Release Notes for Cisco Aironet 802.11a/b/g Client Adapters (CB21AG and PI21AG) Install Wizard 2.5

Contents

This document contains the following sections:

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Introduction

This document describes system requirements, important notes, new and changed information, installation and upgrade procedures, and caveats for CB21AG and PI21AG client adapter Install Wizard release 2.5 and the following software included in the Install Wizard file:

- CB21AG and PI21AG client adapter driver release 2.5
- Aironet Desktop Utility (ADU) release 2.5

System Requirements

You need the following items in order to install Install Wizard 2.5 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
- 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, 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:
    - A hardware token device from OTP vendors or the Secure Computing SofToken program (version 2.1 or later)
    - Your hardware or software token password
- The Microsoft 802.1X supplicant, if your client adapter is installed on a Windows 2000 device and uses PEAP (EAP-MSCHAPV2) with machine authentication
- All necessary infrastructure devices (such as access points, servers, gateways, user databases, etc.) must be 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, 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

Important Notes

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 will be 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) over 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 rendered 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. Using this method, the client does not need to disassociate nor 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's wireless network settings. Simply ignore the Windows icon and use the ASTU icon to check 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-4211-04) 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

Locked Profiles

A **Locked Profile** check box has been added to the Profile Management (Security) window in ADU. The check box is checked if your system administrator used an administrative tool to lock this profile. Locked profiles cannot be modified (with the exception of password fields), written over, or removed.

Secure Session Resume

An **Always Resume the Secure Session** check box has been added to the LEAP Settings, EAP-FAST Settings, and Define PEAP (EAP-GTC) Configuration windows.

- Checking this check box causes the LEAP, EAP-FAST, or PEAP (EAP-GTC) supplicant to always attempt to resume the previous session without prompting the user to re-enter his or her credentials whenever the client adapter becomes disassociated. The session resumes after the client temporarily loses connection to the access point, such as by roaming in and out of range [LEAP, EAP-FAST, and PEAP (EAP-GTC)], or wakes up from suspend or hibernate mode (LEAP and EAP-FAST). This is the default setting.

- Unchecking this check box causes the user to be prompted to re-enter his or her LEAP, EAP-FAST, or PEAP (EAP-GTC) username and password whenever the client adapter temporarily loses association by roaming out of range [LEAP, EAP-FAST, and PEAP (EAP-GTC)] or wakes up from suspend or hibernate mode (LEAP and EAP-FAST).

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> **Note** This check box is available for LEAP and EAP-FAST only if you selected the Automatically Prompt for User Name and Password or Manually Prompt for User Name and Password option. It is available for PEAP (EAP-GTC) only if you selected the Token option.

Enhanced Site Survey Utility

The site survey utility, which is useful in determining the best placement of infrastructure devices within a wireless network, has been modified to include the following enhancements:

- Fit Columns button—This button enables you to resize the columns on the AP scan list so that you can view the text in each column without it being truncated.

- Time of Day field—This field in the AP scan list shows the date and time when the signal strength of each access point was at its maximum.

- Other Information field—This field in the AP scan list contains some new values, such as WMM, WPA, and WPA2.

- Enable Expert Mode for AP Detailed Information parameter—This check box on the Options window causes the AP Detailed Information window to display debugging information, including a hexadecimal debug-style dump of raw access point scan data, under the "Expert Mode (Debug Dump" heading.

- Accumulate button—This button changes the behavior of the AP scan list. Instead of displaying only the current AP scan list, the list includes all of the access points (based on MAC address) that have appeared in the scan list since the Accumulate button was last clicked. After a scan line is added to the list, it is never removed nor updated with new scan information unless the signal strength (RSSI) of the latest scan is greater than or equal to any seen previously from that access point.

- Proximity beeper—This beeper can be used to identify areas where wireless coverage is good or weak based on the client adapter's proximity to access points within a particular area. The beeper can be set to sound as the client adapter approaches or moves farther away from an access point.

- Thresholds—You can now perform the following threshold-related tasks:

  - Configure threshold values that trigger audible alerts, entries in the threshold log file, or both

  - Enable audible threshold alerts and the logging of text messages to the threshold log file when a threshold condition occurs

  - Enter a comment in the threshold log file

  - View or delete the threshold log file

- AP scanning—You can now perform the following tasks related to AP scanning:

  - Configure the site survey utility to automatically copy the contents of the AP scan list to a log file

  - Enable AP scan logging

  - View or delete the AP scan log

  - Save or open the AP scan list

- Status bar indicators—Four indicators on the site survey utility's status bar indicate when certain features are enabled:

  - PRX—The proximity beeper is enabled.

  - ALR—Threshold alerts are enabled.

  - LOG—Threshold logging is enabled.

  - APS—Automatic AP scan list logging is enabled.

The site survey utility is a stand-alone application, separate from ADU, that runs from an executable file. If you check the Install Cisco Aironet Site Survey Utility check box during installation of Install Wizard 2.5, the site survey executable file is installed in the C:\Program Files\Cisco Aironet directory (unless you specify a different directory).

Note The site survey utility can be used only with CB21AG and PI21AG client adapters.

Note Refer to Appendix F of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* (OL-4211-04) for more information on the site survey utility.

Profile Migration Tool

A profile migration tool is now available for the CB21AG and PI21AG client adapters. This tool is designed to migrate Cisco Aironet 350 series and CB20A wireless LAN client adapter profiles to profiles that can be used with Cisco Aironet CB21AG and PI21AG client adapters. The tool is meant to migrate profiles with minimal modification, but its behavior can be altered by command line options. The legacy 350 and CB20A profiles are not deleted or modified in any way.

Cisco expects the profile migration tool to be executed once, most likely immediately after installing or updating the CB21AG/PI21AG client adapter software. Upon completion, the profile migration tool may be removed from the user's system.

When the CB21AG/PI21AG client adapter software is installed, the Install Wizard also automatically installs the profile migration tool. It is saved in the same directory as ADU.

Note Profile migration tool 1.0 can be used only with Install Wizard 2.5.

Note Refer to Appendix G of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* (OL-4211-04) for more information on the profile migration tool.

Other Changes

These additional changes are available in Install Wizard 2.5 and its software components:

- Certificate-based PEAP (EAP-MSCHAP V2) authentication is now available for the CB21AG and PI21AG client adapters.

- An **Always Do User Authentication** check box has been added to the Define Certificate window for EAP-TLS authentication. Checking this check box causes the client to switch from using machine authentication to using user authentication after the user logs on using his or her username and password. This is the default setting. Unchecking this check box causes the client to continue to use machine authentication after the user's computer logs into the domain.

- EAP-FAST PAC files are tied to the machine, so they cannot be used if copied to another machine.

- You can now add columns to or remove columns from the Available Infrastructure and Ad Hoc Networks window in ADU. To do so, choose **Scan List Settings** from the Options drop-down menu. Then use the right and left arrows to move fields between the Available Columns and Selected Columns boxes and click **OK** to save your changes. All of the fields listed in the Selected Columns box now appear in the Available Infrastructure and Ad Hoc Networks window.

- The ADU About window now displays the current version of ADU and the following software components: ACAU, the authentication supplicant, the protocol driver, and the Windows NDIS miniport driver.

- The CB21AG and PI21AG client adapters now support a 5-GHz Japan regulatory domain (designated -P). See Appendix D of the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide* (OL-4211-04) for more information.

Installing or Upgrading Client Adapter Software

This section describes how to initially install or upgrade to CB21AG and PI21AG Install Wizard 2.5 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 the Client Adapter Software" section below. If you are upgrading your client adapter software to release 2.5, follow the instructions in the "Upgrading the Client Adapter Software" section on page 19.

Installing the Client Adapter Software

Follow these steps to install CB21AG and PI21AG Install Wizard 2.5 on your computer.

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

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

Step 1   Make sure the client adapter is inserted into your computer.

Step 2   Use your computer's web browser to access the following URL:

http://www.cisco.com/public/sw-center/sw-wireless.shtml

Step 3   Click **Option #2: Aironet Wireless Software Display Tables**.

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> **Note**   If you prefer to use an automated tool, you can download software from the Software Selector tool instead of the display tables. To do so, click **Option #1: Aironet Wireless Software Selector**, follow the instructions on the window, and go to Step 7.

Step 4   Click **Cisco Aironet Wireless LAN Client Adapters**.

Step 5   Under Aironet Client Adapter Installation Wizard (For Windows), click **802.11a/b/g (CB21AG, PI21AG)**.

Step 6   Click the **Win-Client-802.11a-b-g-Ins-Wizard-v25.exe** file.

Step 7   Complete the encryption authorization form; then read and accept the terms and conditions of the Software License Agreement.

Step 8   Click the file again to download it.

Step 9   Save the file to your computer's hard drive.

Step 10   Use Windows Explorer to find the file.

Step 11   Double-click the file. The "Starting InstallShield Wizard" message appears followed by the Preparing Setup window (see Figure 1) and the Cisco Aironet Installation Program window (see Figure 2).
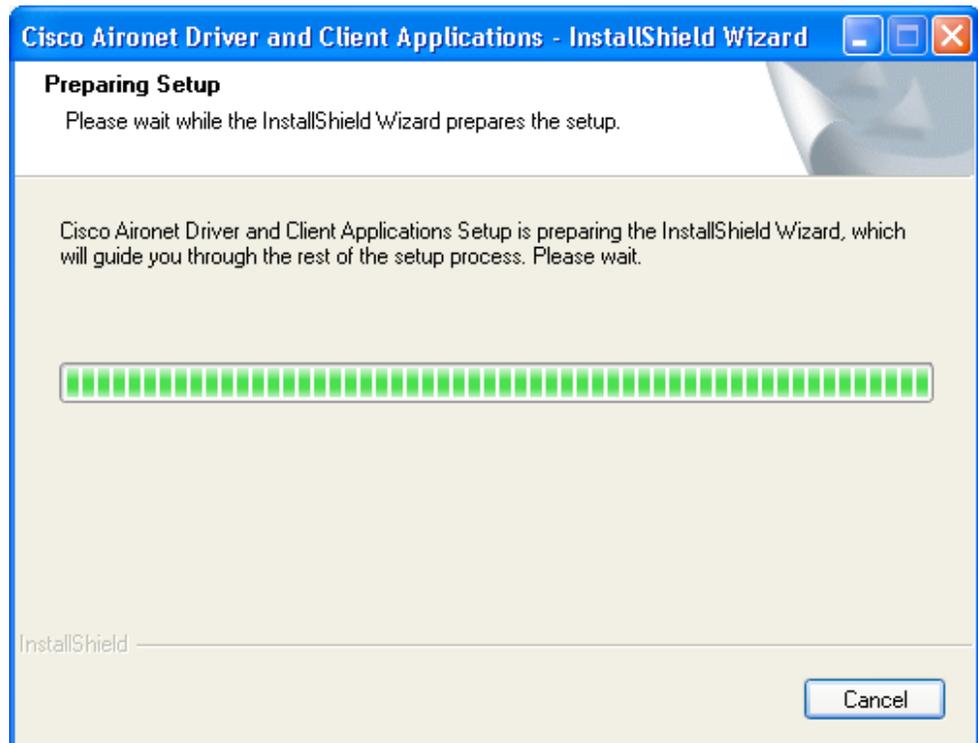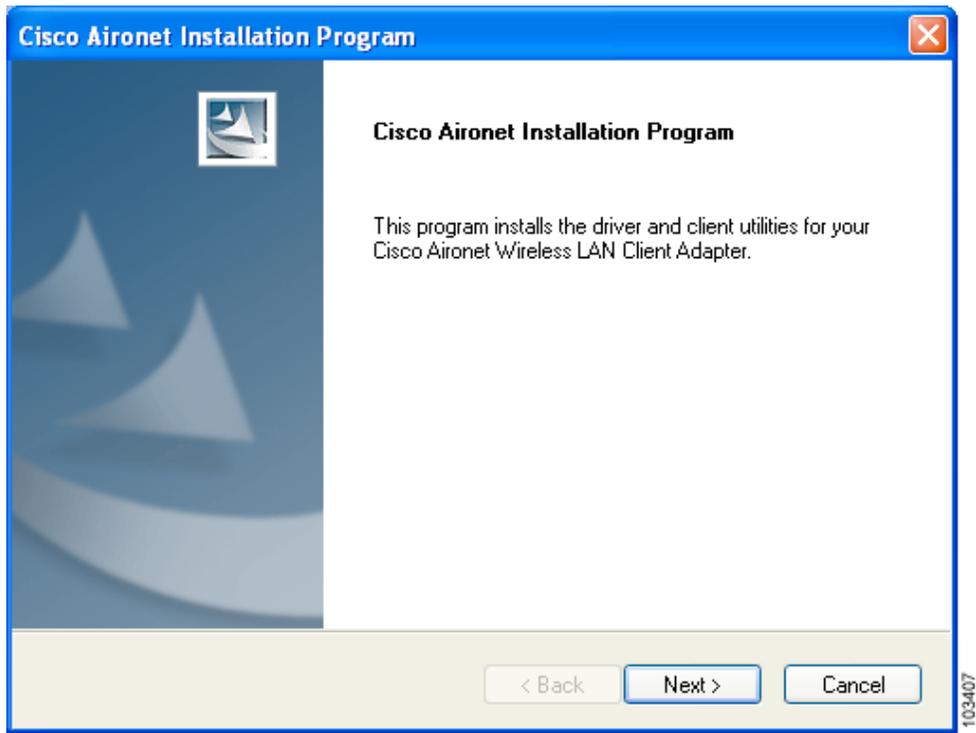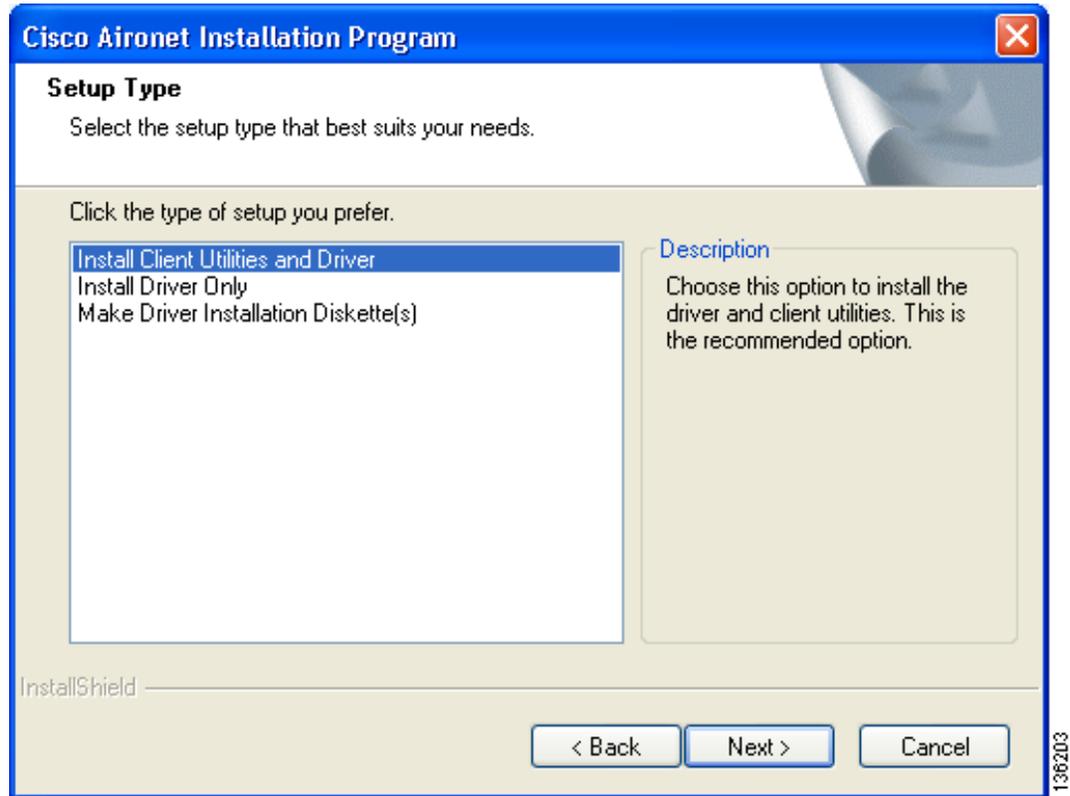
Figure 1   Preparing Setup Window

Figure 2   Cisco Aironet Installation Program Window

Step 12   Click **Next**. The Setup Type window appears (see Figure 3).

Figure 3   Setup Type Window

Step 13   Choose one of the following options and click **Next**:

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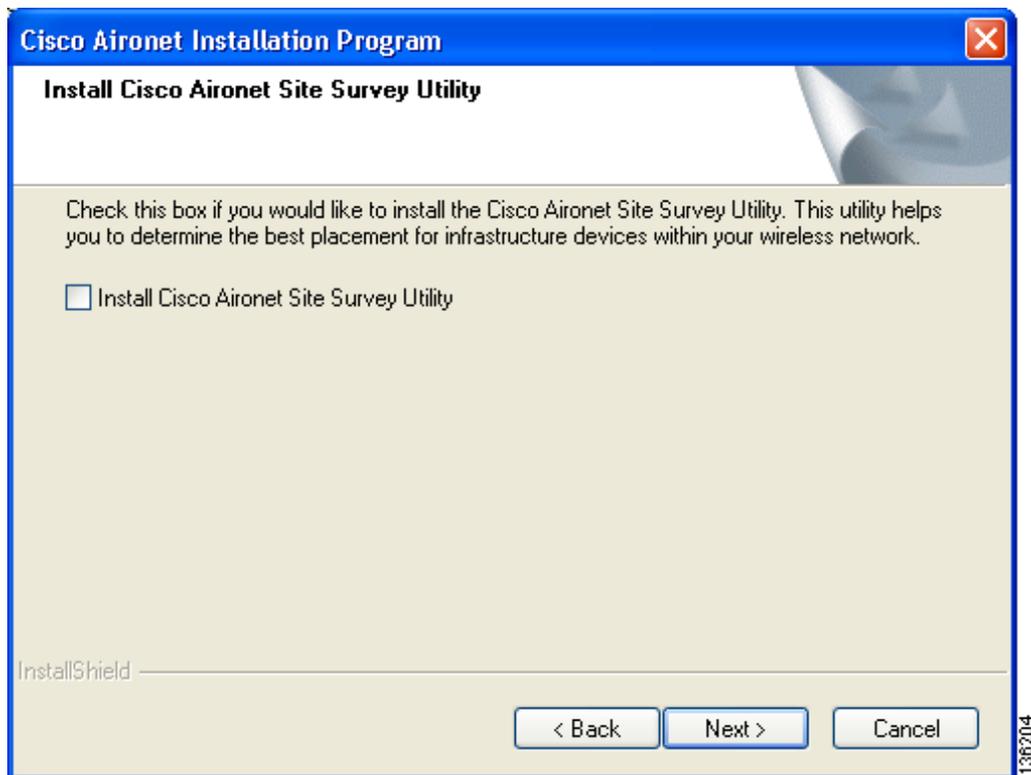> client utilities and driver.

- **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 25.

- **Make Driver Installation Diskette(s)**—Enables you to create driver installation diskettes that can
  be used to install drivers using the Windows Device Manager.

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> **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* (OL-4211-04) for instructions.

Step 14 When the Install Cisco Aironet Site Survey Utility window appears (see Figure 4), check the **Install Cisco Aironet Site Survey Utility** check box if you want to install a utility that helps you to determine the best placement of infrastructure devices within your wireless network. Click **Next**.

Figure 4   Install Cisco Aironet Site Survey Utility Window

Cisco Aironet Installation Program

Install Cisco Aironet Site Survey Utility

Check this box if you would like to install the Cisco Aironet Site Survey Utility. This utility helps you to determine the best placement for infrastructure devices within your wireless network.

☐ Install Cisco Aironet Site Survey Utility

InstallShield

[< Back] [Next >] [Cancel]

Note   The site survey utility is a stand-alone application, separate from ADU, that runs from an executable file. If you check the Install Cisco Aironet Site Survey Utility check box, the Install Wizard installs the site survey executable file in the C:\Program Files\Cisco Aironet directory (unless you specify a different directory in Step 16).
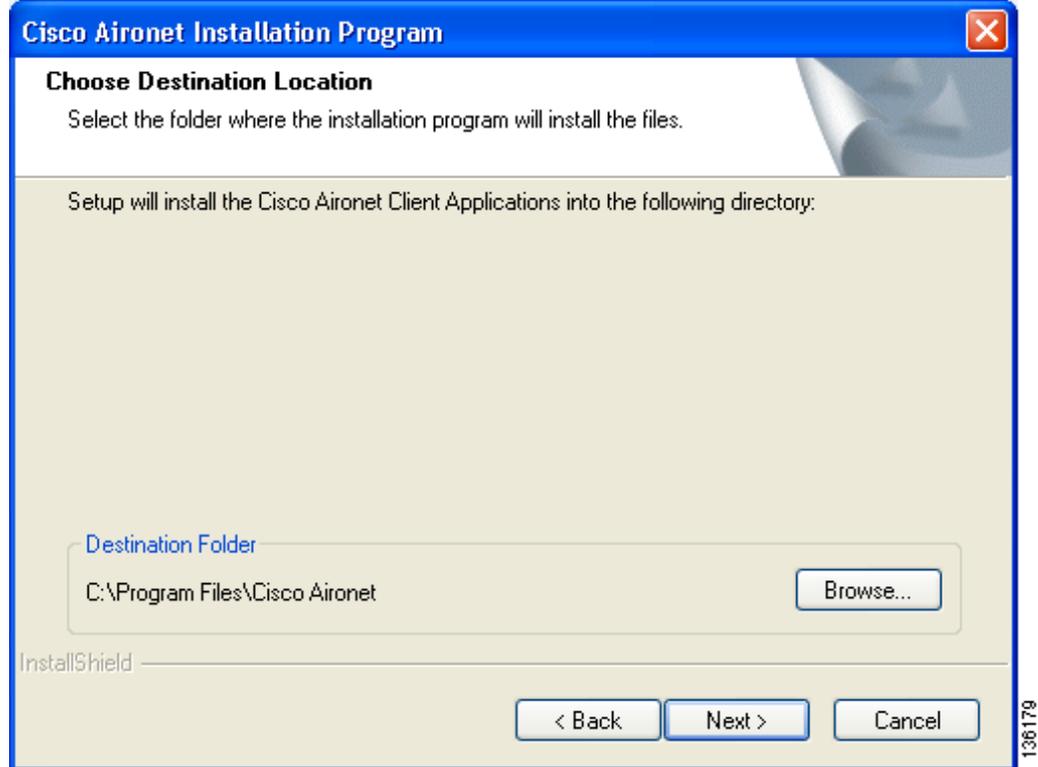
Step 15 If a message appears indicating that you are required to restart your computer at the end of the installation process, click **Yes**.

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 5).

Figure 5   Choose Destination Location Window

Step 16   Perform one of the following:

- If you chose the first option in Step 13, 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 13, insert a floppy disk into your computer and click **Next** to copy the driver to the diskette. Go to Step 25.

> **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 17   The Select Program Folder window appears (see Figure 6).

Figure 6   Select Program Folder Window
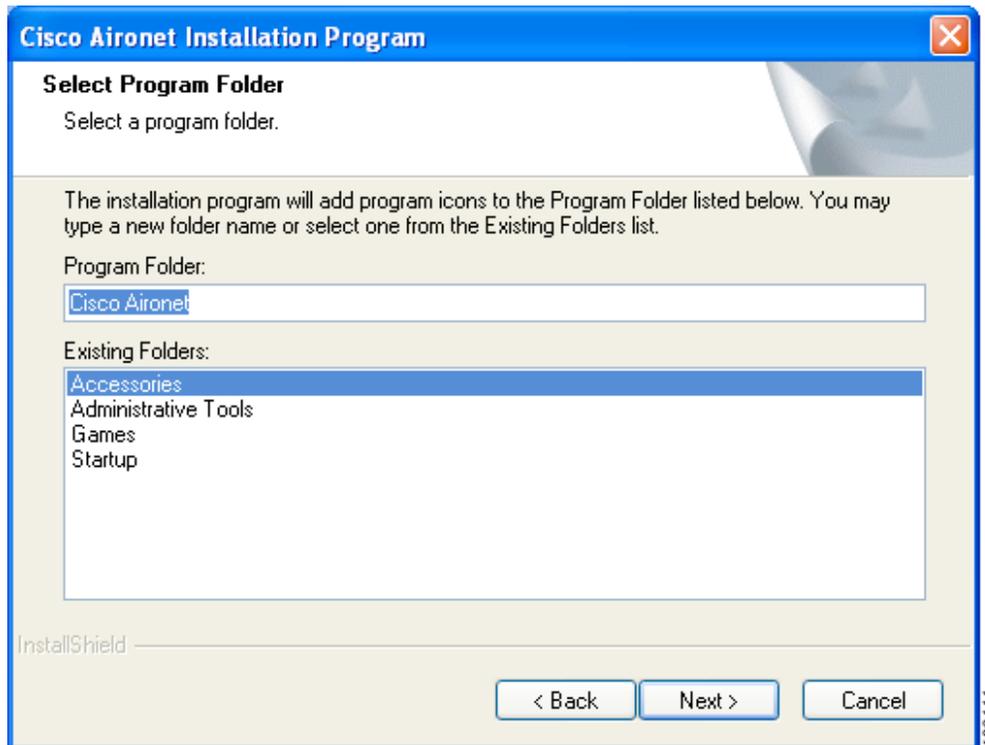
Step 18 Click **Next** to add program icons to the Cisco Aironet program folder.

✎
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**.
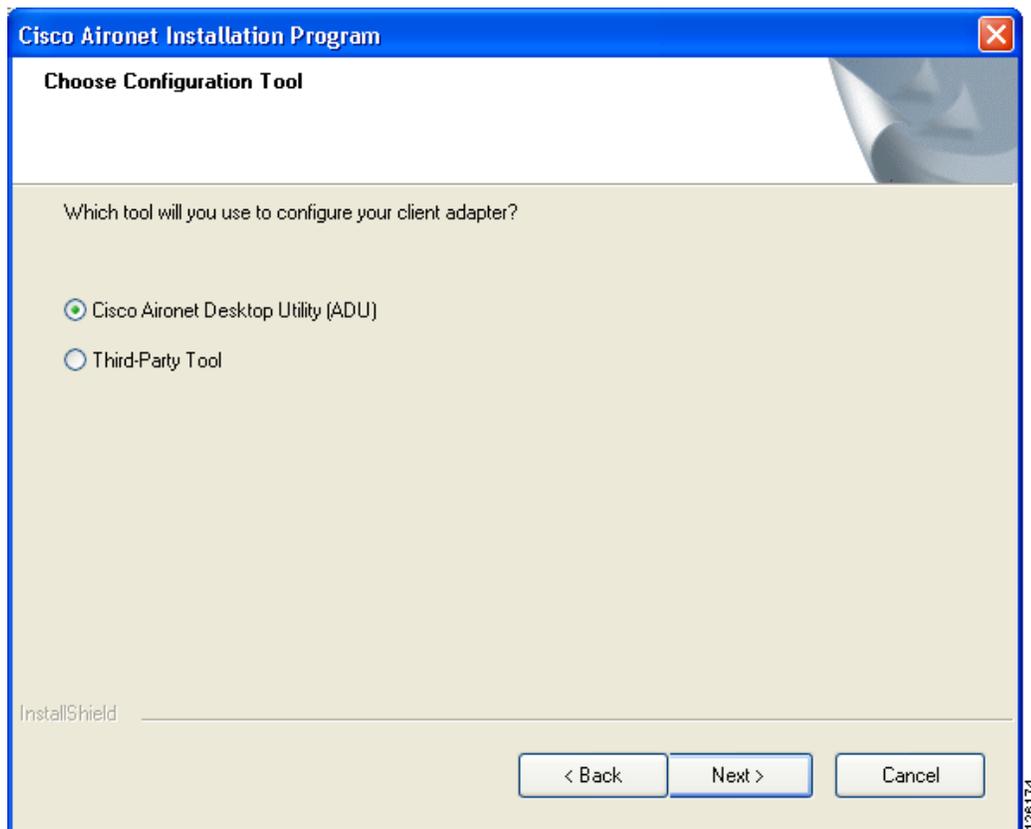
Step 19 If your computer is running Windows 2000, go to Step 25. If your computer is running Windows XP, the IMPORTANT: Please Read! window appears (see Figure 7).

Figure 7   IMPORTANT: Please Read! Window
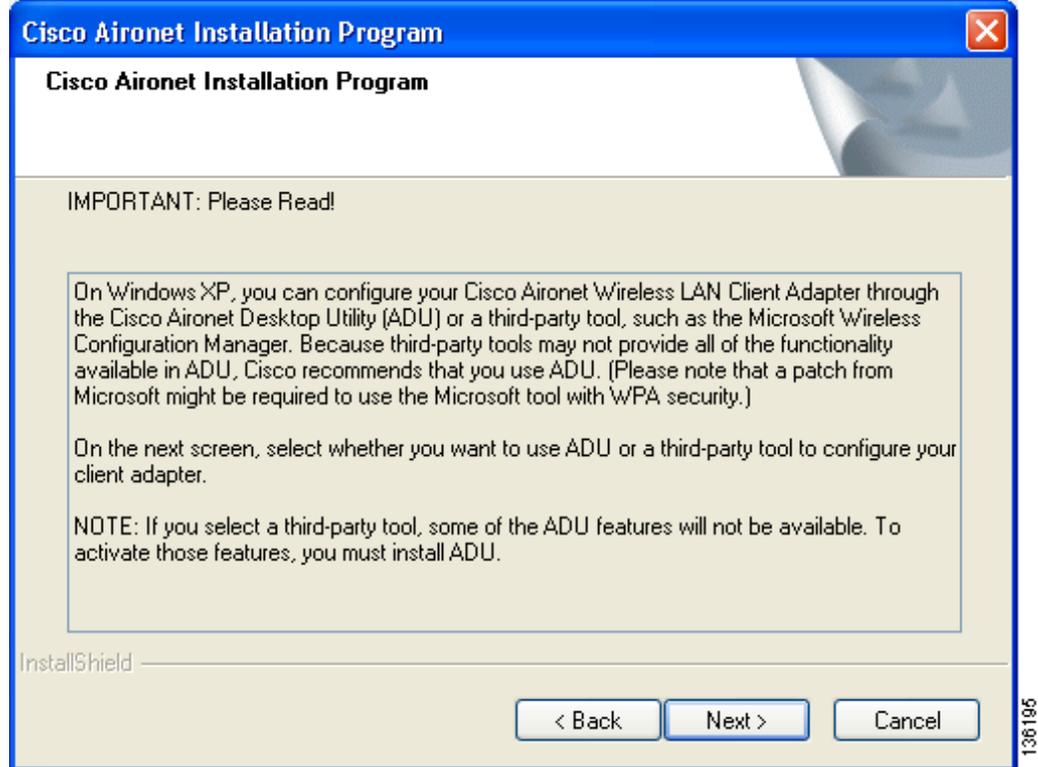
Step 20   Read the information displayed and click **Next**. The Choose Configuration Tool window appears (see Figure 8).

Figure 8   Choose Configuration Tool Window

Step 21 Choose one of the following options based on the tool you want to use to configure your client adapter:

- **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.

✎ **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 22 Click **Next**.

Step 23 If you chose Cisco Aironet Desktop Utility (ADU) in Step 21, go to Step 25. If you chose Third-Party Tool, the Enable Tray Icon window appears (see Figure 9).

Figure 9   Enable Tray Icon Window
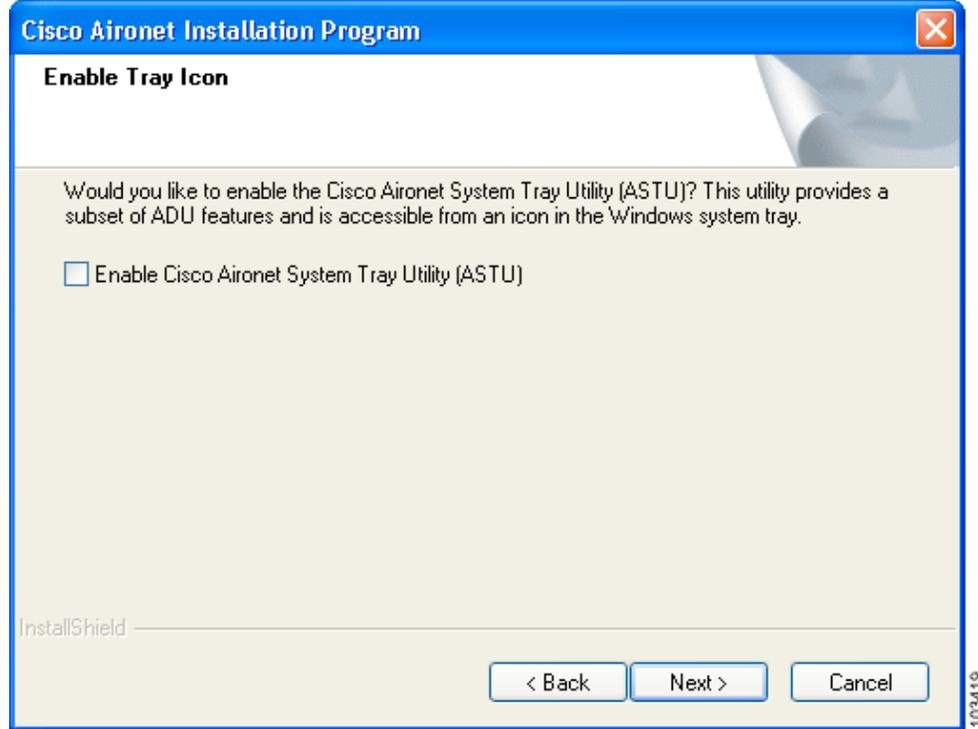
Step 24   Check the **Enable Cisco Aironet System Tray Utility (ASTU)** check box if you want to be able to use ASTU even though you have chosen to configure your client adapter through a third-party tool instead of ADU and click **Next**.

Step 25   When prompted to insert your client adapter, click **OK**. The Setup Status window appears (see Figure 10).

Figure 10   Setup Status Window
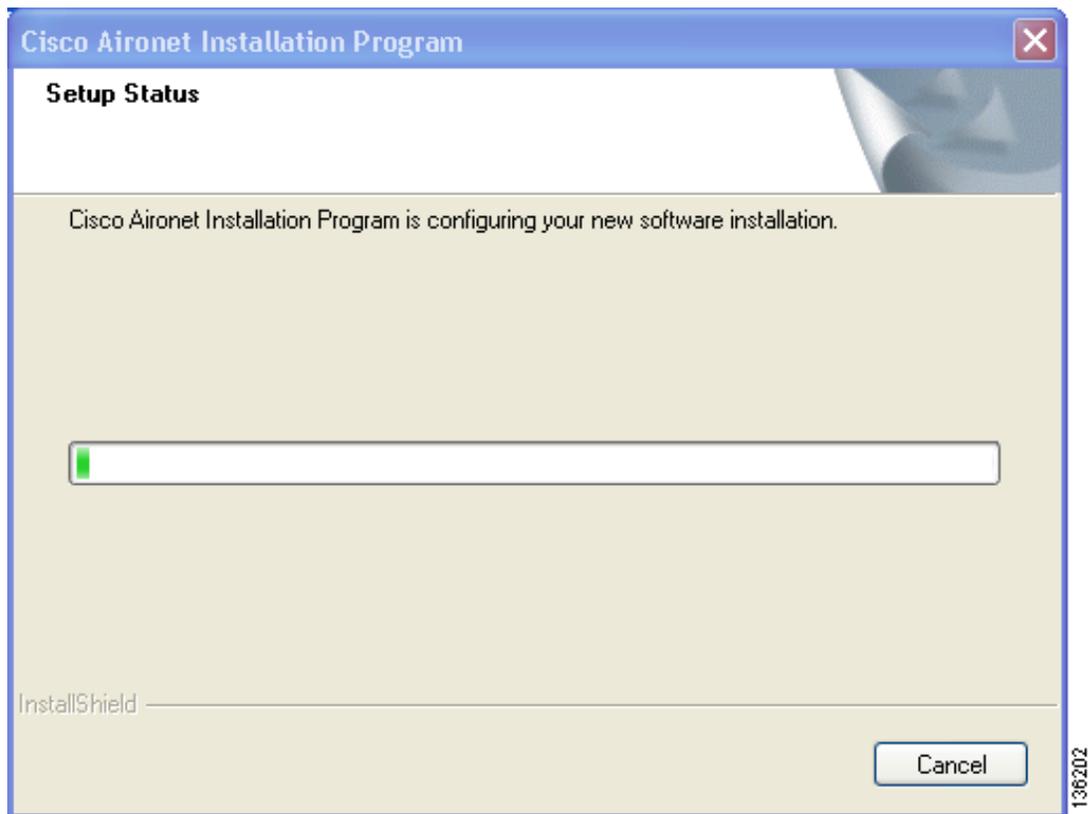
The installation process begins, and you are notified as each software component is installed.

Step 26 When a message appears indicating that your computer needs to be rebooted, click **OK** and allow your computer to restart.

Step 27 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 28 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 29 If you are prompted to restart your computer, click **Yes**. The installation is complete.

Upgrading the Client Adapter Software

Follow these steps to upgrade your CB21AG or PI21AG client adapter software to release 2.5 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 8 to install the new software.

Step 1 Make sure the client adapter is inserted into your computer.

> **Note** If your client adapter is not inserted, the installation continues, but the driver installation is incomplete. You must manually upgrade 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* (OL-4211-04) for instructions.

Step 2 Use your computer's web browser to access the following URL:

http://www.cisco.com/public/sw-center/sw-wireless.shtml

Step 3 Click **Option #2: Aironet Wireless Software Display Tables**.

> **Note** If you prefer to use an automated tool, you can download software from the Software Selector tool instead of the display tables. To do so, click **Option #1: Aironet Wireless Software Selector**, follow the instructions on the window, and go to Step 7.

Step 4 Click **Cisco Aironet Wireless LAN Client Adapters**.

Step 5 Under Aironet Client Adapter Installation Wizard (For Windows), click **802.11a/b/g (CB21AG, PI21AG)**.

Step 6 Click the **Win-Client-802.11a-b-g-Ins-Wizard-v25.exe** file.

Step 7 Complete the encryption authorization form; then read and accept the terms and conditions of the Software License Agreement.

Step 8 Click the file again to download it.

Step 9 Save the file to your computer's hard drive.

Step 10 Use Windows Explorer to find the file.

Step 11 Double-click the file. The "Starting InstallShield Wizard" message appears followed by the Preparing Setup window (see Figure 11) and the Previous Installation Detected window (see Figure 12).

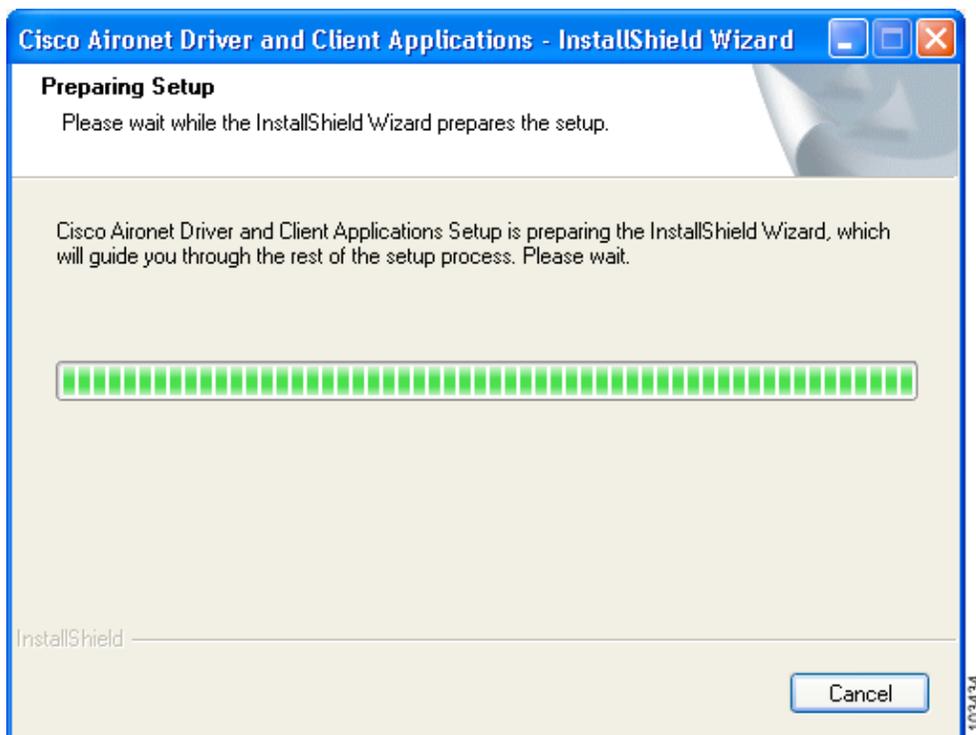*Figure 11   Preparing Setup Window*

Figure 12   Previous Installation Detected Window
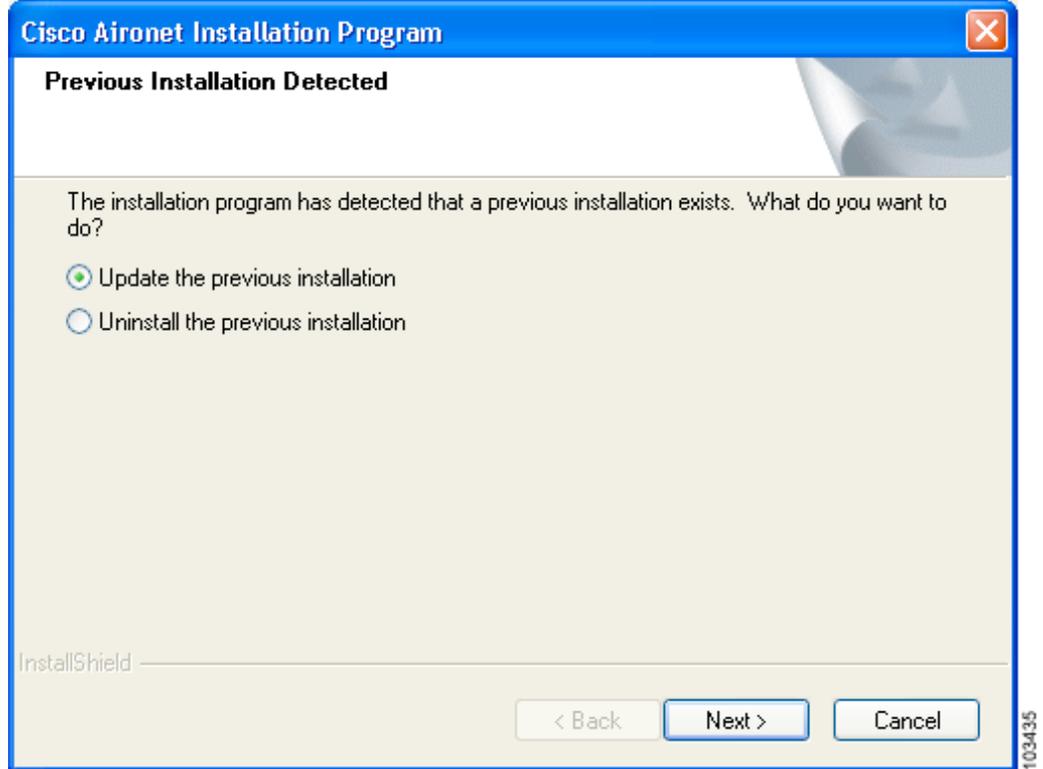
**Step 12**   Choose **Update the previous installation** and click **Next**.

Step 13   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 13).

Figure 13   Setup Status Window
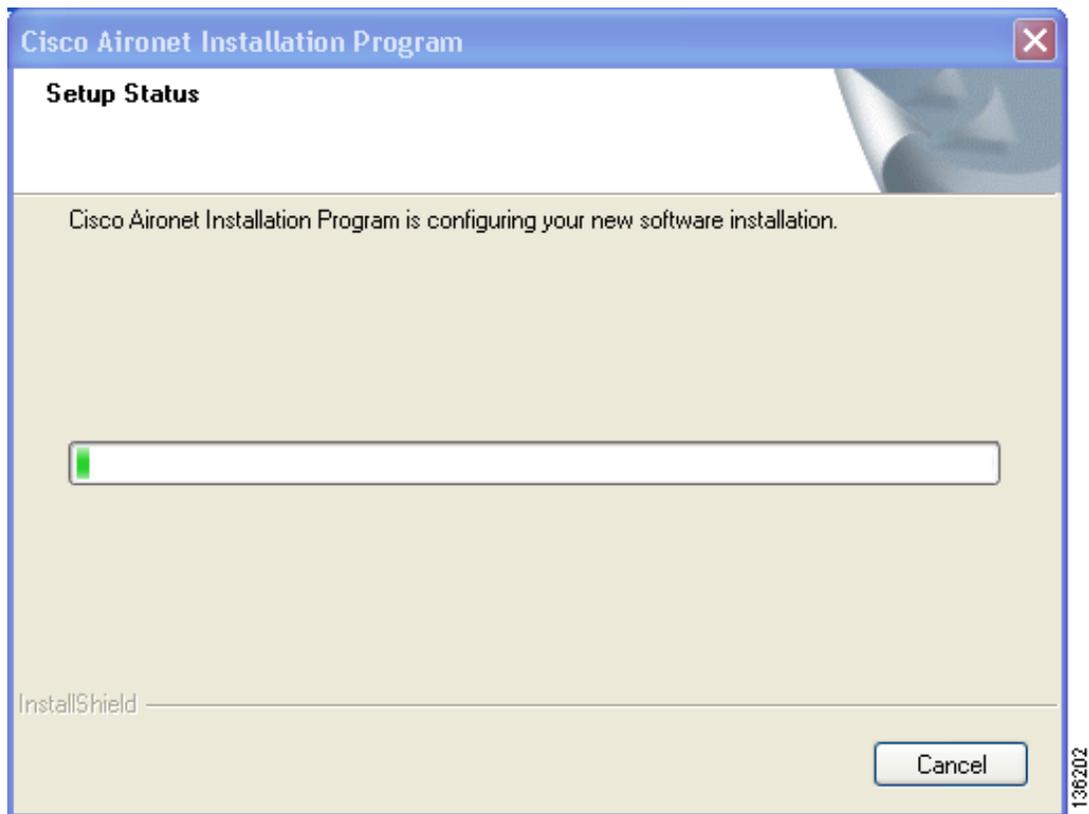
The upgrade process begins, and you are notified as each software component is installed.

Step 14 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 2.0 or later, 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/oas/default.aspx?&c1=508&gprid=7274&

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 Click the hot fix file (userenv.zip).

Step 3 Complete the encryption authorization form and click **Submit**.

Step 4 Click the file again to download it.

Step 5 Save the file to your computer's hard drive.

Step 6 Find the file using Windows Explorer, double-click it, and extract its files to a folder.

Step 7 Reboot your computer and press **F8** while your computer is booting.

Step 8 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) will silently restore the original version of the file you are replacing.

Step 9 Copy the hot fix file (userenv.dll) to %systemroot%\System32 and overwrite the existing version of this file.

Step 10 Delete the copy of userenv.dll in %systemroot%\System32\DllCache.

Step 11 Reboot 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 Version of ADU 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, resolved, and closed caveats for the software components in this release.

Open Caveats

The following caveats are not resolved in CB21AG and PI21AG client adapter software release 2.5.

- CSCeh59294—Failure to find domain controller during LEAP authentication

  The client adapter may be unable to find a domain controller when attempting to LEAP authenticate. This state can be a normal condition due to network unavailability.

- CSCeh59374—Switching between profiles is slow

  The client adapter may take up to 40 seconds to switch from one profile to another.

- CSCei30892—Multi-byte username cannot pass EAP-FAST authentication

  The CB21AG and PI21AG client adapters are unable to successfully EAP-FAST authenticate with an ACS server when the username contains multi-byte characters.

- CSCei40773—Incorrect messages on LEAP and EAP-FAST Authentication Status windows

  The LEAP and EAP-FAST Authentication Status windows show a successful status even if an IPX frame type is not detected or a domain controller is not found on the network.

- CSCei67234—Profile Migration Tool's -AllowReRun command generates two ASTU icons

  Two ASTU icons appear in the Windows system tray after you use the Profile Migration Tool's **-AllowReRun** command line option.

- CSCei86829—Unchecking QoS Packet Scheduler disrupts ADU and ASTU

  When you uncheck the **QoS Packet Scheduler** check box on the Windows XP Wireless Network Connection Properties window, most of the ADU fields become grayed out, and the ASTU icon disappears from the Windows system tray. To work around this problem, perform one of the following: check the **QoS Packet Scheduler** check box, disable and reenable the wireless network connection, or eject and reinsert the client adapter.

- CSCsb46833—IOS access point with EAP-secured SSID toggles between "Open" and "Secure"

  When an IOS access point is configured with an SSID mapped to a VLAN and the SSID is secured with EAP and WPA-TKIP, then in the site survey utility's AP scan list, the access point may toggle between "Open" and "Secure." In this mode, the access point sends out the network configuration information in the beacon and probe responses. Certain fields may differ between beacons and probe responses when VLANs are enabled. The client adapter driver may report the fields from the beacon frame or probe response frame, whichever is received last.

- CSCsb53874—Timing error prevents MAC address authentication

  When using MAC address authentication, the client adapter fails to authenticate due to a timing error. To work around this problem, do not use MAC address authentication.

- CSCsb81180—Client adapters may randomly disassociate

  Client adapters may randomly disassociate from their access points and then fail to reassociate. To work around this problem, reboot the client.

- CSCsb90765—Client adapter fails to reassociate after WLSM is reset

  When the Wireless LAN Services Module (WLSM) is rebooted, the client adapter disassociates from its access point. When WLSM comes back online and Wireless Domain Services (WDS) is available again, the client adapter does not automatically reassociate and therefore fails to reregister with WDS. To work around this problem, manually reauthenticate the client adapter using ADU.

Resolved Caveats

The following caveats are resolved in CB21AG and PI21AG client adapter software release 2.5.

- CSCed93298—The client adapter's IP address may display incorrectly

  The client adapter's IP address may appear as 0.0.0.0 when the adapter is associated to a workgroup bridge that is configured as a root access point. The IP address usually displays correctly after a few minutes.

- CSCee70072—Auto-profile selection prevents connectivity until login

  When auto-profile selection is enabled in ADU, connectivity does not occur until the user logs in.

- CSCef74909—IPX auto frame detection may not work correctly

  When using Novell IPX client software, the client adapter may not allow proper detection of the IPX frame type. As a result, the Novell IPX stack is unable to log into the Novell server. The IPX stack RIP requester stops trying after 2.5 seconds, which is the default value. To work around this problem, you can change the timeout value in the registry at the following location:
  \HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\NwlnkIpx\Parameters

  The parameter is a REG_DWORD named RipCount. Increase the value to 20 seconds by entering hex 28 (40 decimal). The units are in half seconds.

- CSCeg81842—Failure to get IP address when Fast PSP is enabled

  The client adapter may be unable to get an IP address when Fast PSP (Power Save Mode) is enabled in ADU. To work around this problem, use CAM (Constantly Awake Mode) instead.

- CSCeh03426—Client experiences throughput values below 1 Mbps

  When 6 or 9 Mbps is enabled on the access point, the client adapter experiences throughput values below 1 Mbps. To work around this problem, set the access point to its default data rate.

- CSCeh59373—ADU unmanageable after first install

  If ADU is unusable after you install the client adapter software, uninstall the client adapter software and then reinstall it.

- CSCeh60492—Failure to load group policies on boot-up

  When Host Based EAP and PEAP (EAP-MSCHAP V2) machine authentication are enabled, group policy objects (GPOs) may not be loaded upon boot-up.

- CSCeh66276—ADU does not prompt for PIN during PEAP (EAP-GTC) reauthentication

  During PEAP (EAP-GTC) reauthentication, ADU does not prompt you to enter a PIN. When the client roams out of the coverage area and then returns or its radio is disabled and then reenabled, you are not prompted to re-enter your credentials. The client reconnects to the network and starts to transfer data.

- CSCeh69073 and CSCeh72204—Auto-provisioned PAC does not support unicode usernames

  An auto-provisioned PAC is not stored in a user's private store if he or she logs into Windows with a username containing two-byte characters. Automatic PAC provisioning succeeds, but the PAC does not appear in the Select EAP-FAST PAC window of the private store and therefore cannot be deleted. To work around this problem, go to the global store on your computer (C:\Document and Settings\All Users\Application Data\Cisco\cscostore). You can see the PAC here and delete it if desired.

- CSCeh74184—Client fails to associate when configured for WPA/WPA2 passphrase and multiple SSIDs

  The client adapter fails to connect to the network when using a profile that is configured for WPA/WPA2 passphrase and more than one SSID. To work around this problem, create separate profiles for the desired SSIDs.

- CSCeh76770—Removing client adapter causes memory leak

  A memory leak occurs if you remove the client adapter while the site survey utility is running.

- CSCeh93701—PEAP (EAP-MSCHAP V2) incompatible with Funk server

  ADU's PEAP (EAP-MSCHAP V2) supplicant is incompatible with the Funk Steel-Belted RADIUS server.

Closed Caveats

The following caveats, which are listed as open caveats in the Release Notes for Install Wizard 2.1, have been closed and are not resolved in CB21AG and PI21AG client adapter software release 2.5.

- CSCed40520—Up to 5-minute delay for initial boot

  Some computers may experience up to a 5-minute delay during the first boot after installation. Subsequent boots are normal.

- CSCee89506—Driver fails to install when using install disk on Windows 2000

  When you create a driver installation disk (on a floppy or by storing the files in a folder) using the Install Wizard on a computer running Windows 2000, the driver may fail to install. Specifically, when you install the driver via Windows Device Manager > Driver > Properties > Driver Update Driver, Windows indicates that it has finished installing the driver software. However, the Windows Network and Dial-up Connections window shows the following message: "An unexpected error occurred." Also, after you reboot the computer, the Windows Device Manager shows an incomplete installation of the driver software. This problem could not be reproduced.

- CSCeh19611 and CSCef20218—Incorrect EAP-FAST authentication failure error message

  ADU may show the incorrect error message when EAP-FAST authentication fails. This occurs when the access point returns an incorrect error code rather than timing out.

- CSCeh45986—CB21AG in ACER Travelmate 529TX fails DHCP and LEAP

  When the CB21AG client adapter is installed in an ACER Travelmate 529TX running Windows 2000 with Service Pack 4 and configured for static WEP with open authentication, it fails to obtain an IP address through DHCP. In addition, the client adapter also fails to LEAP authenticate.

- CSCeh66882—User is prompted for EAP-FAST PAC when it should be present

  The following message may appear even if you have already specified a PAC to use with EAP-FAST: "The current EAP-FAST profile does not have a PAC or the configured PAC does not match the authentication server. Do you want to use another PAC found on your local system that matches the authentication server without reconfiguring the current EAP-FAST profile?"

  ADU matches the username and server name that it is trying to use with those in the PAC. If they do not match or the configured PAC does not exist, ADU searches the private and global stores. If a matching PAC is found, the user is prompted with the above message before the PAC is used. Click **Yes** to attempt to authenticate using another PAC on your system without having to reconfigure your profile. The client adapter software is behaving as expected.

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/pcgi-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 Cisco Aironet CB21AG and PI21AG client adapters, refer to the following document:

- *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Installation and Configuration Guide*, OL-4211-04

  http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guides_list.html

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

http://www.cisco.com/techsupport

You can access the Cisco website at this URL:

http://www.cisco.com

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Product Documentation DVD

Cisco documentation and additional literature are available in the Product Documentation DVD package, which may have shipped with your product. The Product Documentation DVD is updated regularly and may be more current than printed documentation.

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .pdf versions of the documentation available.

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http://www.cisco.com/go/marketplace/

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Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

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You can send comments about Cisco documentation to bug-doc@cisco.com.

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Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

http://www.cisco.com/go/psirt

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies — security-alert@cisco.com

  An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- Nonemergencies — psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

Tip   We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.*x* through 8.*x*.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

http://www.cisco.com/techsupport

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

http://tools.cisco.com/RPF/register/register.do

Note   Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

http://www.cisco.com/techsupport/servicerequest

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

http://www.cisco.com/techsupport/contacts

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is "down," or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

  http://www.cisco.com/go/marketplace/

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

  or view the digital edition at this URL:

  http://ciscoiq.texterity.com/ciscoiq/sample/

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/ipj

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

  http://www.cisco.com/en/US/products/index.html

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

  http://www.cisco.com/discuss/networking

- World-class networking training is available from Cisco. You can view current offerings at this URL:

  http://www.cisco.com/en/US/learning/index.html

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