



Release Notes for Cisco Aironet 802.11a/b/g (CB21AG and PI21AG) Client Administration Utility (ACAU) 3.0

Contents

- [Introduction, page 2](#)
- [System Requirements, page 2](#)
- [Important Notes, page 2](#)
- [New and Changed Information, page 3](#)
- [Finding the Software Version, page 5](#)
- [Obtaining ACAU, page 5](#)
- [Installing ACAU, page 6](#)
- [Upgrading ACAU, page 11](#)
- [Using ACAU, page 13](#)
- [Caveats, page 13](#)
- [Troubleshooting, page 14](#)
- [Related Documentation, page 15](#)
- [Obtaining Documentation, page 15](#)
- [Documentation Feedback, page 16](#)
- [Cisco Product Security Overview, page 16](#)
- [Obtaining Technical Assistance, page 17](#)
- [Obtaining Additional Publications and Information, page 19](#)



Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Copyright © 2006 Cisco Systems, Inc. All rights reserved.

Introduction

This document describes system requirements, important notes, new and changed information, installation and upgrade procedures, and caveats for Cisco Aironet Client Administration Utility (ACAU) version 3.0.

ACAU is a utility used by administrators to set software installation options and create *profiles* (saved configurations) for users who install Cisco Aironet CB21AG and PI21AG Wireless LAN Client Adapters in computers running the Windows 2000 or Windows XP operating system. Administrators save the installation settings and profiles to a configuration file. Then when the user installs the client adapter software (driver and client utilities), the Install Wizard uses the instructions in the configuration file to govern the installation and setup of the client utilities and load one or more preconfigured user profiles. Administrators can create configuration files to control the installation and configuration of client adapters for one user or groups of users.

**Note**

To ensure proper operation, use ACAU 3.0 only with client adapter Install Wizard 3.0.

System Requirements

You need the following items in order to install and use ACAU 3.0:

- 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)

Important Notes

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

PACs that are created by ACS version 3.x.xx are not compatible with ACS version 4.0.xx. Client stations must import new PACs. If you select auto-provisioning, new PACs will automatically be 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 version 4.0.xx and version 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 experiences authentication failures after upgrading the software, delete all the PACs provisioned from the 3.x.xx server.

Conflict with Third-Party Supplicants

When using release 3.0, you might encounter a conflict with third-party supplicants (such as the Meetinghouse Aegis or the Juniper Odyssey) that causes the Cisco client adapter to lose connection. If you encounter such a conflict, disable third-party supplicants.

Software Compatibility

ACAU 3.0 is compatible with only the Cisco Aironet CB21AG and PI21AG client adapters.

Name and Location of Configuration File

You can change the name of the ACAU configuration file; however, the name must be changed back to *CiscoAdminConfig.dat* before the user runs the Install Wizard. Otherwise, the Install Wizard does not load the configuration file.

You must also save the configuration file to the drive and directory in which the Install Wizard resides. If you save the file to any other location, it is not processed by the Install Wizard.

Installing the Novell Client

To ensure proper operation, the Novell Client (if used) must be installed on the user's computer prior to the client adapter software.

Host Based EAP Profiles Created with Earlier ACAU Versions

If you created a Host Based EAP profile using ACAU 1.2 or 1.3 and import it for use with ACAU 2.5, it is designated as an EAP-FAST profile in ACAU 2.5. To change it, you must manually reconfigure the profile for Host Based EAP.

New and Changed Information

This section describes the new and modified features in version 3.0 of ACAU.

EAP-FAST Enhancements

The following is a list of EAP-FAST enhancements, which are accessible through the ACAU user interface:

- Support of additional EAP authentication methods

Version 3.0 of ACAU supports three EAP methods in both the PAC auto provisioning phase and the EAP-FAST authentication phase. These methods are:

- EAP-MSCHAPv2
- EAP-GTC

- EAP-TLS
- PAC configuration and management screens

Version 3.0 of ACAU has updated PAC configuration screens.

For more information about the new updates, refer to the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Administration Utility Administrator Guide (OL-7086-03)*.

PAC Export

In the previous version, when an EAP-FAST profile is exported or imported, the PAC data linked with the profile was getting ignored. To solve this problem, version 3.0 of ACAU supports the exporting of PAC data using .PAC files.

Finding the Software Version

Follow these steps to obtain the latest ACAU software from Cisco.com:

-
- Step 1** Make sure the client adapter is inserted into your computer.
 - Step 2** Make sure 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 Tools For Systems Administrators**.
 - Step 9** Click **Cisco Aironet CB21AG/PI21AG Wireless LAN Client Adapter Tools**.
 - Step 10** When prompted, enter your CCO username and password, and click **OK**.
 - Step 11** Click **Aironet Client Administration Utility (ACAU)**.
 - Step 12** Click the link with the greatest release number under Available Releases.
 - Step 13** Click the Install Wizard file (**acau-vxx.exe**), where **xx** is the version number.
 - Step 14** If prompted, enter your CCO username and password, and click **OK**.
 - Step 15** Complete the encryption authorization form, read and accept the terms and conditions of the Software License Agreement.
 - Step 16** In the Download page, click the **Download** button to download the installer, and save it on your computer's Desktop.

Before downloading the file, you will be prompted to enter your CCO username and password. You will also be prompted to agree to the software download rules.

Obtaining ACAU

Follow these steps to obtain the latest version of ACAU from Cisco.com.

-
- 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**.
 - Step 3** Click **Cisco Aironet Wireless LAN Client Adapters**.
 - Step 4** Scroll down to Windows Systems Administration Tools and click **Aironet Client Administration Utility (ACAU)**. The Software Download page appears.
 - Step 5** Click **acau-v25.exe**. The Software Download Encryption Authorization Form appears.
 - Step 6** Complete the encryption authorization form and click **Submit**. The Software License Agreement page appears.

- Step 7** If you agree with the terms of the agreement, click **Accept**. Otherwise, click **Decline** to cancel the download.
- Step 8** When the Software Download page appears, click **acau-v25.exe**.
- Step 9** Save the file to a folder you specify.

Installing ACAU

Follow these steps to install ACAU on your computer for the first time:



Note

If you are upgrading to a new version of ACAU or reinstalling the same version, follow the instructions in the [“Upgrading ACAU” section on page 11](#) to upgrade or reinstall your ACAU software.

Step 1 Use Windows Explorer to find the installer.

Step 2 Double-click the installer.

The Preparing Setup window appears followed by the InstallShield Wizard window (see [Figure 1](#) and [Figure 2](#)).

Figure 1 *Preparing Setup Window*

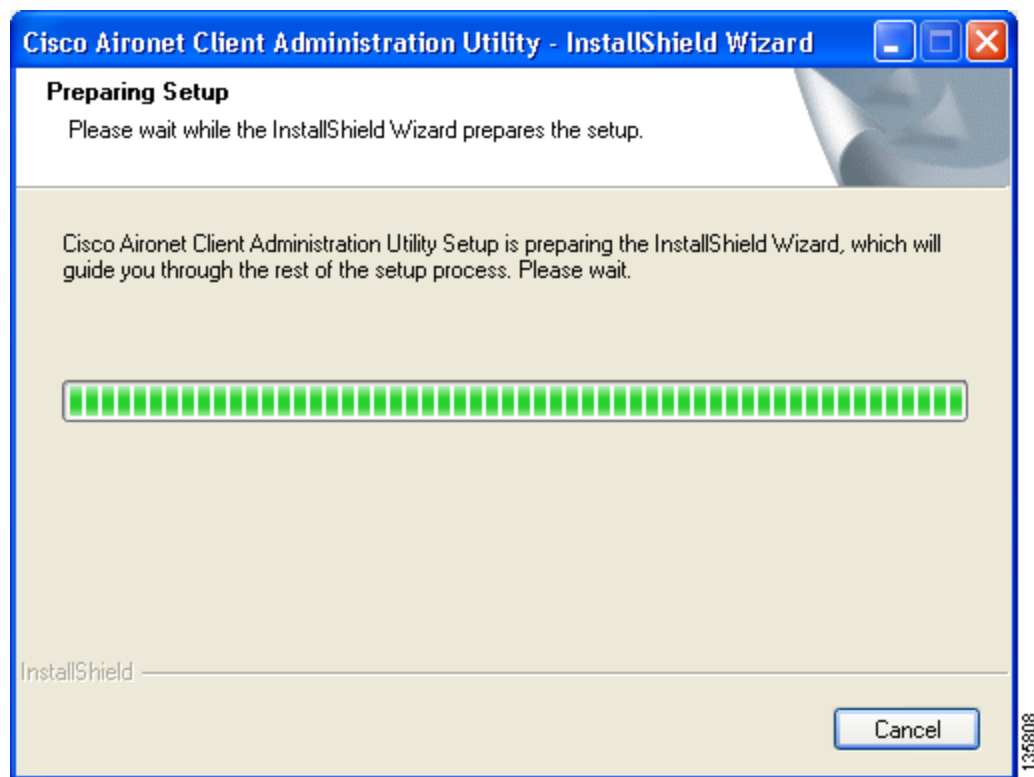
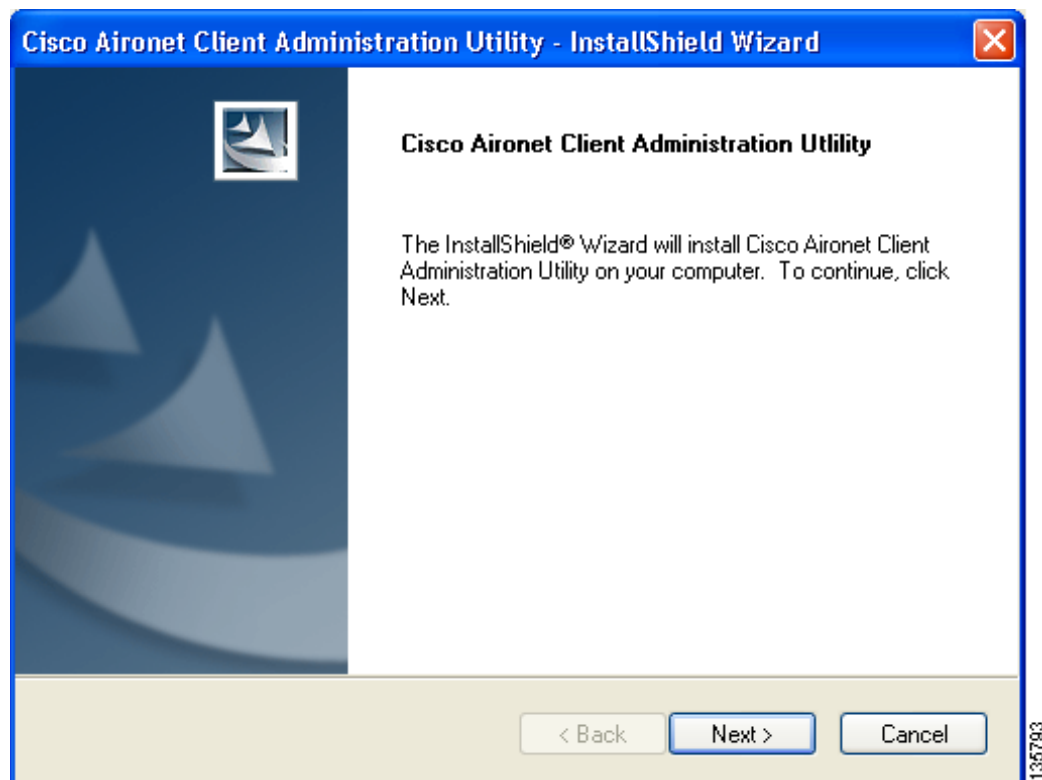
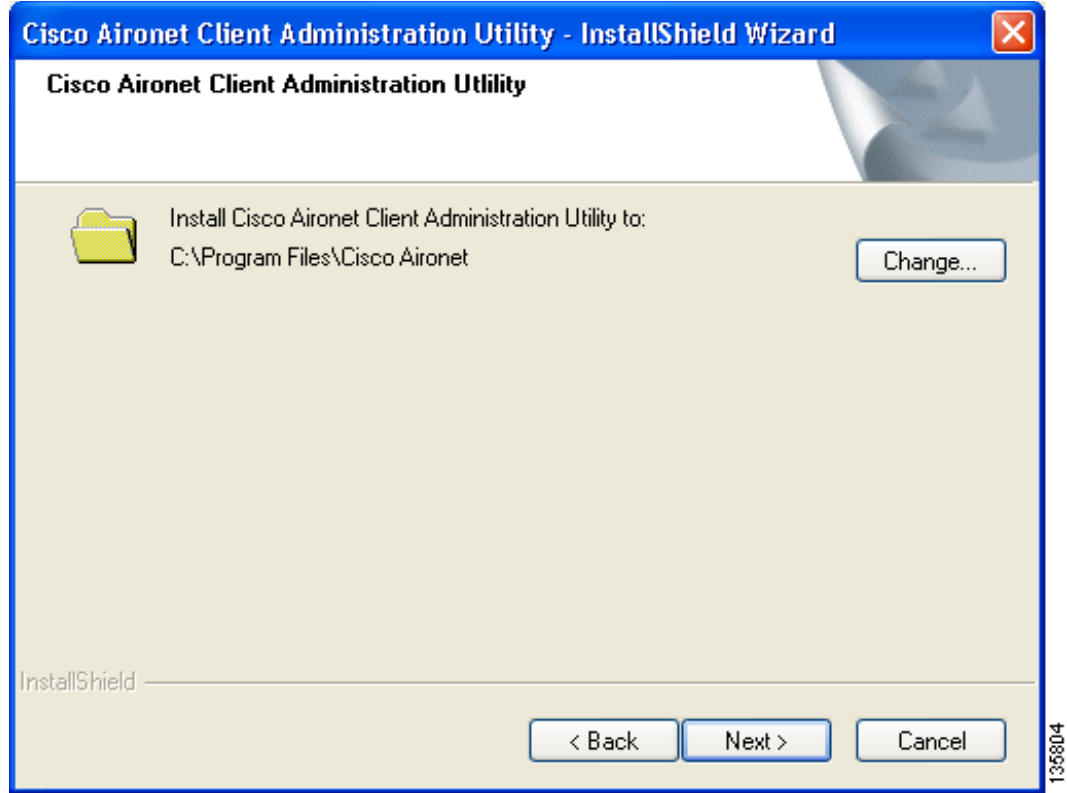


Figure 2 InstallShield Wizard Window



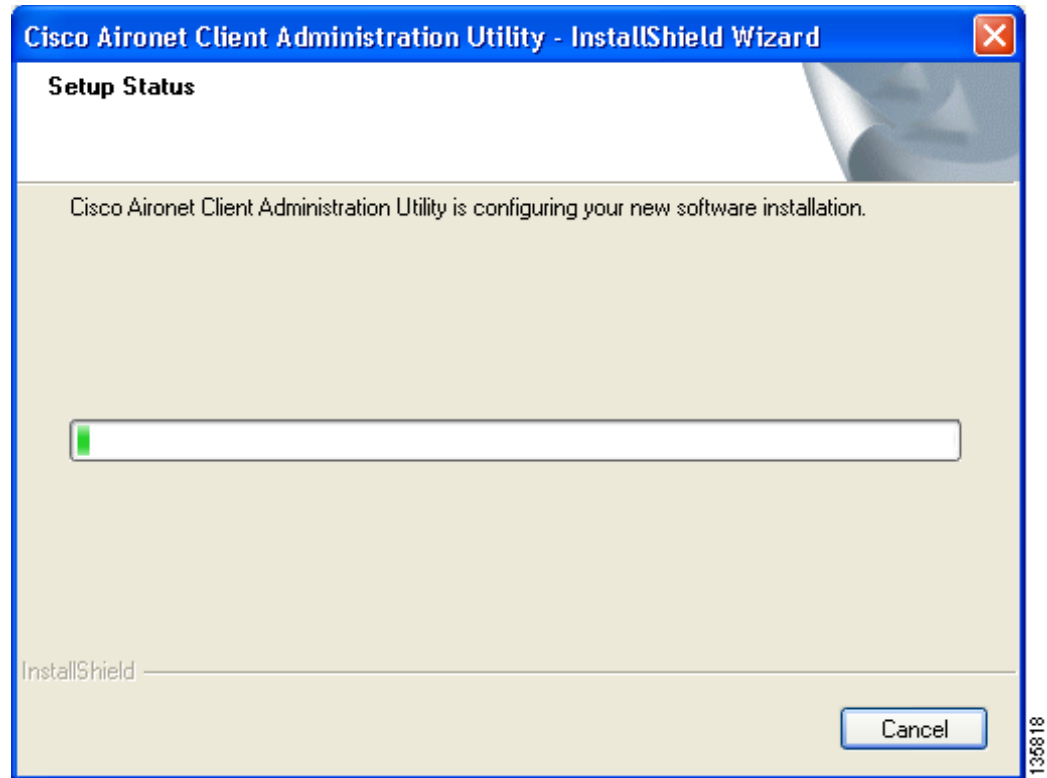
- Step 3** Click **Next**. The Installation Location window appears showing the default location where ACAU will be installed (see [Figure 3](#)).

Figure 3 Installation Location Window



- Step 4** If you want to change the default location, click **Change**, browse to the location of your choice, and click **OK**.
- Step 5** Click **Next** to begin the installation process. The Setup Status window appears (see [Figure 4](#)).

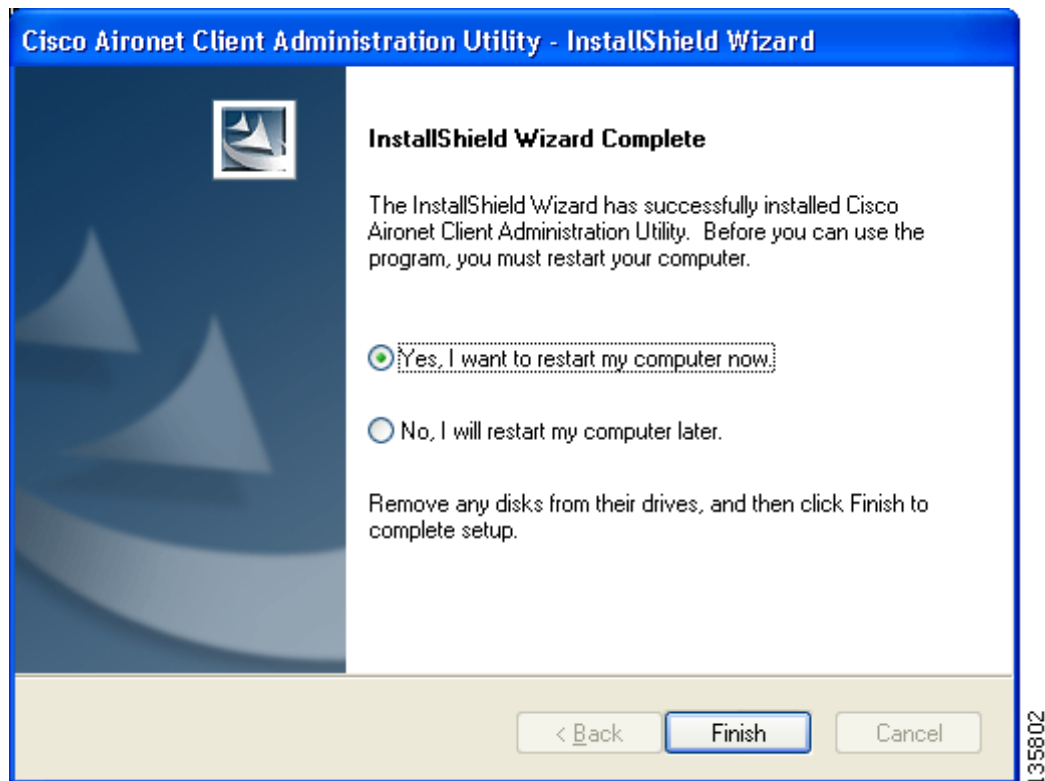
Figure 4 Setup Status Window



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

Step 6 When ACAU is installed, the InstallShield Wizard Complete window appears (see [Figure 5](#)).

Figure 5 *InstallShield Wizard Complete Window*



Step 7 Click **Yes, I want to restart my computer now** to restart your computer after quitting the installer. Otherwise, click **No, I will restart my computer later** if need to install other programs before restarting your computer.



Note Before you can use ACAU, you must restart you computer.

Step 8 Click **Finish**. The installation is complete.

Upgrading ACAU

Follow these steps to upgrade your ACAU software to the latest ACAU release:

Step 1 Run the ACAU installer.

The Preparing Setup window appears followed by the Previous Installation Detected window (see [Figure 6](#) and [Figure 7](#)).

Figure 6 *Preparing Setup Window*

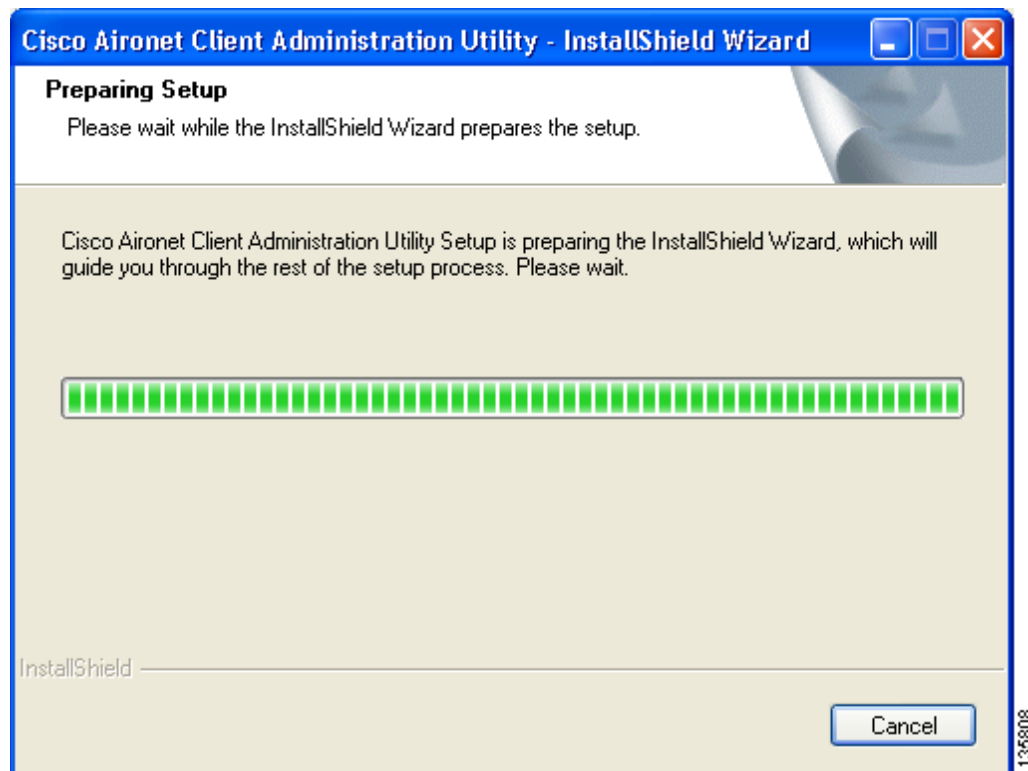
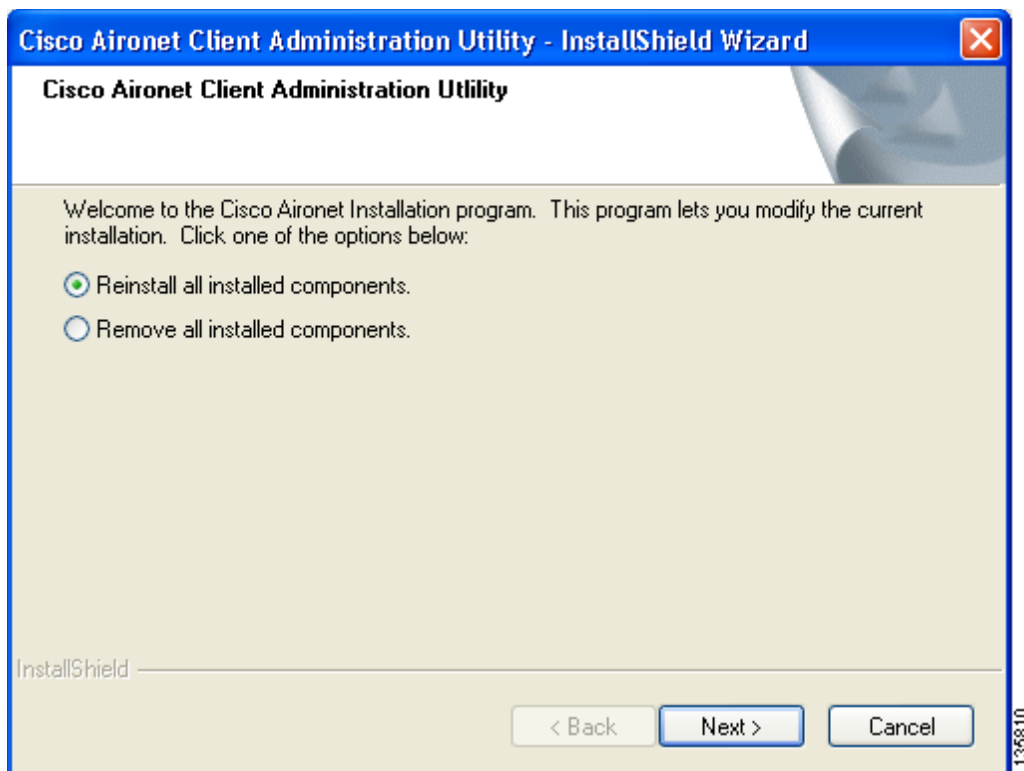


Figure 7 Previous Installation Detected Window



Step 2 Perform one of the following:

- If you want to upgrade your ACAU software using new installation settings, you must first uninstall the existing ACAU software from your computer. Follow these steps to do so:
 - a. Choose **Remove all installed components** and click **Next**.
 - b. Click **Yes** to confirm your decision.
 - c. After ACAU has been uninstalled, click **Finish**.
 - d. Follow the instructions in the [“Installing ACAU”](#) section on page 6 to install the new ACAU software.
- If you want to upgrade your ACAU software using the installation settings that were selected during the last installation, follow these steps:
 - a. Choose **Reinstall all installed components** and click **Next**. The Setup Status window appears and notifies you as each software component is installed.
 - b. When the upgrade finishes, the Maintenance Complete window appears. If the window contains an option to restart your computer, choose that option.
 - c. Click **Finish** and allow your computer to restart if it begins the reboot process.

Running ACAU

When you install ACAU, the installation routine places an Aironet Client Administration Utility icon on your Windows desktop. Double-click the icon to start the utility.

Using ACAU

Refer to the *Cisco Aironet 802.11a/b/g Wireless LAN Client Adapters (CB21AG and PI21AG) Administration Utility Administrator Guide (OL-7086-03)* for instructions on using ACAU to set software installation options and configure user profiles.

Caveats

This section lists open and resolved software issues in ACAU 3.0.

Open Caveats

The following caveats are not resolved in ACAU 3.0:

- CSCsb74191—The error message displayed when using the 5GHz Ad Hoc mode in a European-country domain is not clear

If, when creating a new profile for an Ad Hoc network, you select **5GHz 54Mbps** from the Wireless Mode pop-up menu, the following error message might appear:

“An Ad Hoc Wireless mode must be selected for starting Ad Hoc network.”

This error message is displayed if the user does not select the correct wireless mode. However, this message is also displayed if the current wireless regulatory domain, country setting, or the card SKU do not allow creation of an Ad Hoc network in that wireless mode.

When creating a new profile, the ADU software does not take into account the SKU of the client adapter inserted into the computer or the current country code and regulatory domain. By not recording the SKU, the country code, and the regulatory domain, the profiles can be easily exported and imported into other computers that use different client adapters and country codes.

One side-effect of making profiles easy to import to other systems is that the client software’s underlying driver will dynamically apply the appropriate limitations based on the current network settings while activating a profile. However, these limitations will be visible only in the Diagnostics and Advanced Status pages, but not under Profile Management.

- CSCsd80097—The CB21AG client adapter with versions 2.6 or 3.0 drivers installed on a Compaq NX 6110 computer exhibits roaming inconsistencies with the G channels. This issue has not been verified by Cisco.

The reason for the flakiness is that the cardbus controller driver was not getting installed and the generic driver was used instead. To fix the problem, download the sp30219.exe file from the HP support website onto your system and run it to install the media card reader driver to fix the roaming inconsistencies.

- CSCsd02837—The CB21AG client adapter does not send re-association requests in mobility

The CB21AG client adapter does not send re-association requests with the CCKM keys when moved from controller to another. The adapter sends re-association request with CCKM keys only when it roams back to the controller to which it was first attached. This issue occurs when the access point is configured to use WPA2 for key management.

This issue can be solved by using WPA key management with TKIP and CCKM.

Resolved Caveats

The following caveat has been resolved in ACAU 3.0.

- CSCei67249—WEP key setting in ACAU profile fails to transfer to ADU profile

If you create a profile with a 128-bit static WEP key and choose the Install & Run option under Global Settings > Setup Settings > Profile Migration Tool in ACAU and save these settings to the CiscoAdminConfig.dat file, this profile is no longer configured for 128-bit static WEP after it is loaded into ADU.

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 identify existing bugs (or caveats) in Cisco software products.

Access the TAC Software Bug Toolkit at the following URL:

http://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-7086-03)*—Provides instructions for installing ACAU 3.0 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-4211-05)*—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 Client Adapters (CB21AG and PI21AG) Install Wizard 3.0 (OL-8338-01)*—Describes new features and open and resolved caveats in Install Wizard 3.0.
http://www.cisco.com/en/US/products/hw/wireless/ps4555/prod_release_notes_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

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

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at this URL:

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

Ordering Documentation

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/>

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at tech-doc-store-mkpl@external.cisco.com or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can submit comments about Cisco documentation 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.

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 will find information about how to:

- 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, security notices, and security responses for Cisco products is available at this URL:

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

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at 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 have identified a vulnerability in a Cisco product, contact PSIRT:

- For Emergencies only—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.

- For 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 (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.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.

If you do not have or use PGP, contact PSIRT at the aforementioned e-mail addresses or phone numbers before sending any sensitive material to find other means of encrypting the data.

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)—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.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operations 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 the network is impaired, while 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.

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco offerings. To order and find out more about the Cisco Product Quick Reference Guide, go to this URL:

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

- 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>

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

CCSP, CCVP, the Cisco Square Bridge logo, Follow Me Browsing, and StackWise are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and iQuick Study are service marks of Cisco Systems, Inc.; and Access Registrar, Aironet, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, FormShare, GigaDrive, GigaStack, HomeLink, Internet Quotient, IOS, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, LightStream, Linksys, MeetingPlace, MGX, the Networkers logo, Networking Academy, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, ProConnect, RateMUX, ScriptShare, SlideCast, SMARTnet, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0601R)

Copyright © 2006 Cisco Systems, Inc.
All rights reserved.