.0 Professional
- Windows Mobile 6.1 Standard
- Windows Mobile 6.1 Professional

# Installation & Setup

## Overview

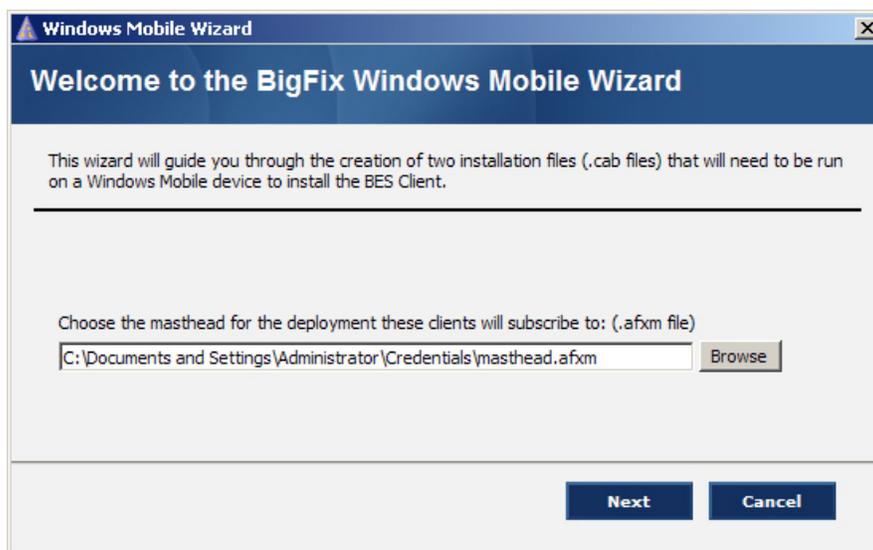
The BigFix Windows Mobile Client currently includes two separate installers, one for **Windows Mobile** and one for the **Pocket PC**.

- **Windows Mobile:** This installer is for Windows Mobile 5, Windows Mobile 6 Classic and Professional client.
- **Pocket PC:** This installer is for the Pocket PC 2003 (i.e. CE 4.2) client.

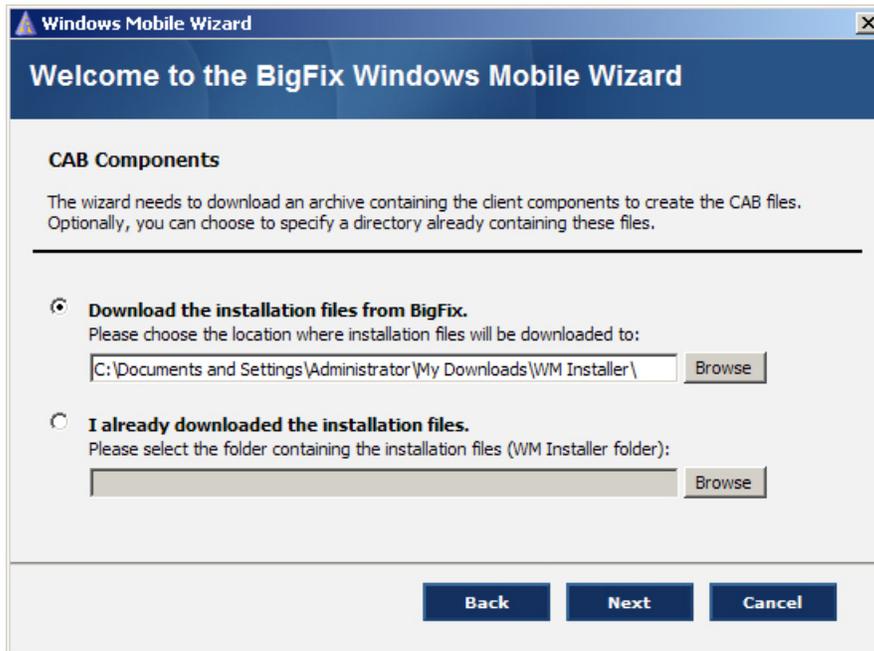
Both of these installers will be produced by the Wizard that accompanies the *Device Management for Windows Mobile* site. There are two basic stages of the installation. The first stage is to run the Wizard, which will package the Client installer with your authorized masthead into a CAB file. The second stage is to deploy the CAB file to the individual mobile devices. The next sections will show you how to quickly get up and running.

## Creating the CAB Files

1. Obtain the masthead (.afxm file) for the BigFix Windows Mobile Fixlet site from your BigFix representative.
2. Double-click the masthead or – from within the BigFix Console – load it from **Tools > Manage Sites > Add External Site**. When the site has loaded, it will create a new Wizard.
3. From the **Wizards** menu, select **Windows Mobile Wizard**. You will be presented with the following dialog.



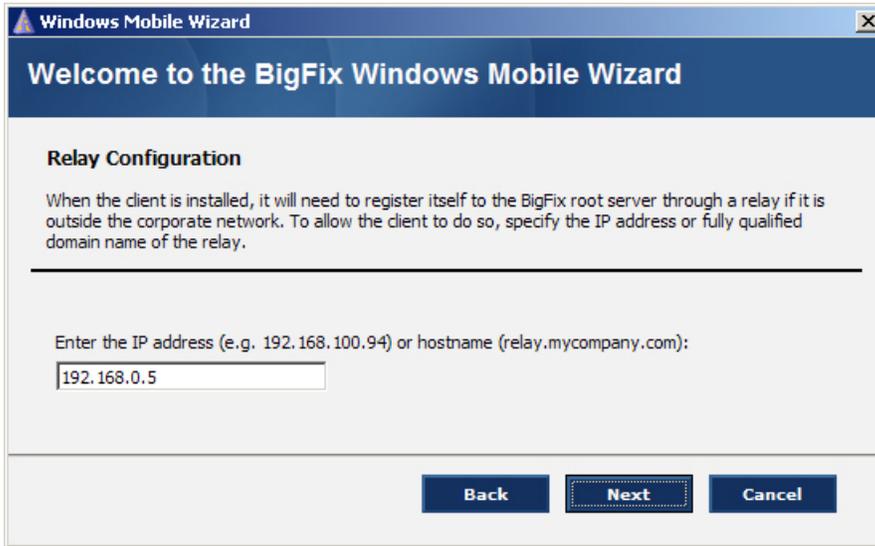
4. Click the **Browse** button to find and select your credentialed Action site labeled masthead.afxm. Click **Next** for the next Wizard dialog that will help you locate the installation files.



5. You have two choices here:
  - If you haven't yet downloaded the installation files, click the first choice and use the **Browse** button to select the desired download folder. When you do, the Console will then attempt to connect to the BigFix server to download the file.
  - If you have already downloaded or otherwise received the installation files (see step 1), click the second choice and use the **Browse** button to locate the folder where those files were saved.

Whichever option you use, keep track of the folder. This is where the CAB files will ultimately be created. Click **Next**.

6. The **Relay Configuration** dialog appears.

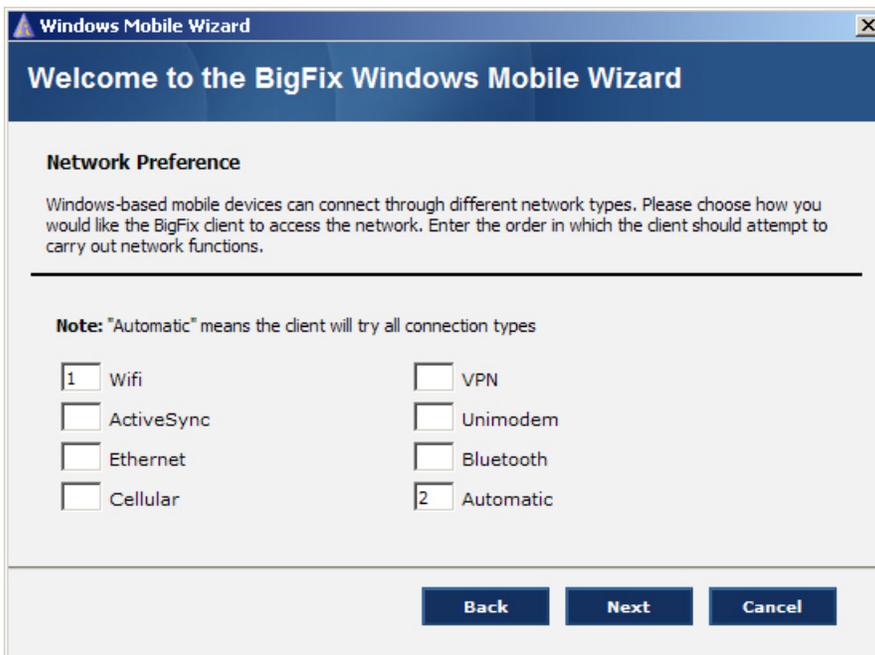


Enter the name of the BigFix Relay that your mobile device will be connecting to. Note that you may enter the IP address or the hostname of the relay. The full address of the relay will be of the form:

**http://yourRelay ipaddress:52311/bfmirror/downloads**  
or  
**http://yourRelay hostname:51311/bfmirror/downloads**

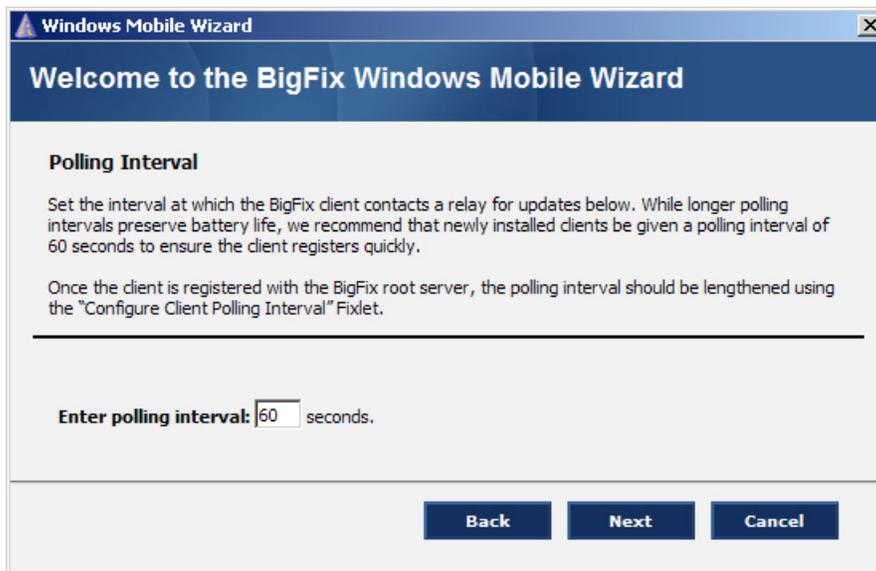
Click **Next**.

7. The **Network Preference** dialog appears.



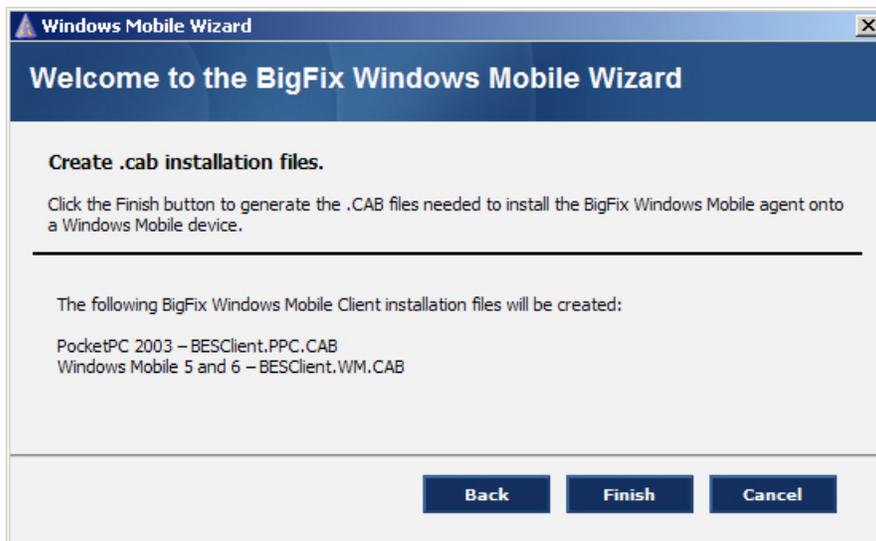
This dialog allows you to specify how you want to connect to the mobile device. List all the possible connection methods, in the order that you want BigFix to attempt them. Or simply choose **Automatic** to let the BigFix client decide on the best connection method. Click **Next**.

8. The **Polling Interval** dialog appears.



Here you can set the reporting interval. The recommended starting interval is 60 seconds to ensure a swift registration of the device. After the BigFix client is installed, you can use the **Configure Client Polling Interval** Fixlet to reset the interval to a larger number to conserve battery life. Click **Next**.

9. The final Wizard dialog appears.



When you click the **Finish** button, two CAB files will be generated and placed in the WM Installer folder (your original installation folder). One CAB file is for **Windows Mobile** devices, and the other is for the **Pocket PC**. You can rename these files if you wish. The folder containing these CAB files is displayed so you can see where they have been created.

## Deploying the CAB Files

Now you have a CAB file for both your Windows Mobile devices and your Pocket PCs. The CAB files contain the client installer. The final step is to deploy the CAB files to the devices themselves. There are several possible techniques you can use. Here are two:

### Using ActiveSync

The simplest method of client deployment is through a Windows Desktop running Microsoft ActiveSync. This desktop deployment will install the Windows Mobile CAB files on the local computer, initiate the Microsoft ActiveSync utility to extract the CAB files to the Windows Mobile device, and install them. See the following links for more information on ActiveSync:

- Windows XP: <http://www.microsoft.com/windowsmobile/en-us/help/synchronize/activesync45.mspx>
- Windows Vista: <http://www.microsoft.com/windowsmobile/en-us/help/synchronize/device-center.mspx>

**Note:** Windows Mobile Device Center is the replacement for Microsoft ActiveSync on Vista.

### Hosting the CAB File

ActiveSync works well to upload the Mobile Client to one device at a time. However, it can be tedious when deploying to large numbers of devices. A better technique in this case is to host the CAB files you created in the previous steps on a web server in your company. Then send an SMS message to each device pointing them to the URL. This way, each user can upload the CAB files on their own. Once uploaded, each user can be instructed to run the client and verify proper installation.

## Verifying the Installation

### From the Console

There are two ways to verify that the Windows Mobile Client is installed correctly. From the BigFix Console, do the following:

1. Click the **Computers** tab.
2. Check to make sure that the specified client(s) have reported in.

### From the Phone

Or you can check to make sure the BigFix Client software is installed on the phone. Here's how:

1. Tap or select the **Start Menu** on the mobile device.
2. Select **Programs > File Explorer**.
3. Navigate to the **Windows\StartUp** directory. You should see an entry for the **BES Client** program as shown on the left. Then navigate to the **\Program Files\BigFix** directory. You should see a file structure like the one on the right, which will confirm successful installation.



## Upgrading Clients

Upgrading the Client can be accomplished in two ways:

- Reverse the installation steps performed above to remove the client binaries from the mobile device. Then reinstall the updated Client.
- Create an Action within BigFix to deploy an updated client.

If you decide to use a BigFix Action, here is a sample script you can modify:

```
// Download the required files (both the CAB file and the inf file are required)
download now http://url/download/BESCab.inf
download now http://url/download/BESCab.CAB
// Validate the installer size and hash
continue if {(size of it = 1847344 AND sha1 of it =
"f6424ace4c168575ac23b305d61e8d931adca492") of
  file "BESCab.CAB" of folder "__Download"}
continue if {(size of it = 4533 AND sha1 of it =
"489ef78a289bc5e5ac23b3e5e61e8de31eddad41") of file
  "BESCab.inf" of folder "__Download"}
// Launch the cab file using run wceload.exe
run wceload.exe "{location of client}\__BESData\actionsite\__Download\BESCab.CAB"
```

Or, instead of the **run** command, you can use the **open** command which calls wceload.exe through the shell. Just replace the last line of the above script with this:

```
open {location of client}\__BESData\actionsite\__Download\BESCab.CAB
```

For more information, see the ***BigFix Action Language Reference***.

**Note:** It is not possible to directly run the CAB file using the standard **run** command. Using **wceload.exe** gives you access to more options, including silent installation.

# Creating Custom Sites

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## Overview

You can use the site as-is. The site is a collection of **controls**, also referred to as configurations, which describe individual device settings. These controls are implemented as Fixlet messages and may also include associated Tasks, Actions or Analyses. You can click through the Fixlet messages to see what values have been set out-of-the-box. The Fixlet description displays the recommended **default value** and the **current value** for each associated control.

These default values may be just what you want. However, it is more likely that you will wish to establish your own custom version of the site, reflecting your current corporate policy. This set of values is called a **benchmark**. It describes a group of controls that are contained within a single BigFix Site, used to measure the overall state or compliance of a given set of endpoints. To establish your own benchmark, you must create a custom site to host your content. Although you can make changes to the original site, those modifications will be cleared whenever the site resynchronizes. This section tells you how to create a custom site and then how to populate it with custom controls to easily establish a benchmark across any or all of your mobile devices.

The ability to customize parameters and exclude specific devices from analysis gives you a great deal of power over your security posture. Custom sites allow you to target specific sets of computers with tailored content using the subscription mechanism. This allows highly accurate statistics to be created with any desired granularity. To craft your own policy with custom sites, follow the four-step process below:



**Step 1:** Create a Custom Site

**Step 2:** Copy the Desired Fixlet Messages into the Custom site

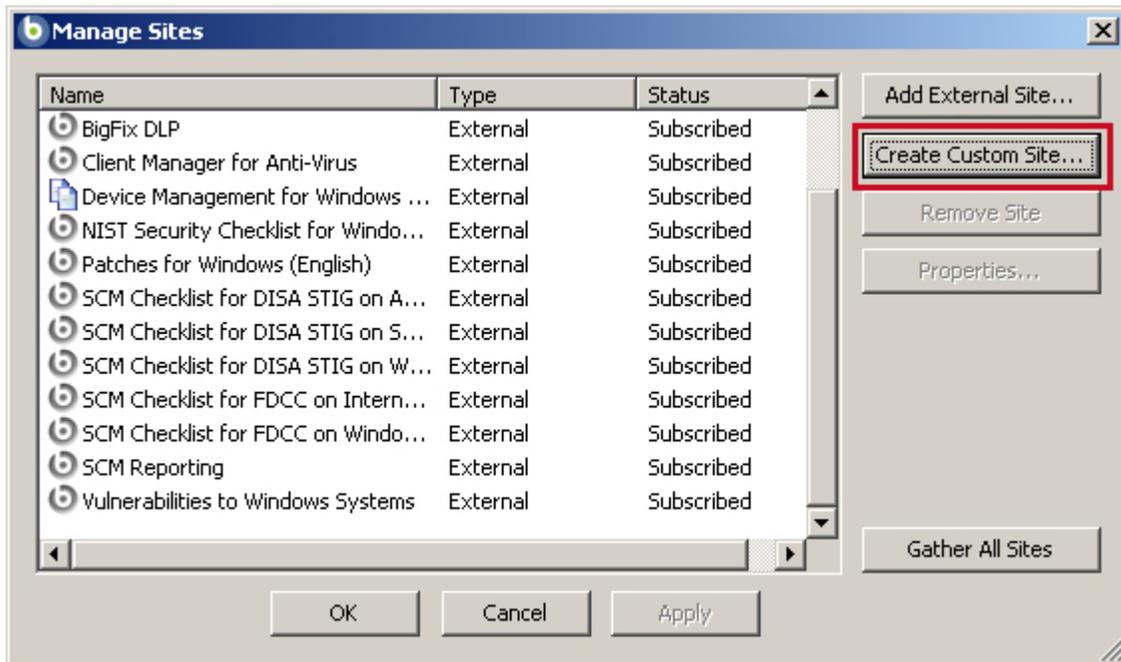
**Step 3:** Customize Fixlet Messages using Parameters and Exceptions

**Step 4:** Subscribe the proper clients to the custom site

## Creating a Custom Site

As you have seen, you can achieve a great deal of power and convenience by grouping controls into custom sites. This section describes how to set up a custom site, set permissions on it and populate it with customized controls:

1. From the **Tools** menu, select **Manage Sites**. The Manage Sites dialog opens.

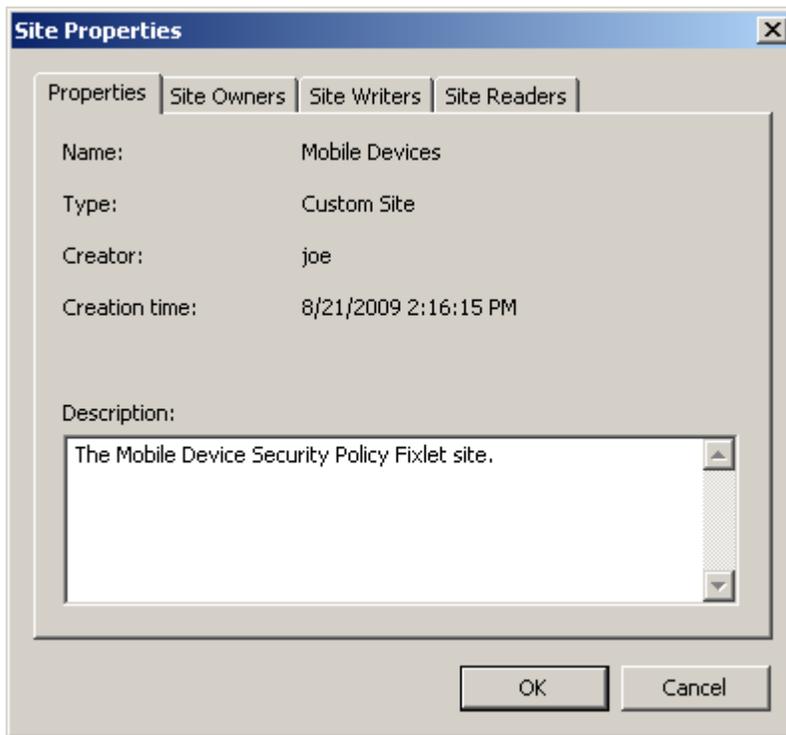


2. Click the button labeled **Create Custom Site**. The Create Custom Site dialog opens.



3. In the dialog box that appears, enter the name of your site. Do *not* check the box to **Create a policy action** that will subscribe all computers to this Custom Site by default. Click **OK**.

4. The **Site Properties** dialog appears.



Enter a description of your site in the text box.

5. Click on the other tabs to set any **owner**, **writer** and **reader** permissions you want to apply to this site, then click **OK**.
6. Back at the **Manage Sites** dialog, click **OK** to propagate your new site. You will need to provide your user password, and your new custom site will be finalized.

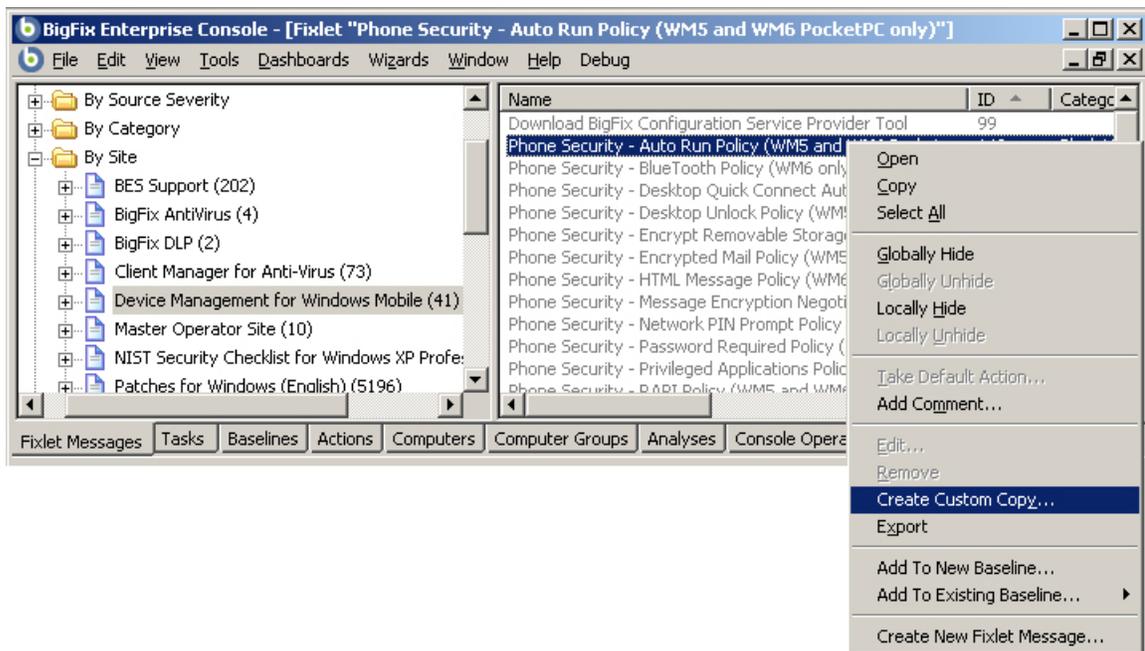
## Copying Content

Now that you have a custom site, you will want to populate it with customized controls. This entails copying Fixlet messages from the original site to your custom site and then setting the desired value for each control. The resulting group of custom settings establishes your policy benchmark.

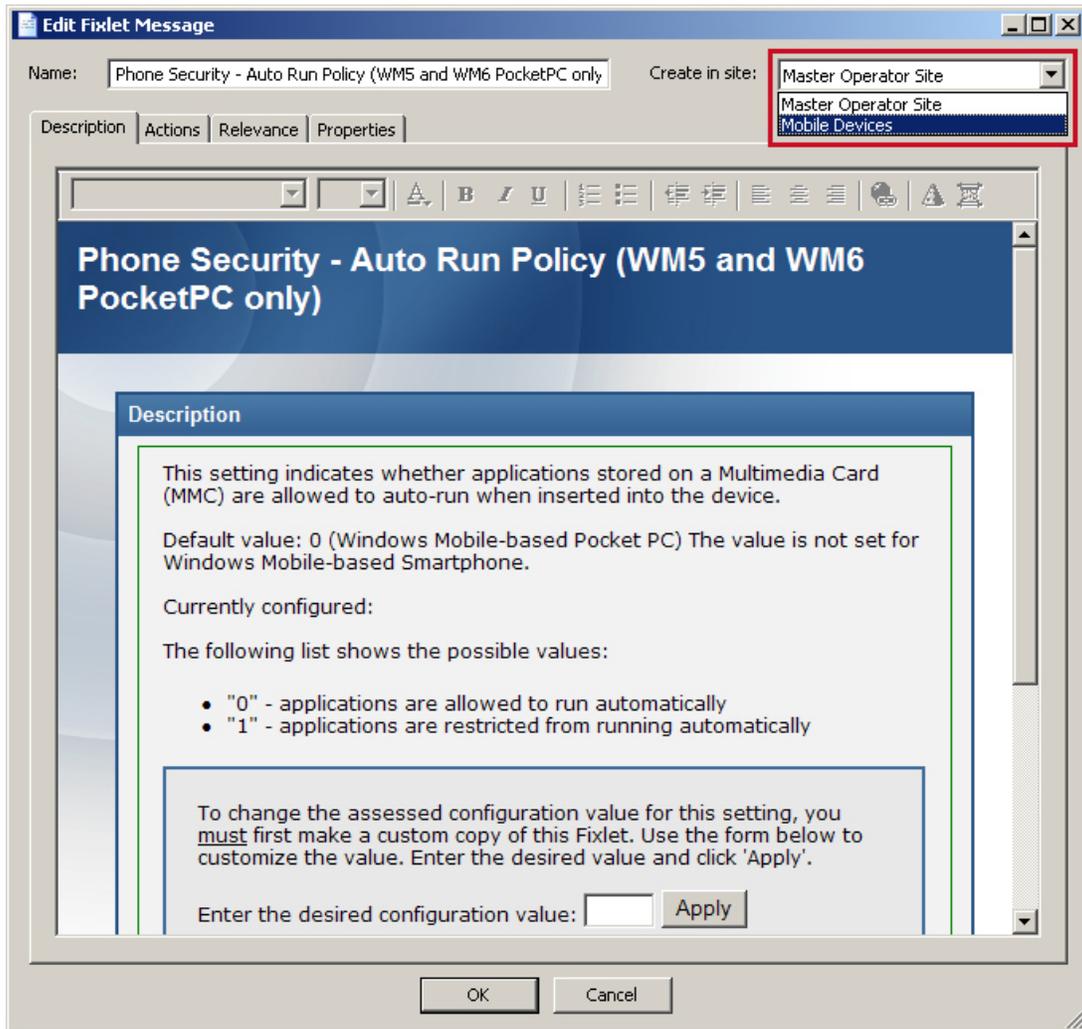
### Copying Single Items

To add content from mobile device sites published by BigFix one item at a time, follow these steps:

1. Right-click any item in the Fixlet list to bring up the context menu, and then select **Create Custom Copy**.



2. From the **Edit Fixlet Message** dialog that appears, select your custom site from the pull-down menu on the right labeled **Create in Site**.



3. Click **OK** and enter your password.
4. Repeat this process for each Fixlet message you wish to place in your custom site.

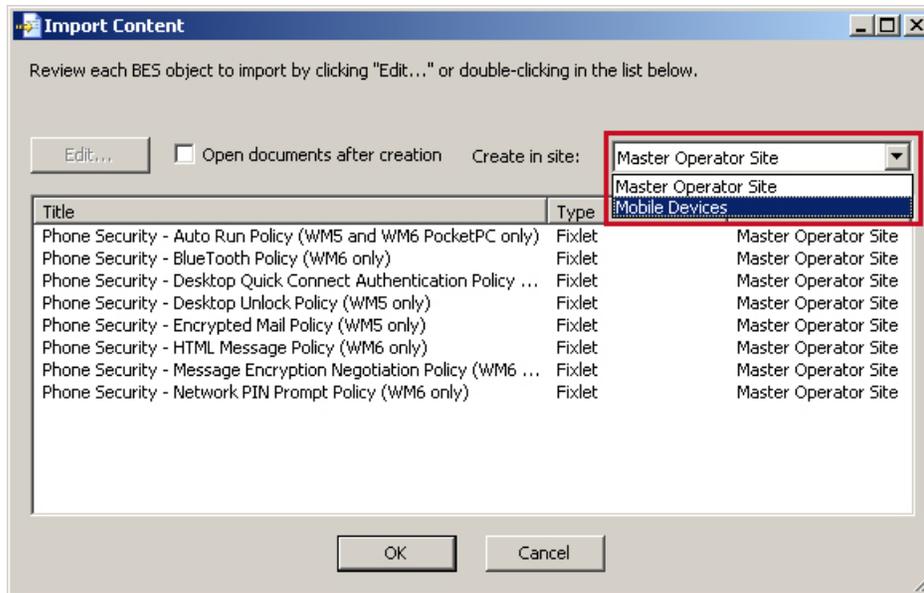
## Copying by Batch

1. Shift-click or Ctrl-click to select the Fixlet messages or Tasks you would like to move and then right-click the set. From the context menu, select **Export**.



The **Save As** dialog opens. Select a pathname for the file (and take note of it) and then save it.

2. In the Windows file system, locate the saved **.bes** file and double click to import it.
3. From the Import Content dialog that appears, select your custom site from the pull-down menu on the right labeled **Create in Site**.

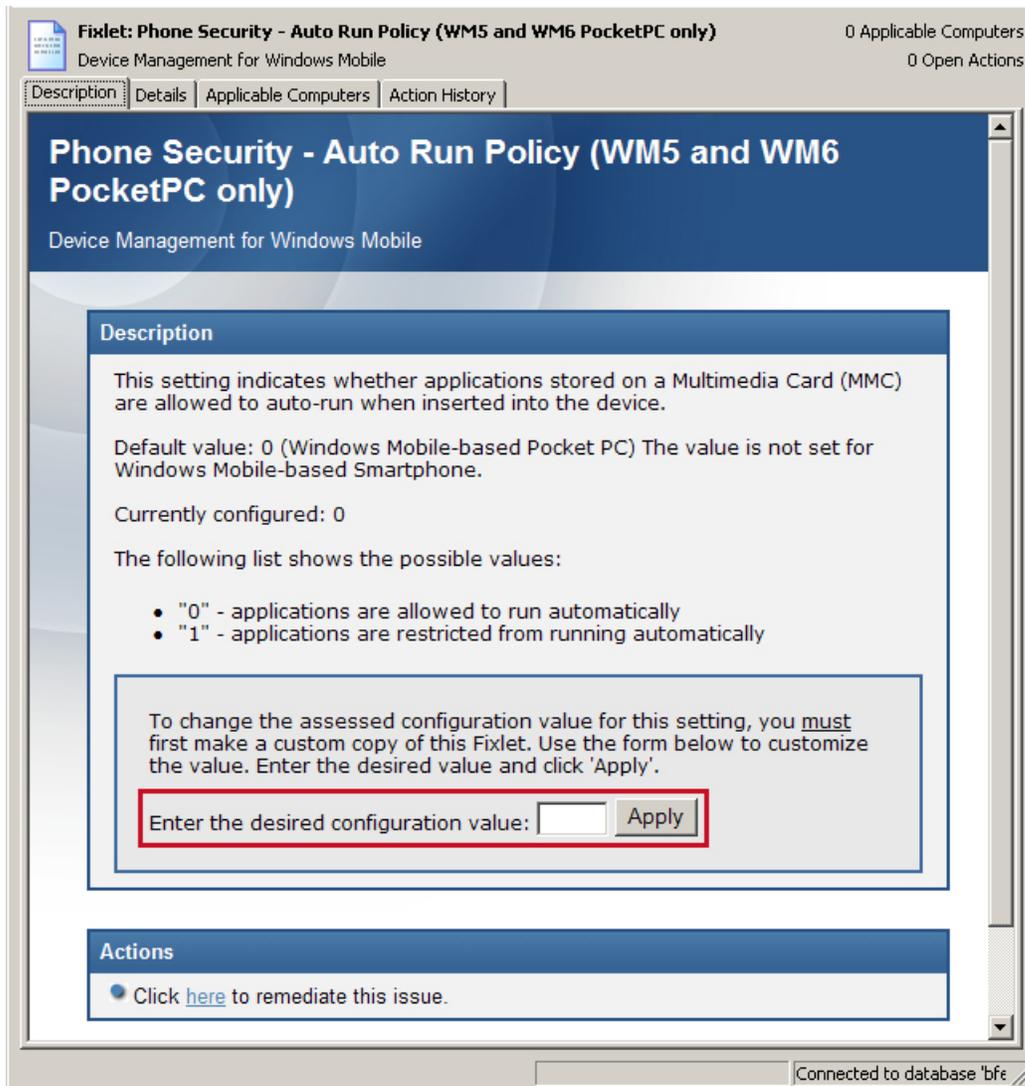


Click **OK** and enter your password to complete the process.

## Customizing Content

Now that you've created a custom site by importing the Fixlet messages you want, you can alter their settings to conform to your company's desired policies. Here's how.

1. Click the **Fixlet Messages** tab.
2. Click **All Fixlet Messages**, open the **By Site** folder and then select the custom site you just created from the navigation panel on the left.
3. Double-click through each Fixlet in turn from the list on the right. In the work area, the Fixlet will be displayed.



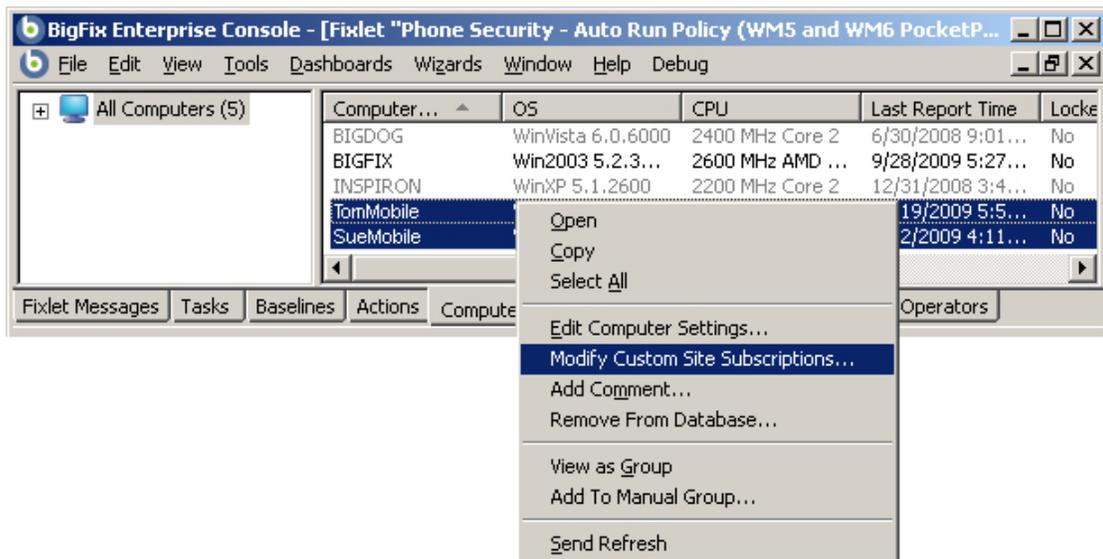
4. Click the Description tab, and for each Fixlet, enter your **desired configuration value** and then click the **Apply** button.

## Subscribing Devices to Your Custom Site

Now that you have created your custom site, you need to subscribe mobile devices to it. Remember that the proper collection of statistics depends on targeting the content to the appropriate devices. There are two ways to subscribe computers to your site, described in the following sections.

### Subscribing Specific Devices

1. Click the **Computer** tab. From the list, select the clients you want to add to the subscription list.
2. Right click on the selected clients and choose **Modify Custom Site Subscriptions** from the context menu.



3. Click the first button to **Subscribe selected computers to site**. From the pull-down menu, select the custom site you want.



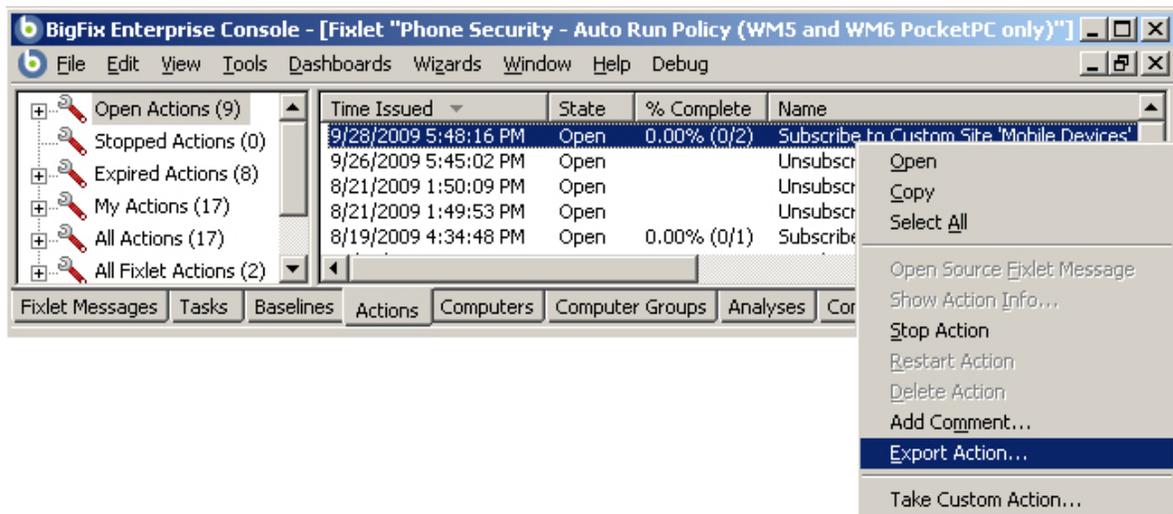
Note that this interface also allows you to *unsubscribe* computers.

4. Click **OK** and then enter your password to complete the subscription process.

## Subscribing by Properties

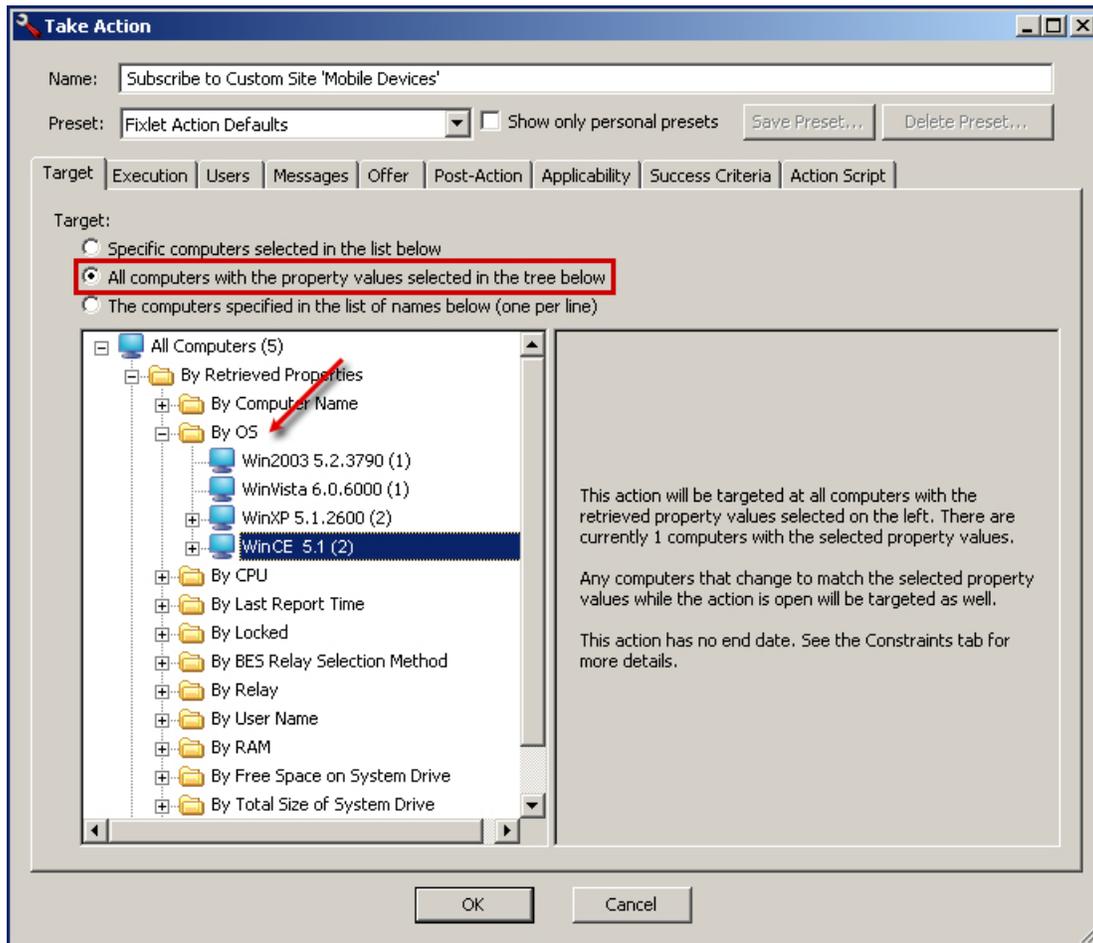
The previously described method of subscribing specific clients is simple and straightforward, but lacks flexibility. Each time you add a new device to your network, you need to manually subscribe it to the appropriate custom site. Targeting computers by their properties is a much better technique for controlling site subscriptions. This way, whenever a device is added, its OS (or other characteristic) will be examined and it will automatically be subscribed to the appropriate site. This automated technique is slightly more difficult to set up, but much more powerful. Here is how to implement it:

1. Follow the steps described previously to subscribe a single device to the desired site (since we are going to modify the targeting, it does not matter which device or computer you select). This creates an action that you can find by clicking the **Action** tab.
2. From the Action list, right-click the subscription Action you just created. From the context menu, select **Export Action**.



3. From the **Save As** dialog, choose a name and a location to save the exported Action as a **.bes** file. Take note of the pathname you selected for the file.
4. From the Windows file system, locate the exported Action file and double-click it. This opens the **Take Action** dialog in the Console.

- From the **Target** tab of this dialog, click the second button labeled **All computers with the property values selected in the tree below**.



- Open the **All Computers** tree and the **By Retrieved Properties** folder beneath it. From the list of properties, select the ones you want to use to target your computers. Typically, you will find the **By OS** folder most useful, but you may have other criteria that you prefer. Select the desired property (for instance, WinCE) to complete the targeting.

- Click **OK** to deploy this new subscription Action and then provide your password to propagate it.

Congratulations! You have now successfully installed, customized and subscribed your Windows Mobile devices to your site. For more information about creating new content and managing your site, see the *User's Guide to Windows Mobile*.

# Resources

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## Troubleshooting

### My Mobile Device won't connect to the BES Server on a WiFi network

In some environments, the phone may not correctly connect to the BigFix Enterprise Server. The issue can be easily resolved by adding an entry into the 'Hosts' section of the Windows Mobile 6 registry. Editing the registry is straightforward, but comes with the usual warnings. Follow these steps:

1. Download a Registry Editor for the mobile device.
2. Open the registry using the editor and navigate to the following location: HKLM\Comm\Tcpip\Hosts\.
3. Create a KEY under the server's hostname and create a binary value under the hostname called **ipaddr**.
4. Add the binary value for the IP Address. Note that the value is the HEX conversion of the IP address (e.g. "c0 a8 01 02" which stands for 192.168.1.2).

Alternatively, you can download a utility to set the hostname. A utility called Pocket Hosts by Zimmerman can be found in the following location:

<http://handheld.softpedia.com/progDownload/Pocket-Hosts-Download-8804.html>

You can also set the host resolution for BigFix relays once the phone registers by modifying the `_BESClient_Relay_NameOverride` setting.

After the phone registers with the BigFix server, the setting `_BESClient_Relay_NameOverride` can be set on a BigFix relay. Use the IP address of that relay to avoid having to set the host resolution for future relays.

### I can't find the installed CAB files

When you run the WM Installer Wizard, a set of CAB files is created in the installer folder. If you can't find the files there, you may want to step through the setup batch file. To do so, follow these steps:

1. Open the folder containing the WM Installation files.
2. Open the setup.bat file in a text editor such as WordPad.
3. Open a command (DOS) window.
4. Copy each line of the batch file and paste it into a DOS Window.
5. By stepping through the batch file, you may discover where the execution stopped or failed.

## I accidentally removed the CSP tool

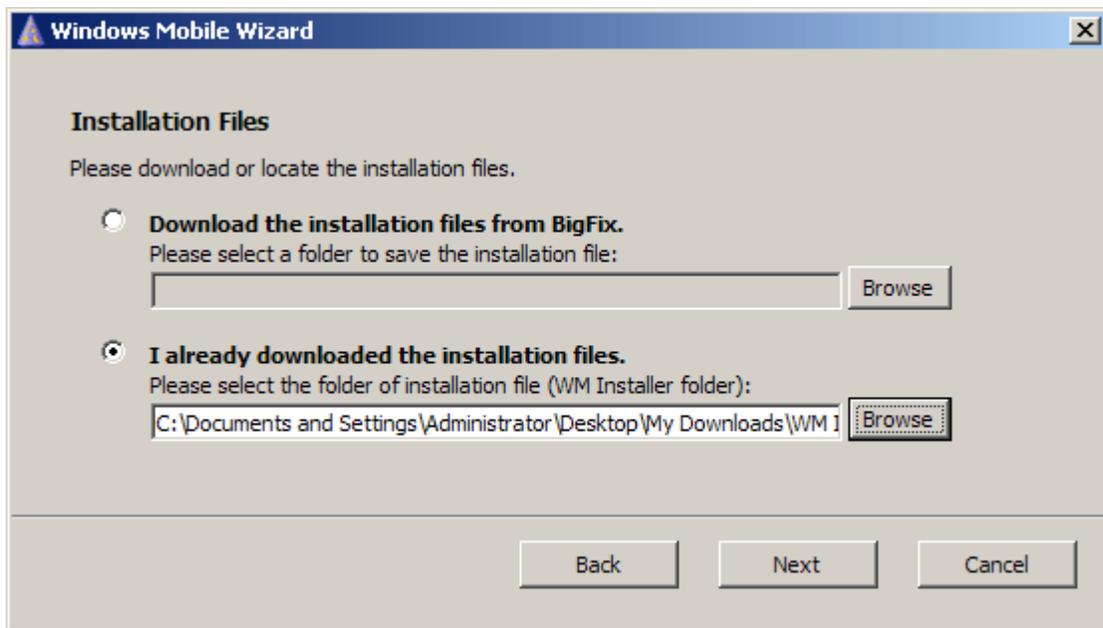
If you accidentally remove the CSP tool, you will not be able to use any of the related Fixlet messages or Tasks. You can recover the tool with a Fixlet:

1. In the Console, click the Fixlet Messages tab.
2. Find Fixlet #99, "Download BigFix Configuration Service Provider Tool".
3. Click the Action link to download the specified utility.

## I can't download the installation files from the Wizard

If, for any reason, you are unable to download the installation files through the Wizard, you may wish to obtain the WM Installer package from BigFix before proceeding. Here's how:

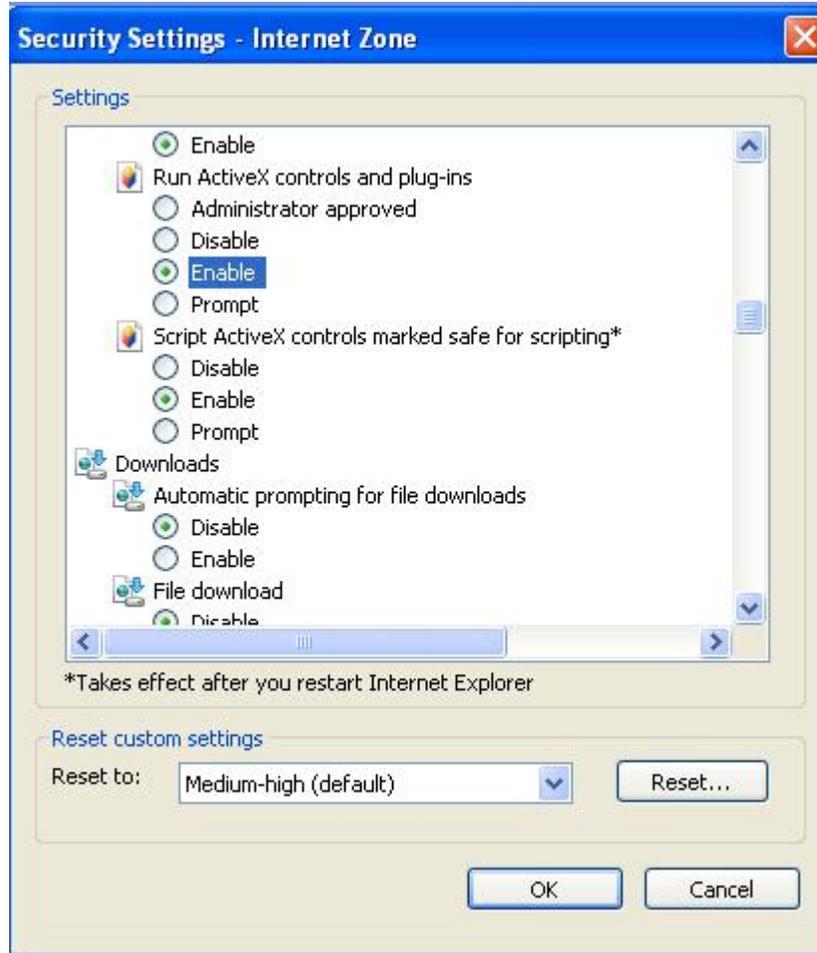
1. Download the Installer package from the website at:  
<http://software.bigfix.com/download/windowsmobile/7.2.16.3/WMInstaller.exe>.
2. In the Wizard, when you are asked to download the Install files, click the second button.



3. Click the Browse button to find and select the folder where you saved the installation files.

## I received an "Automation server can't create object" error

If you receive this error after attempting to apply an Action, you need to enable two Internet Explorer security settings on the Console computer. Specifically, you need to enable both "Run ActiveX control and plug-ins" and "Script ActiveX controls marked safe for scripting".



## I have a Proxy issue

BigFix attempts to collect proxy information from the connection manager and configure it properly. However, when there is a username and password set in the connection manager and automatic proxy detection is enabled, the client may misconfigure the proxy settings. To fix it, set the proxy information manually.

## Global Support

BigFix offers a suite of support options to help optimize your user-experience and success with this product. Here's how it works:

- First, check the BigFix website [Documentation](#) page:
- Next, search the BigFix [Knowledge Base](#) for applicable articles on your topic:
- Then check the [User Forum](#) for discussion threads and community-based support:

If you still can't find the answer you need, [contact](#) BigFix's support team for technical assistance:

- Phone/US: 866 752-6208 (United States)
- Phone/International: 661 367-2202 (International)
- Email: [enterprisesupport@bigfix.com](mailto:enterprisesupport@bigfix.com)

## Index

---

### A

Access · i  
actionsite · 9  
ActiveSync · 7  
ActiveX · 23  
afxm · 4  
Analyses · 10

---

### B

batch · 15  
Batch · 15, 21  
battery · 1, 6  
BES  
    Cab · 9  
    Client · 21  
    Console · 3, 4, 8, 19, 22  
    Data · 9  
BigFix · 13  
    Console · 19  
binaries · 9

---

### C

CAB · 3, 4, 6, 7, 9, 21  
Client Report Interval · 6  
compliance · 10  
Configuration · 1, 5, 22  
configure · 1, 23  
conserve · 6  
CSP · 1, 22  
customize · 10  
Customizing · 10, 13, 15, 16

---

### D

deploy · 20  
deployment · 3, 7, 9, 20

---

### E

efxm · 3  
endpoints · 10  
Exceptions · 10  
Export · 15, 19

---

### F

Fixlet Message · i, 1, 3, 6, 10, 13, 14, 15, 16, 17, 22

---

### G

Global · 24

---

### H

HKLM · 21  
hostname · 5, 21

---

### I

Installation · i, 1, 3, 6, 7, 8, 9, 20, 21, 22  
Installation & Setup · 3  
IP Address · 5, 21

---

### L

license · i

---

### M

masthead · 3, 4  
menu · 11, 13, 14, 15, 18, 19

---

### N

Name Override · 21

---

### O

OS · 1, 19, 20  
ownership · i

---

### P

password · 12, 14, 16, 18, 20, 23  
Phone · 1, 8, 24  
Pocket PC · 3  
policy · 10, 11, 13  
propagate · 12, 20

Properties · i, 12, 19, 20  
property · 12, 19, 20  
Proxy · 23

---

**R**

registration · 6  
registry · 21  
reinstall · 9  
Relay · 5, 21  
Relevance · i  
Requirements · 1  
reset · 6  
resynchronize · 10  
Retrieved Properties · 20  
RPM · i

---

**S**

SCM · 13  
Site  
    custom · 10, 11, 13, 14, 15, 18  
    SCM · 13, 19  
Smartphone · 1  
statistics · 10, 18  
subscription · 10, 18, 19, 20

synchronize · 7

---

**T**

tethered · 1

---

**U**

unsubscribe · 18  
Upgrade · 9

---

**V**

Vista · 7

---

**W**

WinCE · 20  
Wizard · 3, 4, 6, 21, 22

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XP · 7