



Release Notes for Cisco Aironet 802.11a/b/g Client Adapters (CB21AG and PI21AG) Install Wizard 4.5

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Introduction

This document describes system requirements, important notes, new and changed information, installation and upgrade procedures, caveats for CB21AG and PI21AG client adapter Install Wizard release 4.5, and the following software included in the Install Wizard file:

- CB21AG and PI21AG client adapter driver release 4.5
- Aironet Desktop Utility (ADU) release 4.5
- Cisco Aironet Site Survey Utility release 1.5


Note

If you use the Cisco Aironet Client Administration Utility (ACAU), use ADU version 4.5 with ACAU version 4.5 to ensure the proper operation of both utilities. The software build number for ACAU version 4.5 is 4.5.0.84.

System Requirements

You need the following items in order to install Install Wizard 4.5 and use its software components:

- One of the following Cisco Aironet client adapters:
 - CB21AG PC-Cardbus card.
 - PI21AG PCI card.
- A computer running the Windows 2000 or XP operating system.


Note

Cisco recommends a 300-MHz (or greater) processor.

- Service Pack 2 for Windows XP (Professional, Home); Service Pack 4 for Windows 2000.
- 20 MB of free hard disk space (minimum).
- 128 MB of RAM or greater (recommended).
- If your wireless network uses EAP-TLS or PEAP authentication, you need Certificate Authority (CA) and user certificates for EAP-TLS authentication or CA certificate for PEAP authentication.
- If your wireless network uses PEAP (EAP-GTC) authentication with a One-Time Password (OTP) user database, you need the following:
 - A hardware token device from OTP vendors or the Secure Computing SoftToken program (2.1 or later).
 - Your hardware or software token password.
- If your client adapter is installed on a Windows 2000 device and uses PEAP (EAP-MSCHAPV2) with machine authentication, you need the Microsoft 802.1X supplicant.
- All necessary infrastructure devices (such as access points, servers, gateways, user databases, etc.) properly configured for any authentication type you plan to enable on the client.
- The following information from your system administrator:
 - The logical name for your workstation (also referred to as *client name*).
 - The protocols necessary to bind to the client adapter, such as TCP/IP.

- The case-sensitive service set identifier (SSID) for your RF network.
- If your network setup does not include a DHCP server, you need the IP address, subnet mask, and default gateway address of your computer.
- The wired equivalent privacy (WEP) keys of the access points with which your client adapter will communicate, if your wireless network uses static WEP for security
- The username and password for your network account
- Protected access credentials (PAC) file if your wireless network uses EAP-FAST authentication with manual PAC provisioning
- If you want to use the Network Managed Test feature in the Diagnostics tab of the ADU, you need to run software release 4.2 (or later) on the Cisco Wireless LAN Controller (controller).
- If you want the client adapter to use Management Frame Protection (MFP), you need to run software release 4.1.181 or later on the controller.

Important Notes

Client MFP Incorrectly Enabled for WPA Sessions

If a client that supports MFP attempts to associate to a WLAN that is configured for both WPA and WPA2, authentication fails if WPA is negotiated for the session. This behavior is a controller issue that is tracked in CSCsm39923.



Note

Defect CSCsm39923 is resolved in controller software releases 4.2.112 and later. If your controller runs software release 4.2.112 or later, you do not need to follow these steps.

To address this issue from the client side, two registry entries have been added to software build 4.4.0.69. Both registry entries have settings that can be configured through the network control panel.

The first registry entry is called *ccx5FeatureEnable*. To configure this entry, perform the following steps:

- Step 1** Right click **Properties** on the device icon in Network Connection dialog box of the control panel.
- Step 2** Click **Configure**, and select the **Advanced** tab.
- Step 3** Click **MFP** in the Property column.
- Step 4** Choose the policy setting from the drop-down list in the Value column.
 - **Disable**—Management Frame Protection is disabled. With MFP disabled, the client does not advertise MFP support. The client cannot connect to networks that require the use of MFP.
 - **Enable**—Management Frame Protection is enabled. With MFP enabled, the client can connect to networks where use of MFP is disabled, optional, or required. Use the MFP Policy setting

Choose the MFP policy setting that is suitable to your network.

The second registry entry is called *ccxMFPPolicy*. To configure this entry, perform the following steps:

- Step 1** Right click **Properties** on the device icon in Network Connection dialog box of the control panel.

- Step 2** Click **Configure**, and select the **Advanced** tab.
- Step 3** Click **Management Frame Protection Policy** in the Property column.
- Step 4** Choose the policy setting from the drop-down list in the Value column.
 - Use MFP Setting of Network—This setting configures the registry entry ccxMFPPolicy to 0. When this setting is chosen, the client follows the MFP policy of the network. The client looks at the MFP bit advertised by the network in the SFA IE of the probe response. If that bit is set, then the client also sets the MFP bit in the SFA IE of the association request, confirms the MFP bit in the SFA IE that is returned in the association response frame, and obeys the rules of MFP.



Note The Use MFP Setting of Network value is the default policy in build 4.4.0.69.

- Always Advertise MFP Support—This setting configures the registry entry ccxMFPPolicy to 1. When this setting is chosen, the client always advertises MFP support while connecting to a CCX version 5-enabled network. The client sets the MFP bit in the SFA IE of association request. It obeys the rules of MFP only if the association response from the access point also has the MFP bit set in the SFA IE.

This policy is consistent with the CCX version 5 specification for MFP. The policy is required to pass MFP tests for certification.



Note The Always Advertise MFP Support setting is not interoperable with some controller and access point software versions that are currently in the field. Do not use this setting until the infrastructure network is upgraded to the proper version.

EAP-FAST with PEAP-GTC Authentication Fails When Using Auto-provisioning

When a profile is configured with 802.1X EAP-FAST with PEAP-GTC as the authentication method and auto-provisioning enabled, authentication fails. However, if an existing PAC is chosen, the domain username in the PAC is entered, and the correct password is entered in the password window, authentication succeeds. The failure also occurs when EAP-FAST with EAP-TLS is used. This behavior can be the result of validating the client certificate on the RADIUS server. With PEAP-GTC, a client-side certificate does not exist.

Transmit Power of Transmitted Packets Not Intended Power

After a change in channel, the transmit power of transmitted packets might be lower or higher than the intended transmit power.

PMKID Caching Not Working with CB21AG

With a 4400 controller, a wireless LAN is configured with WPA2 and with 802.1X selected as the key management method. A client sends a PMKID in the association request, but the PMKID does not match the controller PMKID cache.

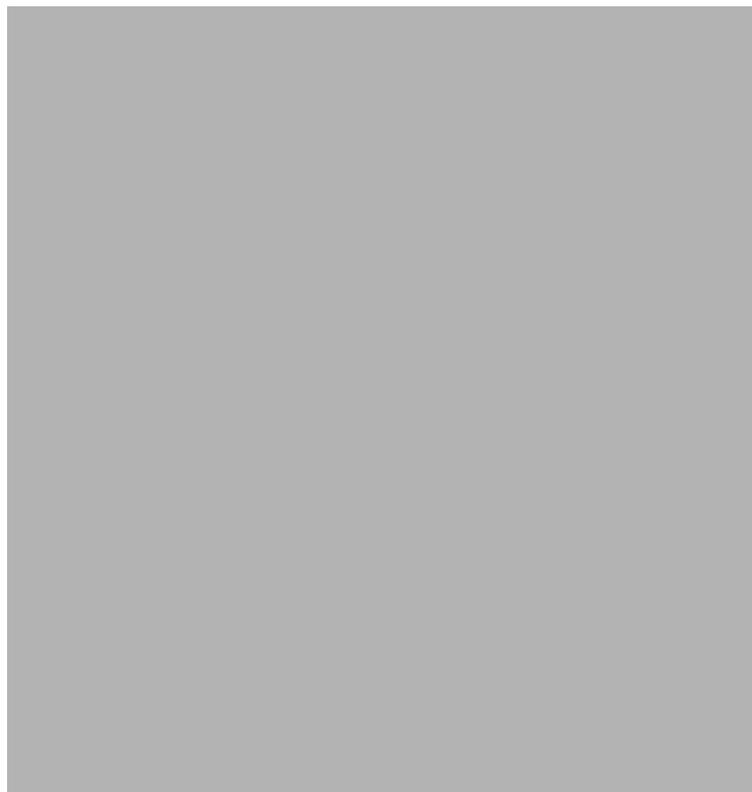
Conflict between Cisco Security Agent 5.0 and the Install Wizard for the CB21AG or PI21AG

If you have Cisco Security Agent (CSA) 5.0 installed on your computer and you attempt to run Install Wizard 4.5 (setup.exe) for the Cisco Aironet CB21AG or PI21AG wireless client, you might encounter one of two conditions that prevents the completion of software installation:

- If you click **No**, you are instructing the CSA to disallow devcon.exe of the client installation software from executing its tasks. The installation then appears to stall. The installation does not complete, and the computer must be rebooted. To avoid this behavior, disable the CSA before installing the wireless client software.
- If you click **Yes**, you are instructing the CSA to allow devcon.exe of the client installation software to execute its tasks. However, the CSA might block cmd.exe from executing. The installation then appears to stall, and the computer must be rebooted.

When you run setup.exe, the CSA opens the following dialog box (see [Figure 1](#)).

Figure 1 Cisco Security Agent Dialog Box



Mismatch between HP DC5 100 PCI Bus Controller and PCI Key Cache Register on PI21AG Chip

A mismatch exists between the HP DC5100 PCI bus controller and the PCI key cache register on the chip of the PI21AG. The key cache uses a 48-bit register in which the PI21AG sends out two write cycles on the PCI bus consecutively (DWORD and WORD). The controller on the device cannot handle two consecutive write cycles on the bus, which causes a fatal error on the PCI bus.

You should slow down the write operations to the key cache by performing a register read cycle before and after a register write cycle. To slow down the write operations, install registry key `singleWriteKC=1`. The path of the `singleWriteKC=1` registry key is the following:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BF
C1-08002bE10318}
```

You should not see any system performance degradation because the key cache is only changed every few minutes. An additional read cycle before the second write cycle only lasts a few micro seconds in the PCI space.

Installing the CB21AG Intermediate Driver Manually

In some instances, the installation of the CB21AG software might not work as expected because the intermediate driver might not have installed correctly. In this situation, the installer might not detect this condition, and the rest of the software will not function correctly.

The CB21AG intermediate driver must be installed manually. To install the intermediate driver manually, follow these steps:

-
- Step 1** Insert the client adapter.
 - Step 2** Click **Network Connections** in the Start > Settings menu in Windows XP, or right-click **My Network Places** in Windows 2000. Find the CB21AG instance.
 - Step 3** Right-click the **Cisco CB21AG** instance, and left click **Properties**.
 - Step 4** Choose the **Install** option and then add a new service.
 - Step 5** Click **Have disk**. Go to the `\windows\system32` directory and choose `wsimd.inf`.
 - Step 6** Select **Wireless Intermediate Driver** and click **OK**. The wireless IMD is bound to the adapter.
 - Step 7** Reboot system.
-

Incompatibility between PACs Created by ACS 3.x.xx and ACS Version 4.0.xx

PACs that are created by ACS 3.x.xx are not compatible with ACS 4.0.xx. Client stations must import new PACs. If you select auto-provisioning, new PACs are automatically generated and used. However, if you select manual provisioning, you must manually export new PACs to the client stations.

If a user wants to authenticate to ACS 4.0.xx and 3.x.xx at different times, both PACs must remain on the client station. The ADU is capable of automatically selecting the appropriate PAC.

However, if you experience authentication failures after upgrading the software, delete all the PACs provisioned from the 3.x.xx server.

Conflict with Third-Party Supplicants

When using CB21AG and PI21AG release 4.5, you might encounter a conflict with third-party supplicants (such as the Juniper Odyssey) that causes the Cisco client adapter to lose connection. If you encounter such a conflict, disable third-party supplicants.

Customized Installation Images (Notice to IT Professionals)

**Caution**

Use caution when bundling the client adapter software into a customized installation image. If the registry settings are modified, the software may not install and uninstall properly.

Client Adapter Software Compatibility

**Caution**

Cisco Aironet CB21AG and PI21AG client adapter software is incompatible with other Cisco Aironet client adapter software. The Aironet Desktop Utility (ADU) must be used with CB21AG and PI21AG cards, and the Aironet Client Utility (ACU) must be used with all other Cisco Aironet client adapters.

Installing the Novell Client

If you are going to use the Novell Client, be sure to install it on your computer prior to installing the client adapter software.

Enabling CCKM Fast Secure Roaming

If you want to enable CCKM on the client adapter, you must choose the WPA/WPA2/CCKM security option, regardless of whether you want the adapter to use WPA or WPA2. The configuration of the access point to which your client adapter associates determines whether CCKM is used with 802.1x, WPA, or WPA2.

Access Point Setting for LEAP or EAP-FAST Authentication

Access points must be set for both Network-EAP and open authentication in order to associate to CB21AG and PI21AG client adapters running LEAP with WPA/WPA2/CCKM or EAP-FAST.

EAP-FAST Fails When Access Point Configured as Local RADIUS Server

The client adapter fails to authenticate using EAP-FAST when the access point is running Cisco IOS Release 12.3(2)JA2 and is configured as a local RADIUS server. The following message appears: “Unable to EAP-FAST authenticate the wireless user in the specified amount of time. Network infrastructure might be down.”

GINA Error on Bootup

If your computer ever experiences a GINA error on bootup, boot to the safe mode command prompt. Then copy the msgina.dll file in the WinNT\System32 directory (Windows 2000) or Windows\System32 directory (Windows XP) to a file named cscogina.dll. The **copy** command enables you to copy a source file (msgina.dll) to a destination file (cscogina.dll) within the same directory.

Reboot Required When Uninstalling ACU and ADU



Caution

When you uninstall ACU and ADU, be sure to reboot your computer when prompted. Otherwise, the system may be unable to boot, displaying the message “The Logon User Interface DLL cswGina.dll failed to load. Contact your system administrator to replace the DLL or restore the original DLL.”

Uninstalling Software Components

All profiles and stored PAC files are deleted if you use the Uninstall the previous installation option on the Previous Installation Detected Install Wizard window to uninstall the client adapter software. Cisco recommends that you use the Profile Manager’s export feature to save your profiles before uninstalling the software.

Profiles for PC-Cardbus Cards

The profiles for PC-Cardbus cards are tied to the slot in which the card is inserted. Therefore, you must always insert your PC-Cardbus card into the same slot, create profiles for both slots, or export the profiles for one slot and import them for the other slot.

Auto Profile Selection Enables Scan of Wireless Modes in Auto-Selected Profiles

When you enable auto profile selection, the client adapter ignores the selected profile’s wireless mode setting and scans the wireless modes specified by all the profiles in the auto profile selection list for an available network. With this method, the client does not need to disassociate or to change the current profile while looking for networks in other profiles.

ASTU Exit Option

The Exit option on the Aironet System Tray Utility (ASTU) pop-up menu closes both ASTU and ADU.

Windows Wireless Network Connection Icon Shows Unavailable Connection (Windows XP Only)

If your computer is running Windows XP and you configured your client adapter using ADU, the Windows Wireless Network Connection icon in the Windows system tray may be marked with a red X and show an unavailable connection even though a wireless connection exists. This condition is caused by a conflict between ADU and Windows XP wireless network settings. Simply ignore the Windows icon and use the ASTU icon to verify the status of your client adapter's wireless connection.

Supporting Documentation

The *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* (OL-4211-06) pertains specifically to CB21AG and PI21AG client adapters. If you are using a Cisco Aironet 340, 350, or CB20A client adapter, refer to the installation and configuration guide for that client adapter and your computer's operating system.

New and Changed Information

Management Frame Protection

CB21AG and PI21AG release 4.5 supports Management Frame Protection (MFP) when available and enabled on the wireless infrastructure. The CB21AG and PI21AG have MFP automatically enabled.

Installing or Upgrading Client Adapter Software

This section describes how to initially install or upgrade to CB21AG and PI21AG Install Wizard 4.5 on a computer running Windows 2000 or XP. If the client adapter software is not installed on your computer, follow the instructions in the [“Installing or Upgrading Client Adapter Software”](#) section below. If you are upgrading your client adapter software to release 4.5, follow the instructions in the [“Upgrading the Client Adapter Software”](#) section on page 21.

Installing the Client Adapter Software

This section describes how to install Cisco Aironet CB21AG or PI21AG client adapter driver and utilities from a single executable file named *WinClient-802.11a-b-g-Ins-Wizard-vx.exe*, where *x* represents the release number. Follow these steps to install these client adapter software components on a computer running Windows 2000 or XP.



Caution

Cisco Aironet CB21AG and PI21AG client adapter software is incompatible with other Cisco Aironet client adapter software. The Aironet Desktop Utility (ADU) must be used with CB21AG and PI21AG cards, and the Aironet Client Utility (ACU) must be used with all other Cisco Aironet client adapters.

**Caution**

Do not eject your client adapter at any time during the installation process, including during the reboot.

**Note**

This procedure is meant to be used the first time the Cisco Aironet CB21AG or PI21AG client adapter software is installed on your computer. If this software is already installed on your computer, follow the instructions in the “Routine Procedures” chapter of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* to upgrade the client adapter software.

**Note**

Only one CB21AG or PI21AG client adapter can be installed and used at a time. The software does not support the use of multiple CB21AG or PI21AG cards.

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- Step 1** Ensure that the client adapter is inserted into your computer.
- Step 2** Ensure that you have a Cisco Connection Online (CCO) username and password.
- Step 3** If you do not have a CCO username and password, go to Cisco’s main page (<http://www.cisco.com>) and click **Register** (top). Then, follow the instructions to create a CCO username and password.
- Step 4** Browse to the following location:
<http://www.cisco.com/public/sw-center/>
- Step 5** Click **Wireless Software**.
- Step 6** Click **Wireless LAN Access**.
- Step 7** Click **Cisco Wireless LAN Client Adapters**.
- Step 8** Click **Cisco Aironet Wireless LAN Client Adapters**.
- Step 9** Perform one of the following steps:
- If you are using a PC-Cardbus card, click **Cisco Aironet 802.11a/b/g CardBus Wireless LAN Client Adapter (CB21AG)**.
 - If you are using a PCI card, click **Cisco Aironet 802.11a/b/g PCI Wireless LAN Client Adapter (PI21AG)**.
- Step 10** When prompted, enter your CCO username and password, and click **OK**.
- Step 11** Click **Aironet Client Installation Wizard (Firmware, Driver, Utility)**.
- Step 12** Click **Windows 2000 or Windows XP**.
- Step 13** Click the link with the latest release number.
- Step 14** Click the Install Wizard file (**WinClient-802.11a-b-g-Ins-Wizard-vxx.exe**, where *xx* is the version number).
- Step 15** If prompted, enter your CCO username and password, and click **OK**.
- Step 16** Complete the encryption authorization form, read and accept the terms and conditions of the Software License Agreement, select the file again to download it, and save the file on your computer’s Desktop.
- Step 17** Use Windows Explorer to find the installer.
- Step 18** Double-click the installer. The “Starting InstallShield Wizard” message appears followed by the Preparing Setup window (see [Figure 2](#)) and the Cisco Aironet Installation Program window (see [Figure 3](#)).

Figure 2 *Preparing Setup Window*



Figure 3 *Cisco Aironet Installation Program Window*



Step 19 Click **Next**. The Setup Type window appears (see [Figure 4](#)).

Figure 4 **Setup Type Window**



Step 20 Choose one of the following options and click **Next**:



Note To ensure compatibility among software components, Cisco recommends that you install the client utilities and driver.

- **Install Client Utilities and Driver**—Installs the client adapter driver and client utilities.
- **Install Driver Only**—Installs only the client adapter driver. If you choose this option, click **Next** and go to [Step 32](#).
- **Make Driver Installation Diskette(s)**—Enables you to create driver installation diskettes that can be used to install drivers using the Windows Device Manager.



Note If you choose one of the first two options and a client adapter is not inserted into your computer, the following message appears: “The device may not be present or could have been ejected/unplugged from the system. Insert or reinsert it now.” Insert the client adapter and click **OK**. If you proceed without the client adapter inserted, the installation continues, but the driver installation is incomplete. You must manually install the driver later using the Update Device Driver Wizard. See Chapter 9 of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* for instructions.

- Step 21** When the Install Cisco Aironet Site Survey Utility window appears (see [Figure 5](#)), check the **Install Cisco Aironet Site Survey Utility** check box if you want to install a utility that helps you determine the best placement of infrastructure devices within your wireless network. Click **Next**.

Figure 5 *Install Cisco Aironet Site Survey Utility Window*



Note See Appendix F of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* for instructions on using the utility.

- Step 22** If a message appears indicating that you are required to restart your computer at the end of the installation process, click **Yes**.



Note If you click **No**, you are asked to confirm your decision. If you proceed, the installation process terminates.

The Choose Destination Location window appears (see [Figure 6](#)).

Figure 6 *Choose Destination Location Window*



Step 23 Perform one of the following:

- If you chose the first option in [Step 20](#), click **Next** to install the client utility files in the C:\Program Files\Cisco Aironet directory.



Note If you want to install the client utilities in a different directory, click **Browse**, choose a different directory, click **OK**, and click **Next**.

- If you chose the Make Driver Installation Diskette(s) option in [Step 20](#), insert a disk into your computer and click **Next** to copy the driver to the diskette. Go to [Step 32](#).



Note If you want to copy the driver to a different drive or directory, click **Browse**, choose a new location, click **OK**, and click **Next**.

Step 24 The Select Program Folder window appears (see [Figure 7](#)).

Figure 7 **Select Program Folder Window**



Step 25 Click **Next** to add program icons to the Cisco Aironet program folder.



Note If you want to specify a different program folder, choose a folder from the Existing Folders list or type a new folder name in the Program Folder field and click **Next**.

Step 26 If your computer is running Windows 2000, go to [Step 32](#). If your computer is running Windows XP, the window titled IMPORTANT: Please Read! appears (see [Figure 8](#)).

Figure 8 *IMPORTANT: Please Read! Window*



Step 27 Read the information displayed and click **Next**. The Choose Configuration Tool window appears (see [Figure 9](#)).

Figure 9 *Choose Configuration Tool Window*

Step 28 Choose one of the following options:

- **Cisco Aironet Desktop Utility (ADU)**—Enables you to configure your client adapter using ADU.
- **Third-Party Tool**—Enables you to configure your client adapter using a third-party tool such as the Microsoft Wireless Configuration Manager in Windows XP.

[Table 1](#) compares Windows XP and ADU client adapter features.

Table 1 *Comparison of Windows XP and ADU Client Adapter Features*

Feature	Windows XP	ADU
Configuration parameters	Limited	Extensive
Capabilities		
Create profiles	Yes	Yes
Enable/disable radio	No	Yes

Table 1 Comparison of Windows XP and ADU Client Adapter Features (continued)

Feature	Windows XP	ADU
Security		
Static WEP	Yes	Yes
LEAP or EAP-FAST authentication with dynamic WEP	No	Yes
EAP-TLS or PEAP authentication	Yes	Yes
Status and statistics		
Status window	Limited	Extensive
Statistics window (transmit & receive)	No	Yes



Note If you choose Cisco Aironet Desktop Utility (ADU) above, the Microsoft Wireless Configuration Manager is disabled. If you ever manually enable it, you are prompted to disable it whenever ADU is activated.

Step 29 Click **Next**.

Step 30 If you chose Cisco Aironet Desktop Utility (ADU) in [Step 28](#), go to [Step 32](#). If you chose Third-Party Tool, the Enable Tray Icon window appears (see [Figure 10](#)).

Figure 10 Enable Tray Icon Window

- Step 31** Check the **Enable Cisco Aironet System Tray Utility (ASTU)** check box if you want to be able to use ASTU even though you have chosen to configure your client adapter through a third-party tool instead of ADU. Click **Next**.
- Step 32** When prompted to insert your client adapter, click **OK**. The Setup Status window appears (see [Figure 11](#)).

Figure 11 *Setup Status Window*



The installation process begins, and you are notified as each software component is installed.

- Step 33** When a message appears indicating that your computer needs to be rebooted, click **OK** and allow your computer to restart.
- Step 34** If the Windows Found New Hardware Wizard appears after your computer reboots, click **Next**, allow the wizard to install the software for the client adapter, and click **Finish**.
- Step 35** If your network setup does not include a DHCP server and you plan to use TCP/IP, follow these steps for your operating system.
- **Windows 2000**
 - a. Double-click **My Computer, Control Panel, and Network and Dial-up Connections**.
 - b. Right-click **Local Area Connection x** (where *x* represents the number of the connection).
 - c. Click **Properties**.
 - d. In the Components Checked Are Used by This Connection field, click **Internet Protocol (TCP/IP)** and **Properties**.

- e. Choose **Use the following IP address** and enter the IP address, subnet mask, and default gateway address of your computer (which can be obtained from your system administrator).
- f. Click **OK** to close each open window.
- **Windows XP**
 - a. Double-click **My Computer, Control Panel, and Network Connections**.
 - b. Right-click **Wireless Network Connection x** (where *x* represents the number of the connection).
 - c. Click **Properties**.
 - d. In the This Connection Uses the Following Items field, click **Internet Protocol (TCP/IP) and Properties**.
 - e. Choose **Use the following IP address** and enter the IP address, subnet mask, and default gateway address of your computer (which can be obtained from your system administrator).
 - f. Click **OK** to close each open window.

Step 36 If you are prompted to restart your computer, click **Yes**.

Step 37 Now that your client adapter is properly installed, it is ready to be configured.

- If you are planning to configure your client adapter through ADU, go to Chapter 4 of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* for more information.
- If you are planning to configure your client adapter through the Windows XP Wireless Configuration Manager, go to Appendix E of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* for more information.
- If you are planning to configure your client adapter through another third-party tool, refer to the documentation for that application.



Note

If you want to be able to use ADU's Group Policy Delay parameter, follow the instructions in the next section to download and install a necessary hot fix before configuring your client adapter.



Note

If you experienced problems during or after installation, refer to Chapter 10 of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* for more information for troubleshooting information.

Upgrading the Client Adapter Software

Follow these steps to upgrade your CB21AG or PI21AG client adapter software to release 4.5 using the settings that were selected during the last installation.



Note

If you want to upgrade your client adapter software using new installation settings, you must uninstall the previous installation [see the instructions in Chapter 9 of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide*] and then follow the instructions in the [“Installing the Client Adapter Software” section on page 9](#) to install the new software.

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- Step 1** Ensure that the client adapter is inserted into your computer.
- Step 2** Ensure that you have a Cisco Connection Online (CCO) username and password.
- Step 3** If you do not have a CCO username and password, go to Cisco's main page (<http://www.cisco.com>) and click **Register** (top). Then, follow the instructions to create a CCO username and password.
- Step 4** Browse to the following location:
<http://www.cisco.com/public/sw-center/>
- Step 5** Click **Wireless Software**.
- Step 6** Click **Wireless LAN Access**.
- Step 7** Click **Cisco Wireless LAN Client Adapters**.
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- Step 9** Perform one of the following steps:
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- Step 12** Click **Windows 2000 or Windows XP**.
- Step 13** Click the link with the greatest release number.
- Step 14** Click the Install Wizard file (**WinClient-802.11a-b-g-Ins-Wizard-vxx.exe**, where *xx* is the version number).
- Step 15** If prompted, enter your CCO username and password, and click **OK**.
- Step 16** Complete the encryption authorization form, read and accept the terms and conditions of the Software License Agreement, select the file again to download it, and save the file on your computer's Desktop.
- Step 17** Use Windows Explorer to find the installer.
- Step 18** Double-click the installer. The "Starting InstallShield Wizard" message appears followed by the Preparing Setup window (see [Figure 12](#)) and the Cisco Aironet Installation Program window (see [Figure 13](#)).

Figure 12 *Preparing Setup Window*



Figure 13 *Previous Installation Detected Window*



Step 19 Choose **Update the previous installation** and click **Next**.

Step 20 When a message appears indicating that you are required to restart your computer at the end of the installation process, click **Yes**.



Note If you click **No**, you are asked to confirm your decision. If you proceed, the installation process terminates.

The Setup Status window appears (see [Figure 14](#)).

Figure 14 **Setup Status Window**

The upgrade process begins, and you are notified as each software component is installed.

- Step 21** When a message appears indicating that your computer needs to be rebooted, click **OK** and allow your computer to restart. The client adapter's software has been upgraded.

Installing a Microsoft Hot Fix for Group Policy Delay

If you want to use the Group Policy Delay parameter on the Profile Management (Security) window in ADU, you must install a Microsoft hot fix on computers running Windows 2000. The hot fix is incorporated into Windows XP Service Pack 2 and later.

The Group Policy Delay parameter enables you to specify how much time elapses before the Windows logon process starts Group Policy, a Windows feature used by administrators to specify configuration options for groups of users. The objective is to delay the start of Group Policy until wireless network authentication occurs. Follow the steps below to obtain and install the hot fix.



Note

You must be a registered Cisco customer and log into Cisco.com in order to download the hot fix. If you are unable to access the hot fix from Cisco.com, contact Microsoft Support to obtain it. The Windows 2000 support page provides the contact information:

<http://support.microsoft.com/default.aspx?scid=fh;EN-US;win2000>

-
- Step 1** Use your computer's web browser to access the following URL:
http://www.cisco.com/cgi-bin/tablebuild.pl/aironet_hotfix
- Step 2** If prompted, enter your Cisco Connection Online (CCO) username and password, and click **OK**.
-  **Note** To create a CCO username and password, visit <http://www.cisco.com>.
-
- Step 3** Click the hot fix file (userenv.zip).
- Step 4** Complete the encryption authorization form and click **Submit**.
- Step 5** Click the file again to download it.
- Step 6** Save the file to your computer's hard drive.
- Step 7** Find the file using Windows Explorer, double-click it, and extract its files to a folder.
- Step 8** Reboot your computer and press **F8** while your computer is booting.
- Step 9** When the boot menu appears, select **Safe Mode with Command Prompt**.
-  **Note** You must complete this procedure in safe mode; otherwise, system file protection (SFP) silently restores the original version of the file you are replacing.
-
- Step 10** Copy the hot fix file (userenv.dll) to %systemroot%\System32 and overwrite the existing version of this file.
- Step 11** Delete the copy of userenv.dll in %systemroot%\System32\DllCache.
- Step 12** Restart your computer.
-

Finding Version Numbers

Follow the instructions in this section to find the version numbers of your client adapter's software components.

Finding the Driver Version

To find the driver version that is currently installed for your client adapter, open ADU, click the **Diagnostics** tab, and click **Adapter Information**. The Driver Version field on the Adapter Information window shows the current driver version.

Finding the ADU Version and Other Software Components

To find the version of ADU and other software components installed for your client adapter, open ADU and choose the **About Aironet Desktop Utility** option from the Help drop-down menu. The About window shows the current version of the following software components: ADU, ACAU, the authentication supplicant, the protocol driver, and the Windows NDIS miniport driver.

Caveats

This section describes the open and resolved caveats for the software components in this release.

Open Caveats

The following caveat is open in release 4.5:

- CSCtc88359—PC crashes when you install the PCI21 driver.

Workaround: None.

Resolved Caveats

The following caveats are resolved in release 4.5:

- CSCta03496—PI21AG card and ADU 4.4 lock up Intel Core 2 Duo devices when booting (installing).
- CSCtc88403—cscogina.txt file already exists in C:\ directory when install CB21 adapter in default.

Getting Bug Information on Cisco.com

If you are a Cisco registered user, you can use the Cisco TAC Software Bug Toolkit, which consists of three tools (Bug Navigator, Bug Watcher, and Search by Bug ID Number) that help you to identify existing bugs (or caveats) in Cisco software products.

Access the TAC Software Bug Toolkit at the following URL:

http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl

Troubleshooting

For the most up-to-date, detailed troubleshooting information, refer to the Cisco TAC website at

<http://www.cisco.com/en/US/support/index.html>

Click **Product Support** > **Wireless**. Then choose your product and **Troubleshooting** to find information on the problem you are experiencing.

Related Documentation

For more information about ACAU and the Cisco Aironet CB21AG and PI21AG client adapters, refer to the following documents:

- *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Administration Utility Administrator Guide (OL-7086-04)*—Provides instructions for installing the ACAU and using it to set software installation options and create configuration profiles for CB21AG and PI21AG client adapters.
http://www.cisco.com/en/US/products/hw/wireless/ps4555/prod_maintenance_guides_list.html
- *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide (OL-4211-06)*—Provides instructions for installing, configuring, and troubleshooting CB21AG and PI21AG client adapters on computers running the Microsoft Windows 2000 or XP operating system.
http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guides_list.html
- *Release Notes for Cisco Aironet 802.11a/b/g (CB21AG and PI21AG) Client Administration Utility (ACAU) 4.5 (OL-19065-01)*—Describes new features and open and resolved caveats in ACAU 4.5.
http://www.cisco.com/en/US/products/hw/wireless/ps4555/prod_release_notes_list.html

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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