



Release Notes for Cisco Aironet 802.11a/b/g Client Adapters (CB21AG and PI21AG) Install Wizard 1.0

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Introduction

This document describes system requirements, important notes, installation instructions, and caveats for CB21AG and PI21AG client adapter Install Wizard release 1.0 and the following software included in the Install Wizard file:

- CB21AG and PI21AG client adapter driver release 1.0
- Aironet Desktop Utility (ADU) release 1.0



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System Requirements

You need the following in order to install Install Wizard release 1.0 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 1 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 (release 2.1 or later)
 - Your hardware or software token password
- 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
- 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.

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.

Workaround for PEAP Domain Login Issue (CSCed21099)

To enable your client adapter to PEAP authenticate in a multiple domain environment, create a profile in ADU that uses PEAP authentication but **do not enter a domain name in the Specific Server or Domain field on the Advanced Configuration window**. If the Login Name field is not filled in automatically, enter your username with nothing after it (for example, jsmith).

When you activate this profile, Cisco Secure ACS searches for the login name across all domain databases and attempts to authenticate the user against the first database that matches the username. While not specifying a domain name may increase the time it takes for your client adapter to authenticate, it helps to ensure that the authentication attempt is successful.

**Note**

This workaround applies to both Windows 2000 and XP.

Workaround for EAP-TLS Domain Login Issue (CSCee23962)

To enable your client adapter to EAP-TLS authenticate in a multiple domain environment, create a profile in ADU that uses EAP-TLS authentication but **do not enter a domain name in the Server/Domain Name field on the Define Certificate window**. If the Login Name field is not filled in automatically, enter your username in this format: *username@domain* (for example, jsmith@acs-test.cisco.com).

**Note**

This workaround applies to both Windows 2000 and XP.

Reboot Required When Uninstalling ACU and ADU

**Caution**

When you uninstall ACU and ADU, make sure you 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 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.

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* (part number OL-4211-01) 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.

Installing Client Adapter Software

Follow these steps to use CB21AG and PI21AG Install Wizard release 1.0 to install client adapter drivers and utilities on a computer running Windows 2000 or XP.


Caution

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


Note

The Install Wizard disables the Microsoft 802.1X supplicant, if installed, to prevent any potential conflicts between ADU and the supplicant.


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

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

Step 2 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 6](#).

Step 3 Click **Cisco Aironet Wireless LAN Client Adapters**.

Step 4 Under Aironet Client Adapter Installation Wizard (For Windows), click **802.11a/b/g (CB21AG, PI21AG)**.

Step 5 Click the **Win-Client-802.11a-b-g-Ins-Wizard-v1.exe** file.

Step 6 Complete the encryption authorization form; then read and accept the terms and conditions of the Software License Agreement.

Step 7 Click the file again to download it.

Step 8 Save the file to your computer's hard drive.

Step 9 Use Windows Explorer to find the file.

Step 10 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*

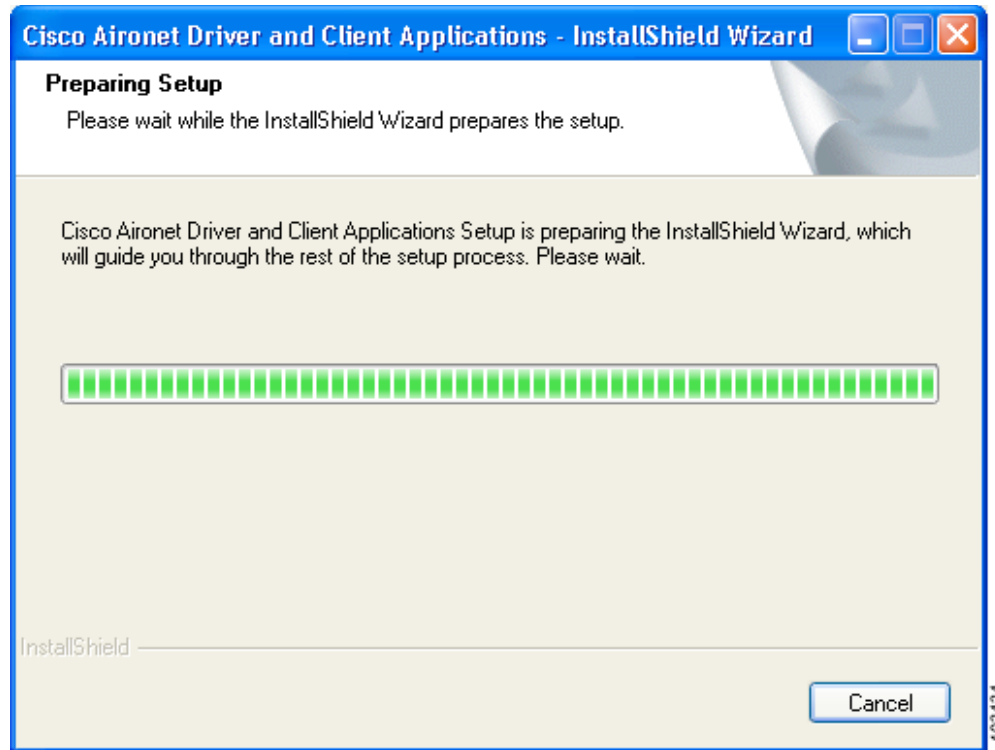
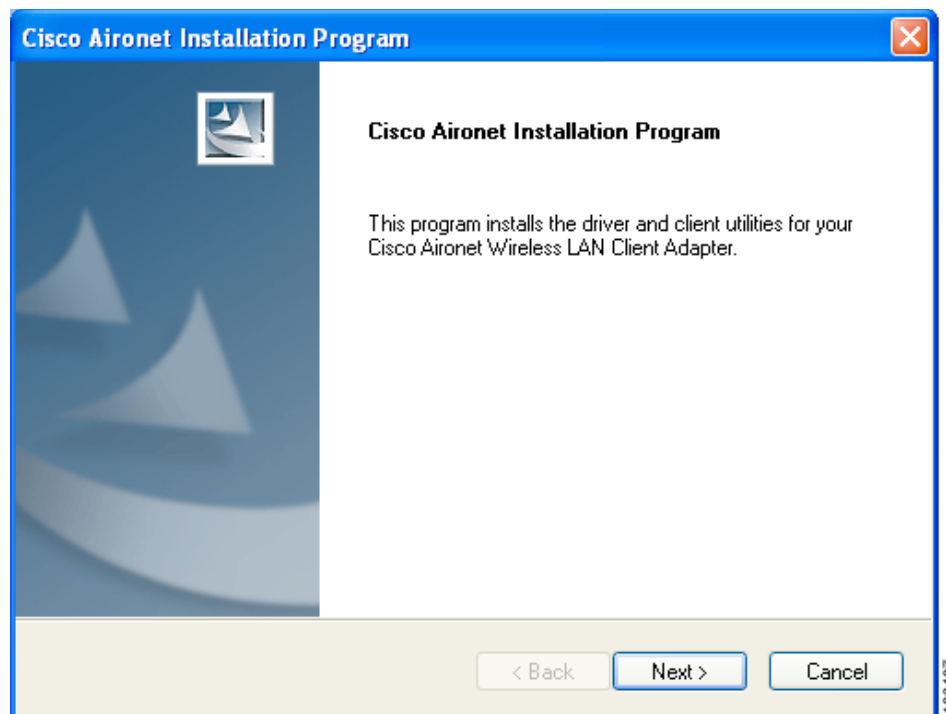
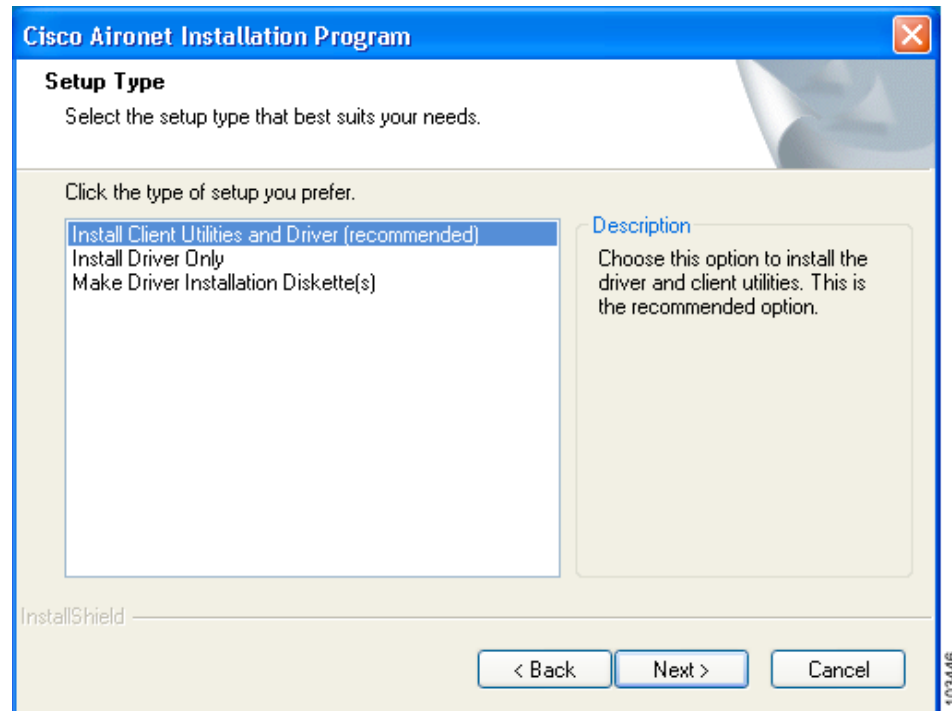


Figure 2 *Cisco Aironet Installation Program Window*



Step 11 Click **Next**. The Setup Type window appears (see [Figure 3](#)).

Figure 3 Setup Type Window



Step 12 Choose one of the following options:



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

- **Install Client Utilities and Driver (recommended)**—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 24](#).
- **Make Driver Installation Diskette(s)**—Enables you to create driver installation diskettes that can be used to install drivers using the Windows Device Manager.

Step 13 Click **Next**.

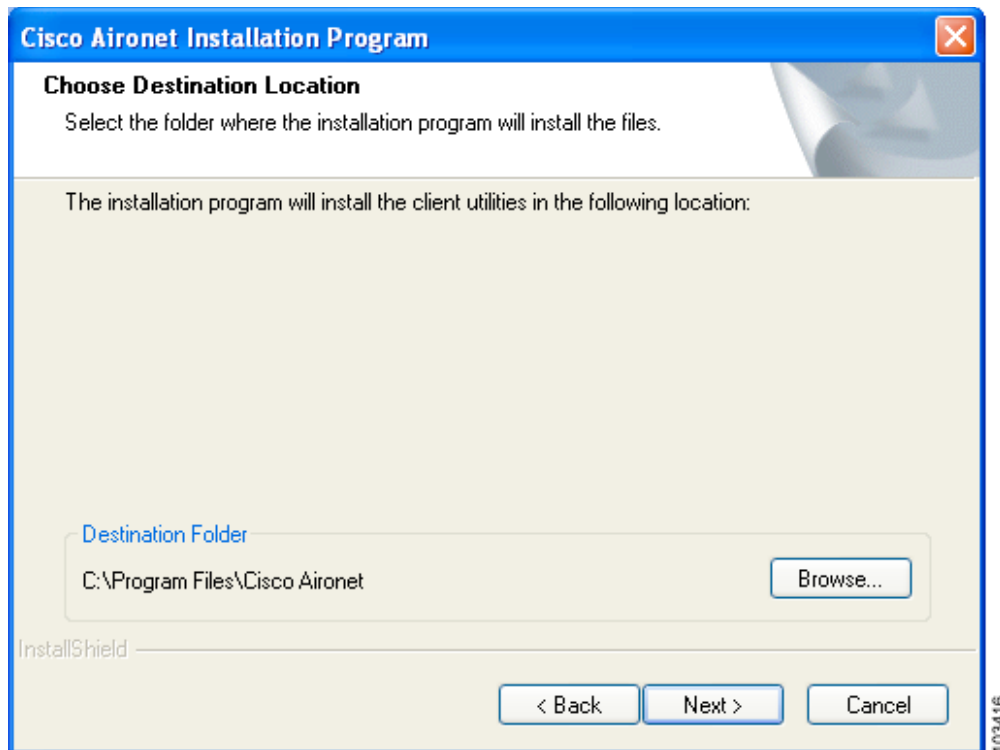
Step 14 If a message appears indicating that you are required to restart your computer at the end of the installation process, click **Yes**.



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 4](#)).

Figure 4 Choose Destination Location Window



Step 15 Perform one of the following:

- If you chose the first option in [Step 12](#), 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**.

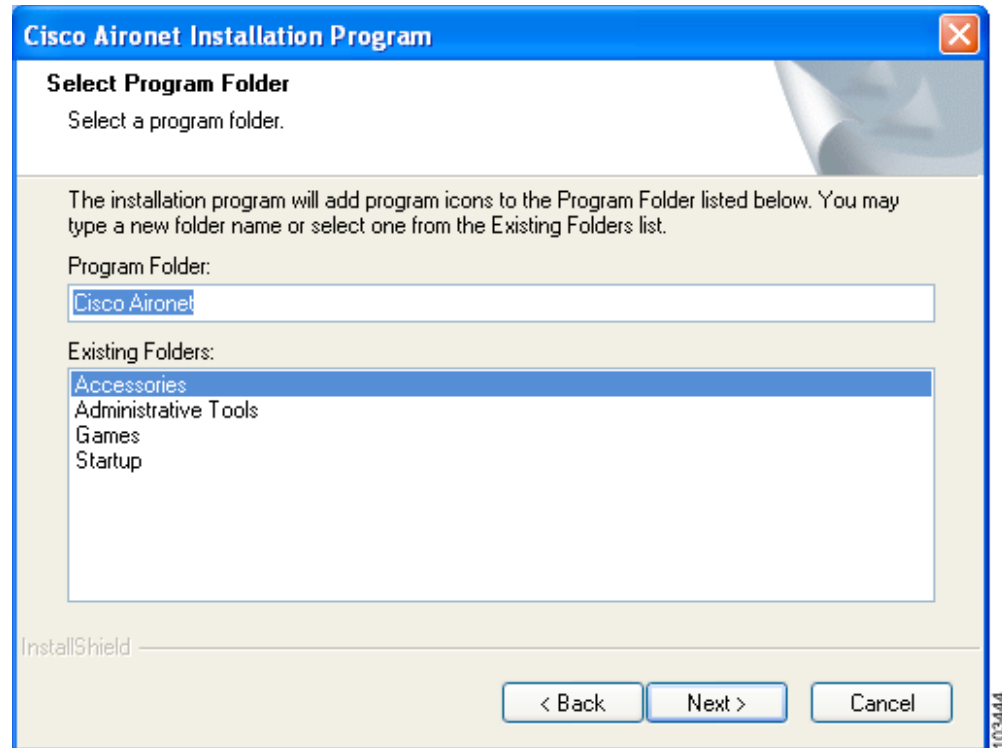
- If you chose the Make Driver Installation Diskette(s) option in [Step 12](#), insert a floppy disk into your computer and click **Next** to copy the driver to the diskette. Go to [Step 24](#).



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 16 The Select Program Folder window appears (see [Figure 5](#)).

Figure 5 Select Program Folder Window



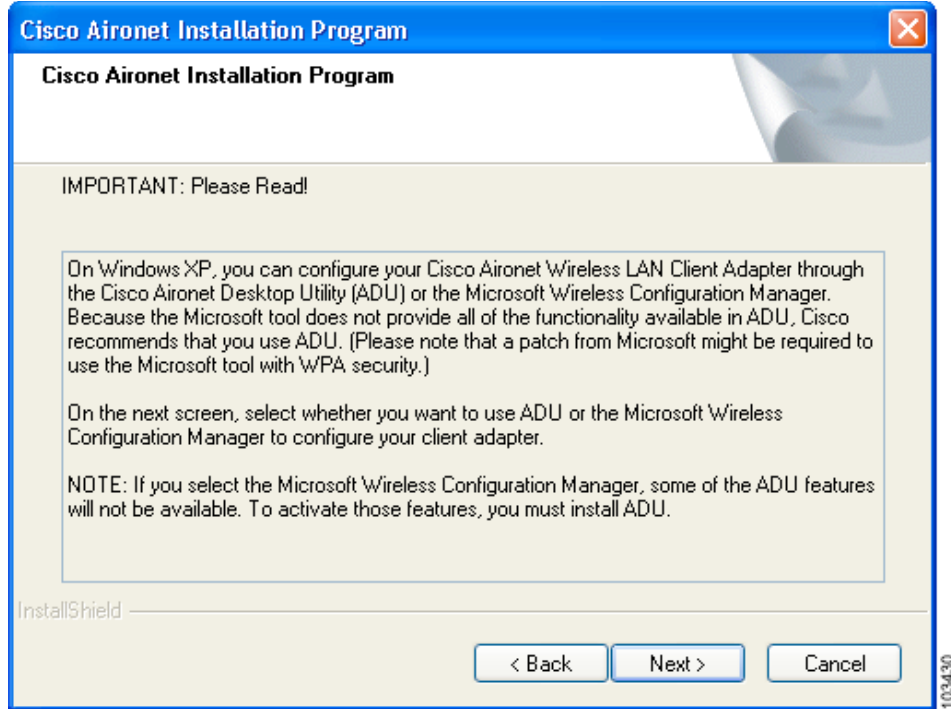
Step 17 Click **Next** to add program icons to the Cisco Aironet program folder.



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**.

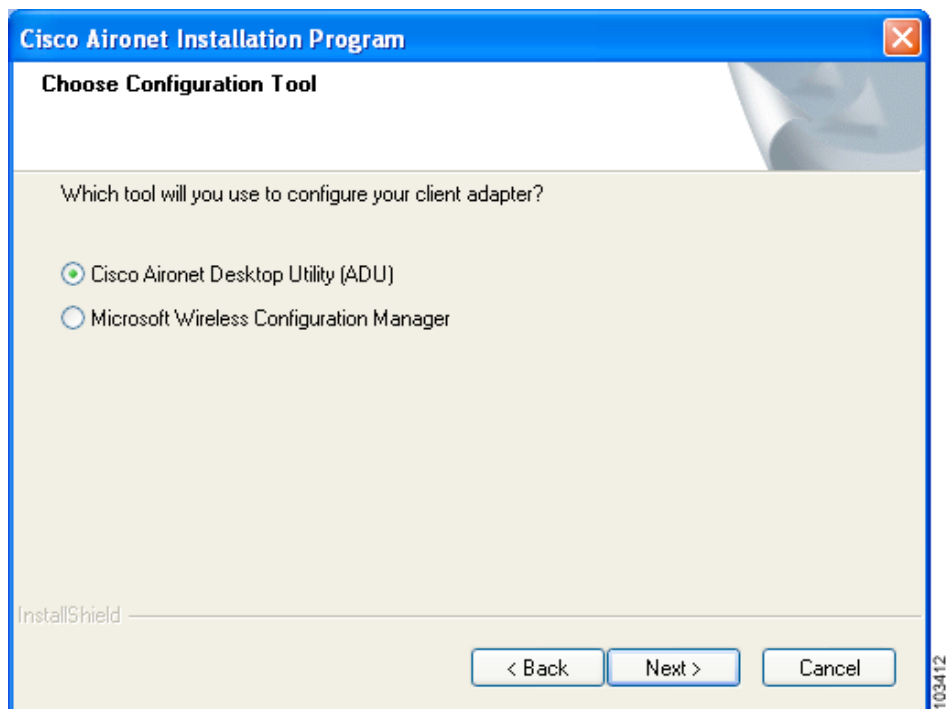
Step 18 If your computer is running Windows 2000, go to [Step 24](#). If your computer is running Windows XP, the **IMPORTANT: Please Read!** window appears (see [Figure 6](#)).

Figure 6 *IMPORTANT: Please Read! Window*



Step 19 Read the information displayed and click **Next**. The Choose Configuration Tool window appears (see [Figure 7](#)).

Figure 7 *Choose Configuration Tool Window*



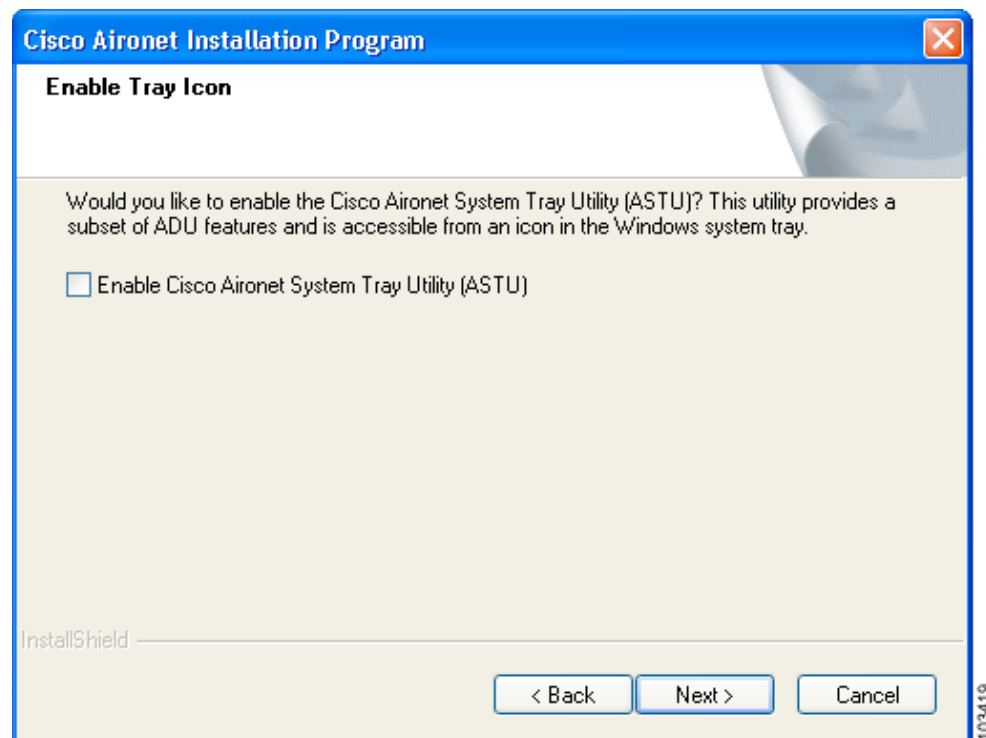
- Step 20** Choose one of the following options based on the tool you want to use to configure your client adapter.
- **Cisco Aironet Desktop Utility (ADU)**—Enables you to configure your client adapter using ADU.
 - **Microsoft Wireless Configuration Manager**—Enables you to configure your client adapter using 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.

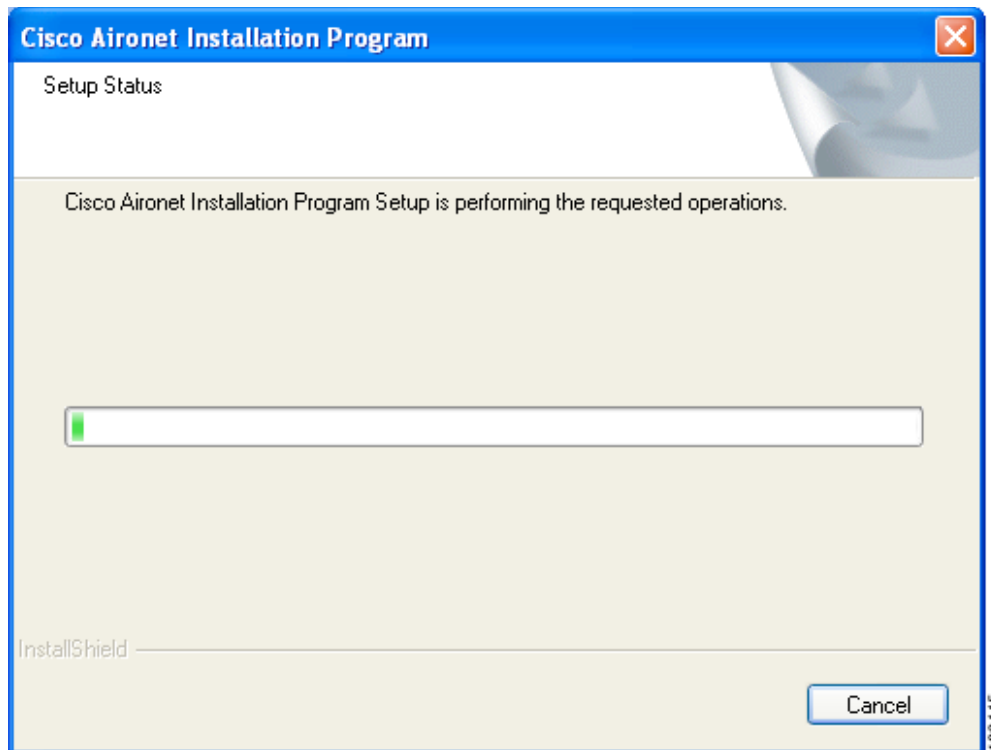
- Step 21** Click **Next**.
- Step 22** If you chose Cisco Aironet Desktop Utility (ADU) in [Step 20](#), go to [Step 24](#). If you chose Microsoft Wireless Configuration Manager, the Enable Tray Icon window appears (see [Figure 8](#)).

Figure 8 Enable Tray Icon Window



- Step 23** 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 Windows XP instead of ADU. Click **Next**.
- Step 24** When prompted to insert your client adapter, click **OK**. The Setup Status window appears (see [Figure 9](#)).

Figure 9 Setup Status Window



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

- Step 25** When a message appears indicating that your computer needs to be rebooted, click **OK** and allow your computer to restart.
- Step 26** 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 27** 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 28 If you are prompted to restart your computer, click **Yes**. The installation is complete.

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

To find the version of ADU that is currently 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 ADU version.

Open Caveats

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

Open Driver Caveats

The following caveats have not been resolved in CB21AG and PI21AG client adapter driver 1.0.

- CSCed21099—PEAP does not operate with domain login
PEAP authentication does not operate with domain login. To work around this issue, create a profile in ADU that uses PEAP authentication but do not enter a domain name in the Specific Server or Domain field on the Advanced Configuration window. If the Login Name field is not filled in automatically, enter your username with nothing after it (for example, jsmith).
When you activate this profile, Cisco Secure ACS searches for the login name across all domain databases and attempts to authenticate the user against the first database that matches the username. While not specifying a domain name may increase the time it takes for your client adapter to authenticate, it helps to ensure that the authentication attempt is successful. This workaround applies to both Windows 2000 and XP.
- CSCee23962—EAP-TLS does not operate with domain login
EAP-TLS authentication does not operate with domain login. To work around this issue, create a profile in ADU that uses EAP-TLS authentication but do not enter a domain name in the Server/Domain Name field on the Define Certificate window. If the Login Name field is not filled in automatically, enter your username in this format: *username@domain* (for example, jsmith@acs-test.cisco.com). This workaround applies to both Windows 2000 and XP.
- 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.
- CSCec08294—Client remains in access point's association table
The client remains in the access point's association table for approximately 30 minutes after it has been disabled.
- CSCed23644—DHCP does not operate if MIC is enabled on VxWorks access points
DHCP does not operate with CB21AG and PI21AG client adapters if MIC is enabled on VxWorks access points. To work around this issue, upgrade the VxWorks access point to firmware version 12.04 or later.

Open ADU Caveats

The following caveats have not been resolved in ADU 1.0.

- CSCin58718—ADU shows invalid IP address for VxWorks access points
The ADU Advanced Status window shows an Associated AP IP Address of 0.0.0.0 when the client adapter is associated to a VxWorks access point. To work around this issue, upgrade the VxWorks access point to firmware version 12.04 or later.
- CSCec67910—ADU may incorrectly show 11 Mbps link speed
When the client adapter associates to an access point with a fixed data rate of 6 or 9 Mbps, the ADU Advanced Status window may incorrectly show 11 Mbps for the current link speed.

- CSCin63049—Incorrect behavior on failed LEAP authentication
If LEAP authentication fails because the authentication server is down, a message appears indicating that the LEAP authentication timeout has expired. When you click OK, you are prompted to re-enter your user credentials even though the failure was caused by the authentication server and not improper credentials.
- CSCec39604—EAP-TLS authentication attempts fail for users with zero-length passwords
EAP-TLS authentication attempts fail for users with zero-length passwords. To work around this issue, set up a Windows password that contains at least one character.

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 **Hardware Support** > **Wireless Devices**. 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-4211-01

<http://www.cisco.com/univercd/cc/td/doc/product/wireless/cb21ag/icg/index.htm>

Obtaining Documentation

Cisco provides several ways to obtain documentation, 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 on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

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

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

All users can order monthly or quarterly subscriptions through the online Subscription Store:

<http://www.cisco.com/go/subscription>

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:
<http://www.cisco.com/en/US/partner/ordering/index.shtml>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

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You can e-mail your comments to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

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

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

Cisco.com

Cisco.com offers a suite of interactive, networked services that let you access Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

To obtain customized information and service, you can self-register on Cisco.com at this URL:

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

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The type of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration. There is little or no impact to your business operations.
- Priority level 3 (P3)—Operational performance of the network is impaired, but most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
- Priority level 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively impacted by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.
- Priority level 1 (P1)—An existing 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.

Cisco TAC Website

The Cisco TAC website provides online documents and tools to help troubleshoot and resolve technical issues with Cisco products and technologies. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

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

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases online so that you can fully describe the situation and attach any necessary files.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

Obtaining Additional Publications and Information

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

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:

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

- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and the *Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access *Packet* magazine at this URL:

<http://www.cisco.com/go/packet>

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

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

- 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/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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